

D.I.Y. SHED PLANS



SHED DESIGN - A

8' x 12' SHED
VARIANT #1



Index

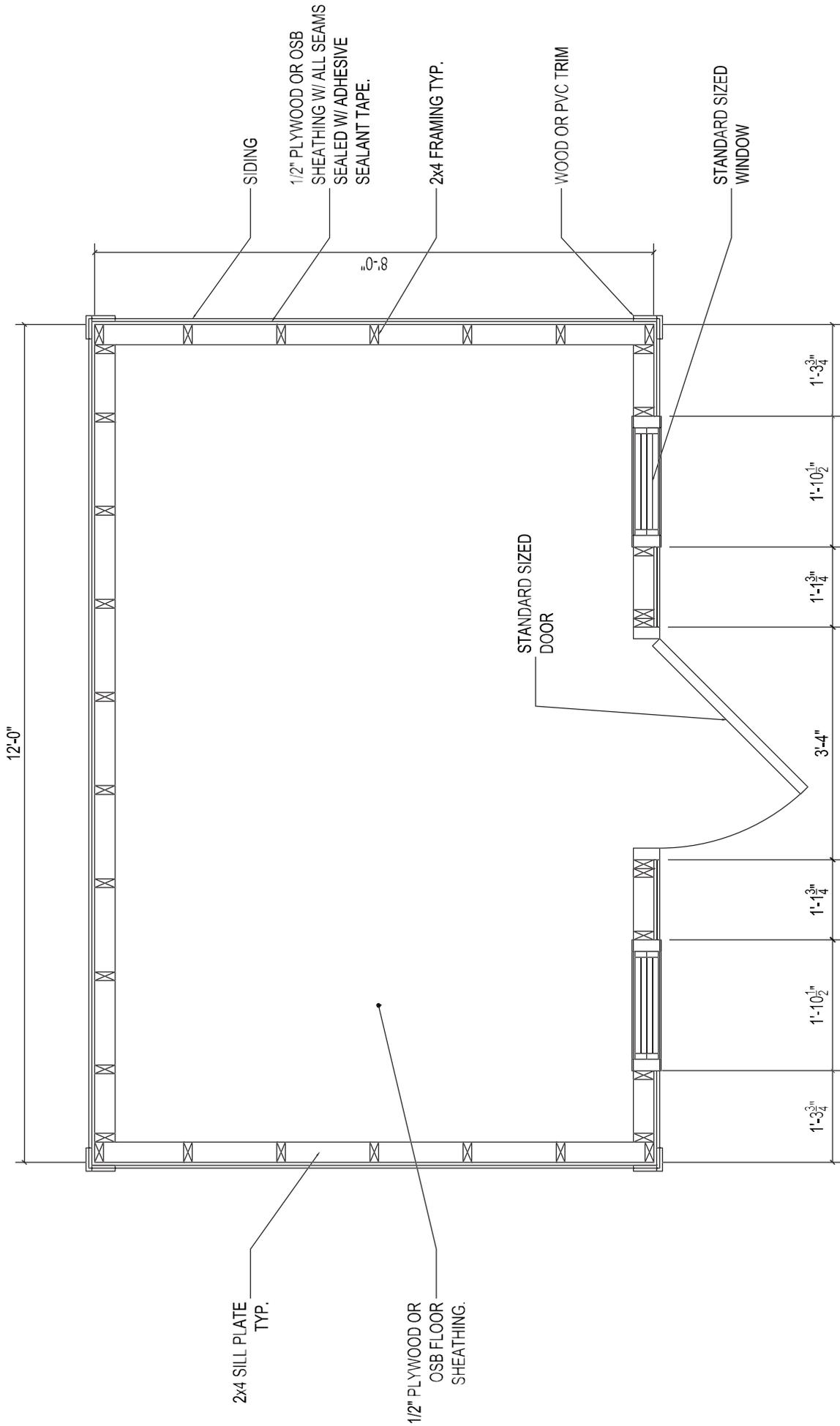
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Materials List

Material	Quantity		Quantity
Footings:		Drip Edges:	
<i>Option A</i>		S-Shape	16 lf
Pavers	Varies	Roof Edge Profile	26 lf
Gravel	1-3 Bags	Siding:	
<i>Option B-1</i>		1/2" Ribbed Tongue & Groove Board (Prefinished)	100 sf
Precast Concrete Pier Blocks	4	Lap siding	80 sf
4x4	Varies	Cedar shake	180 sf
<i>Options B-2&3</i>		Shingles	
Precast Concrete Pier Blocks	4		2 bundles
<i>Option C</i>		Windows	
Gravel	1-3 Bags	Size, manufacturer, style, color are variable	2
Tube Formwork - variable length (optional)	4	Doors	
Quickset concrete	Varies	Size, manufacturer, style, color are variable	1
Post Brackets (optional)	4	Trim (all sizes are nominal):	
4x4	Varies	1x1 - 6'	4
<i>Option D</i>		1x3 - 8'	4
Gravel	2-6 Bags	1x4 - 8'	16
6x6 (alt. 4x6 or 8x8) - 12' length	2	1X4 - 10'	4
2x8 pressure treated boards:		1x4 - 12'	2
12'	2	1x5 - 16'	2
8'	11	1x6 (ripped to 1x5 1/2") - 16'	2
Joist Hangers	18	1x9 - 8'	3
Plywood/OSB:		Fasteners:	
3/4" - 4'x8'	3 (leaves no scrap)	For fasteners, please consult your local hardware provider and estimated quantities for all fasteners.	
1/2" exterior grade - 4'x8'	10	2" deck screws	
1/2" coated roofing - 4'x8'	6	3" deck screws	
2x4 framing boards:		Framing nails	
8'	40	Finish nails	
10'	18	Galvanized nails	
12'	7		
Adhesive sealant tape	2-3 rolls		

Tools List

- A Helper (many of the steps are 2 person tasks)
- Shovel
- Wheelbarrow
- Tape Measure
- Chalk Line
- Pencils
- Hammer
- Power Drill
- Hand Saw
- Chop Saw or Radial Arm Saw (optional but highly recommended)
- Saw Horses
- Circular Saw
- Adhesive Tape Gun (if available)
- 4' Level or longer
- Framing Square
- Box Knife
- Speed Square
- Nail Gun (optional but highly recommended)
- Knee Pads (optional but highly recommended)
- Safety Glasses
- Work Belt (optional but highly recommended)
- Water or other beverages (staying hydrated while working is very important)

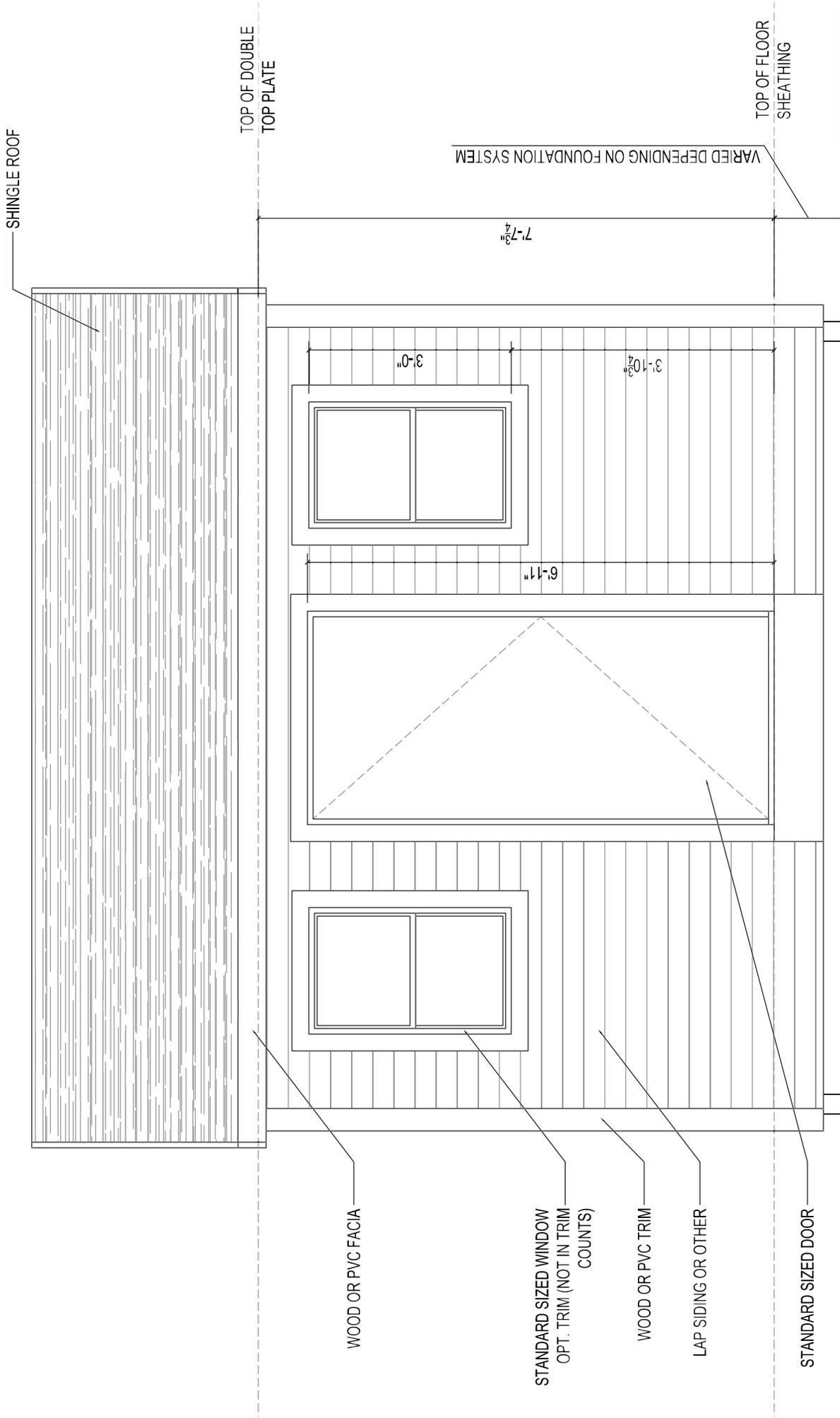


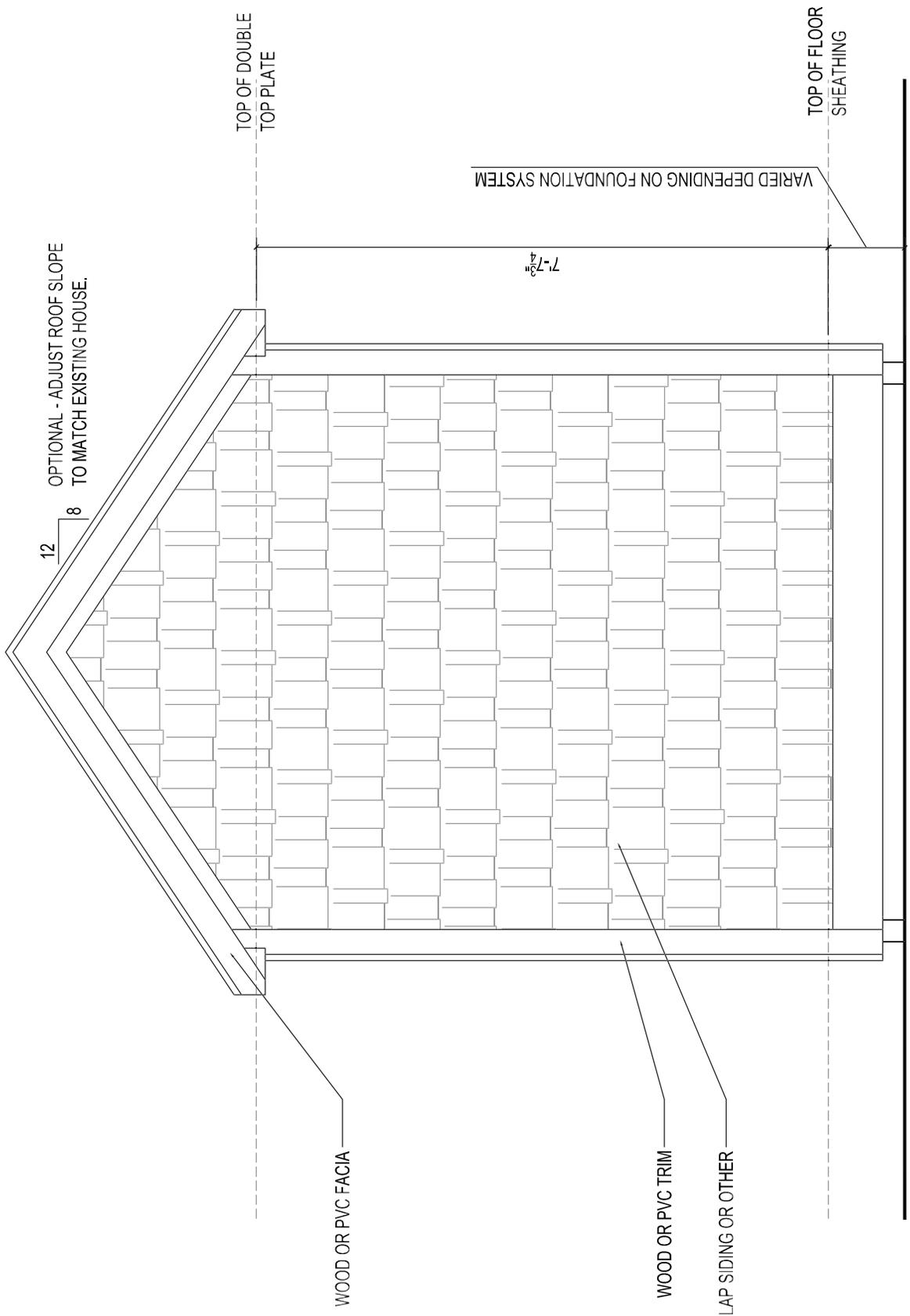
PLAN

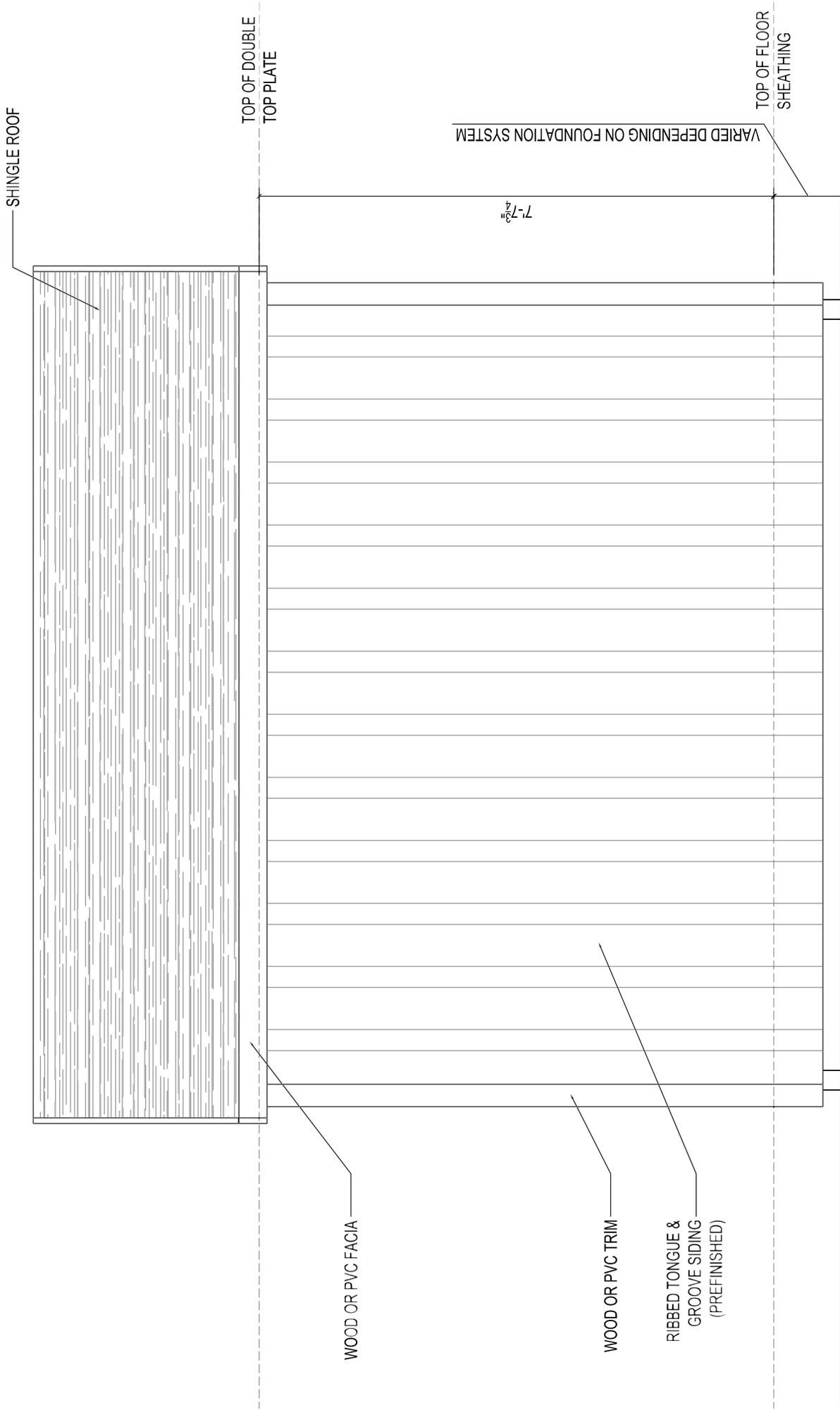
SCALE
1/2" = 1'-0"

SHED DESIGN A

OPTION 1







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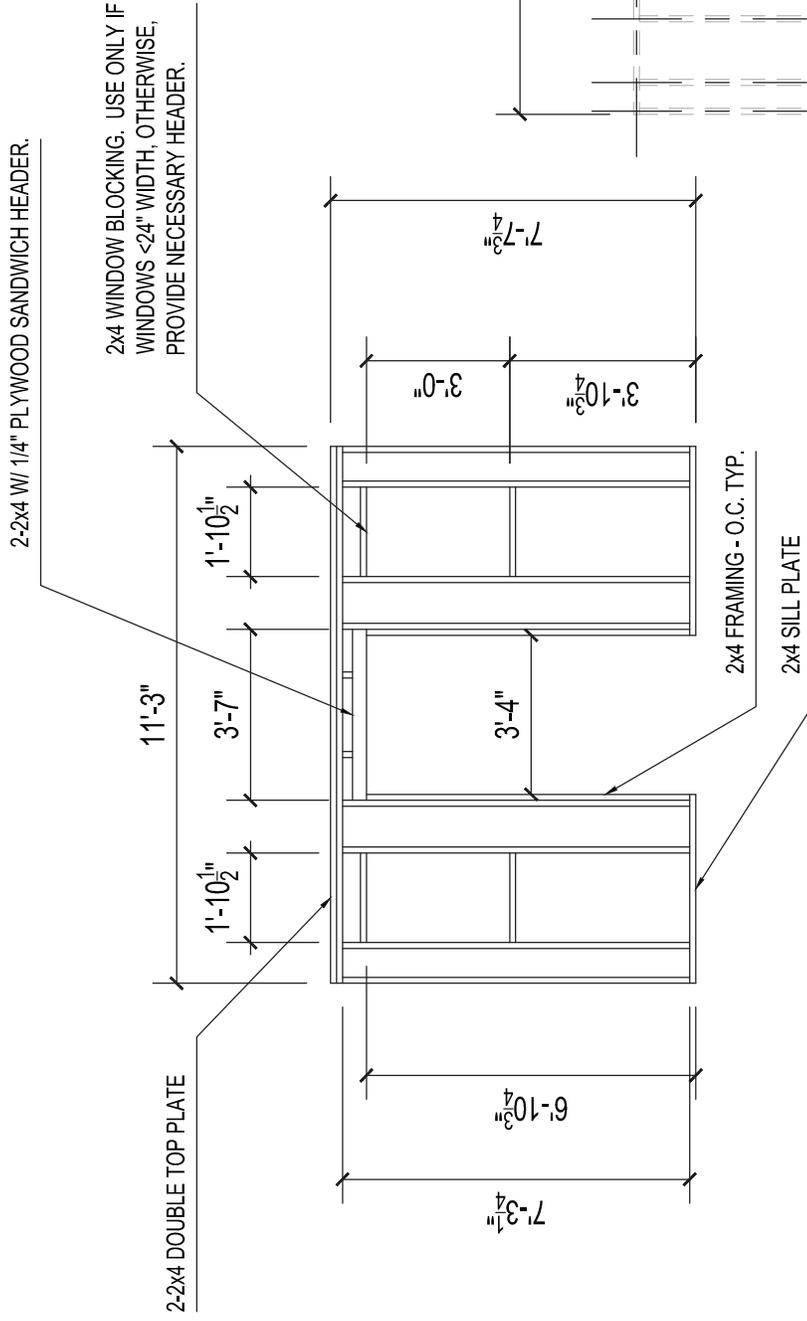
SHED DESIGN A

OPTION 1, 2 & 3

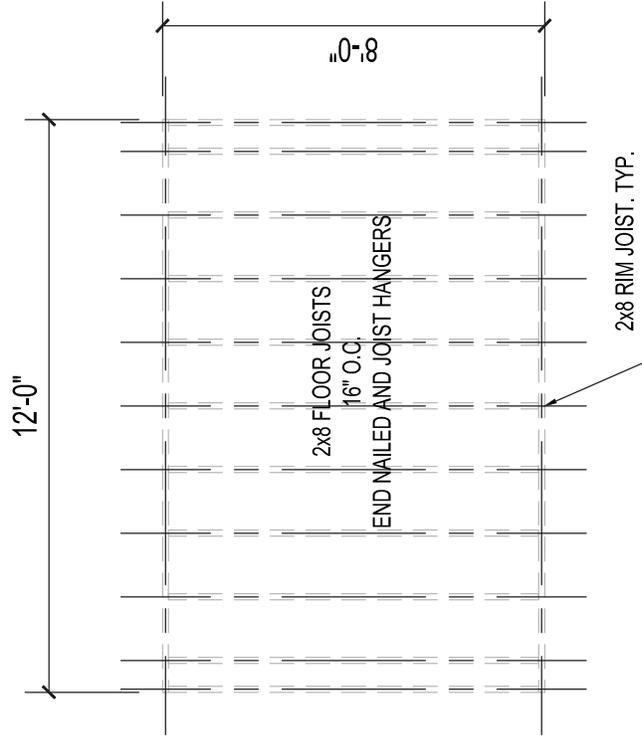
SCALE

1/2" = 1'-0"

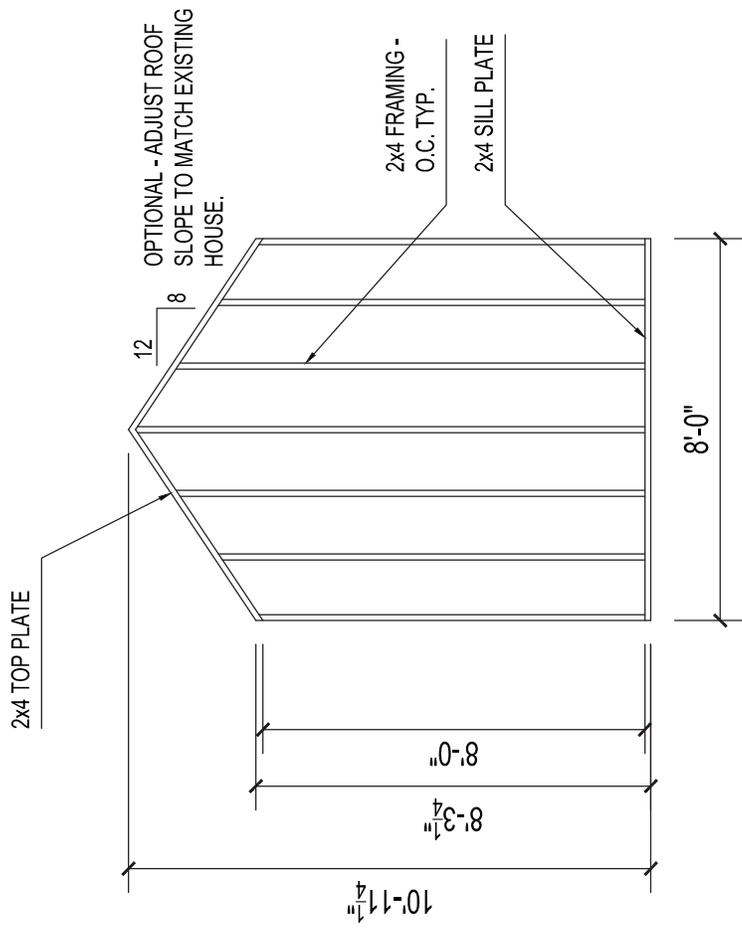
ELEVATION



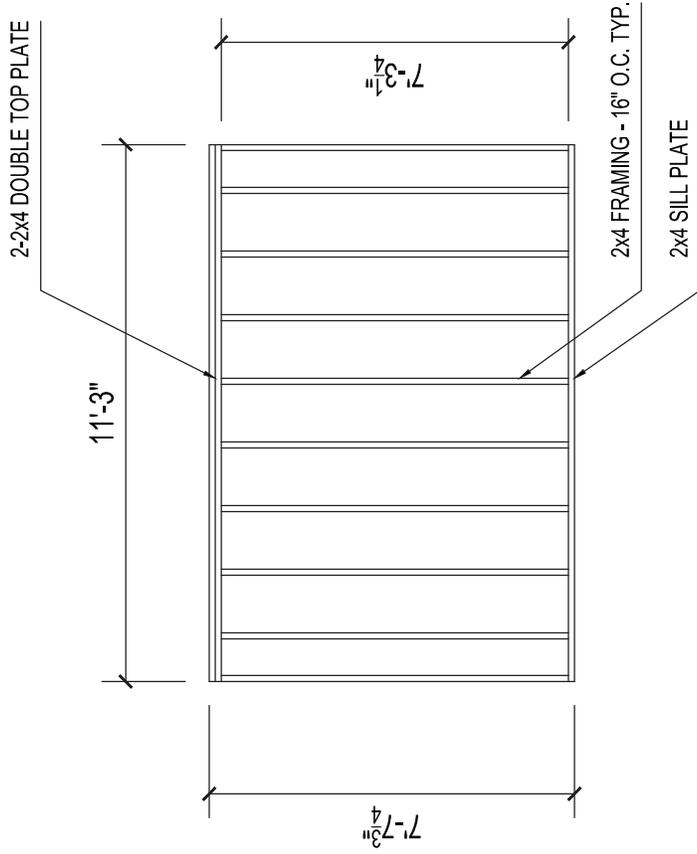
FRONT ELEVATION FRAMING



FLOOR PLATFORM FRAMING



SIDE ELEVATION FRAMING



REAR ELEVATION FRAMING



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SHED DESIGN A

OPTION 1

SCALE

1/4" = 1'-0"

FRAMING

Footings:

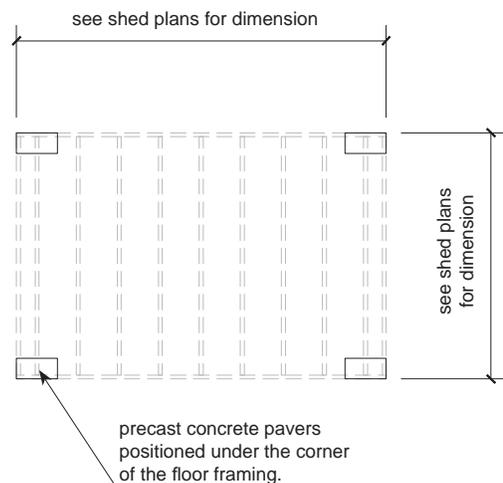
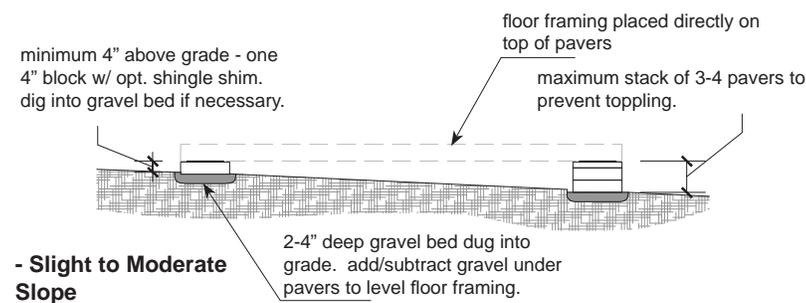
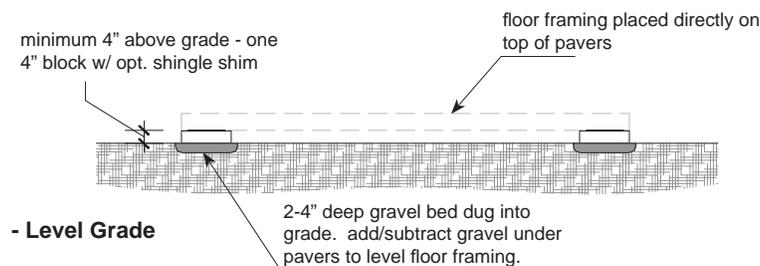
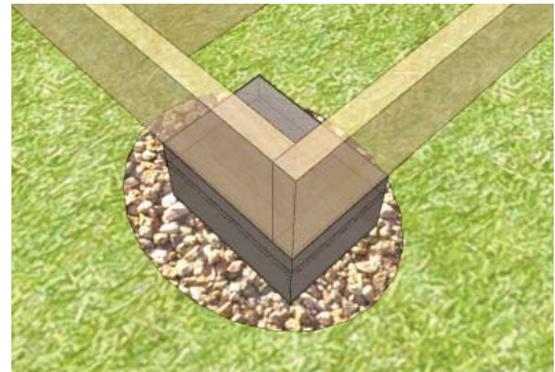
There are many options for footings for sheds, far too many to list in this instruction book, but some of the options are listed here. When deciding on a footing system, you should take into account the following:

- Local codes. Some jurisdictions will require that you have a more permanent footing system such as concrete footings.
- Wind conditions. If you site has heavy winds, then more permanent footings may be necessary to ensure structural stability.
- Permanence of shed location. In some cases, a shed will need to be moved and unless otherwise indicated, a less permanent footing system, such as stacked pavers or piers may be applicable.
- Slope. For sites with more than slight sloping grades, a more stable footing system is advised. While all the systems can work with sloped sights, for the sake of stability, it is advised to use concrete foundations.

The diagrams and notes below will help you to layout and construct the footings for your shed. Please note that you will want to construct the rim joist assembly of your shed (Step 1 in shed construction) before you address the footings. This assembly will be necessary to locate the footings.

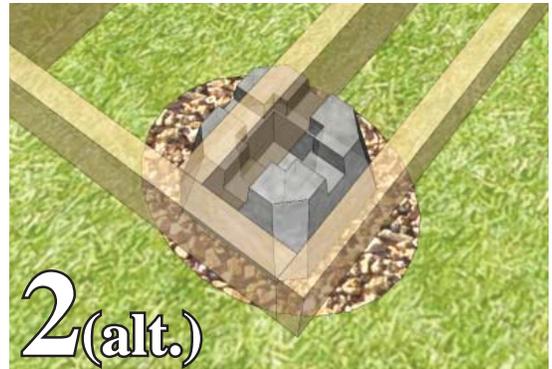
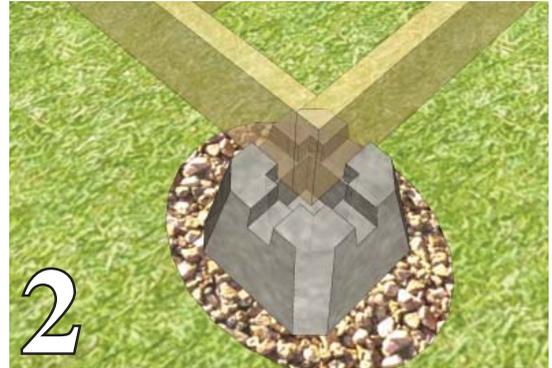
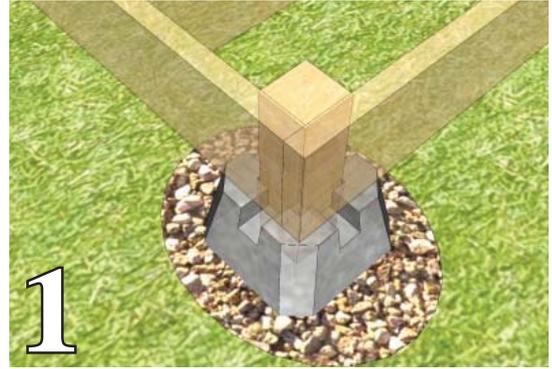
Footing Options:

A. Stacked Pavers (concrete): 8x16 concrete pavers (sizes may vary) are stacked under the corners of the rim joist assembly. The stacks are comprised of 4 inch and 2 inch thick pavers to ensure a level platform. It is advised to limit the height of any stack to 3 blocks, as the pavers will not be secured to each other or the ground. The stack sits on a gravel bed that is dug 2-4 inches into the ground and filled to the top of the hole or just below depending on leveling needs. This footing option is the least stable in windy conditions or on an extreme slope. Stacked pavers is one of the easier to install options, with all the elements small and light enough to handle by one person.

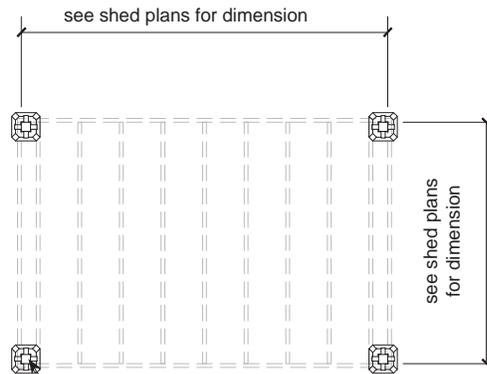


B. Precast Pier Blocks (concrete): Dek-Block or similar product. There are two methods for the use of piers such as Dek-Block but not all precast piers allow for both options. Like the stacked pavers option, these precast concrete piers are placed on gravel beds that are dug into the grade. Precast piers are more stable than stacked pavers in that they are one piece and typically heavier than the stacked pavers.

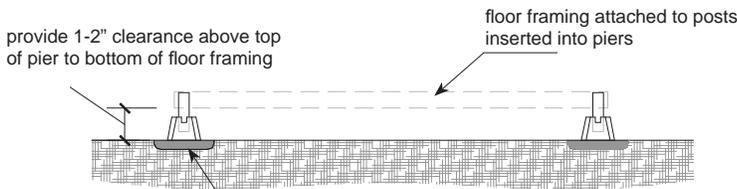
1. Post technique
 - Most precast piers have a hole in the top, sized to receive a 4x4 wood post. Once the post is inserted, it can be cut to length to support the rim joist assembly. For sites with moderate slopes and low wind conditions, this would be a suitable footing option.
2. Rim joist technique
 - In addition to having a hole for post insertion, some precast piers will have slots for the insertion of dimensional lumber. These piers are placed under the rim joists or interior floor joists. This type of foundation is suitable for sites with low to no slopes. If these piers are placed under rim joists, they have the potential to change the final appearance of the shed as they interfere with the trim on the bottom of the walls.



- Option 1



precast concrete piers positioned under the corner of the floor framing, posts inserted and attached to inside of rim joists



provide 1-2" clearance above top of pier to bottom of floor framing

floor framing attached to posts inserted into piers

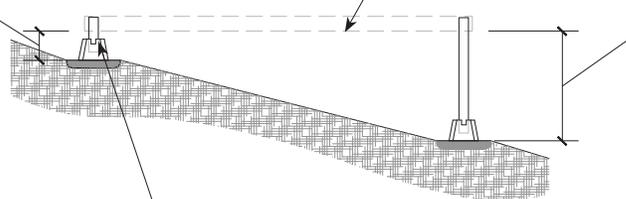
- Level Grade

2-4" deep gravel bed dug into grade. add/subtract gravel under pavers to level floor framing.

minimum 4" above grade - one 4" block w/ opt. shingle shim. dig into gravel bed if necessary.

floor framing placed directly on top of pavers

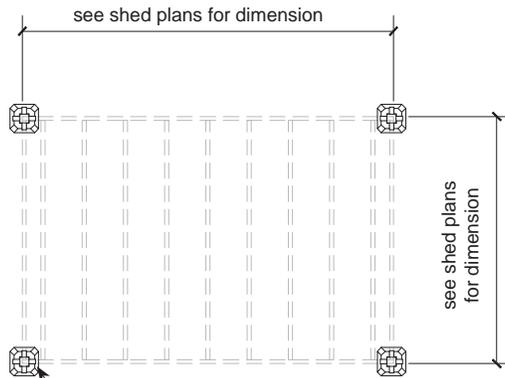
measure height of post to ensure a level floor.



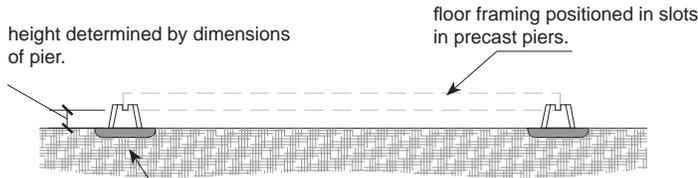
- Moderate to Large Slope

2-4" deep gravel bed dug into grade. add/subtract gravel under pavers to level floor framing.

- Option 2



precast concrete piers positioned under the corner of the floor framing so that framing fits into precast slots in piers.



- Level Grade

2-4" deep gravel bed dug into grade. add/subtract gravel under pavers to level floor framing.

floor framing positioned in slots in precast piers.

top piers may be dug into gravel to allow for level floor framing

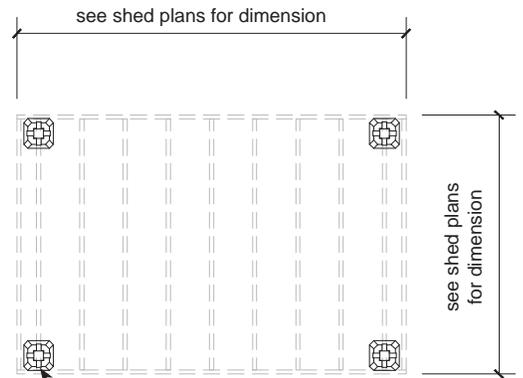
add gravel to ensure level floor framing.



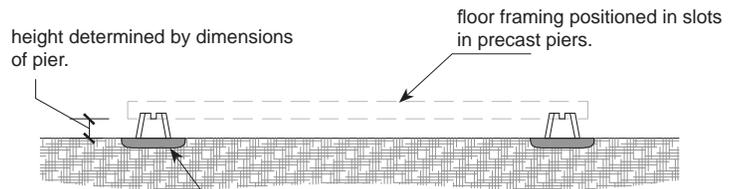
- Slight Slope

2-4" deep gravel bed dug into grade. add/subtract gravel under pavers to level floor framing.

- Option 2(alt)



precast concrete piers positioned under the interior beam of the floor framing so that framing fits into precast slots in piers.



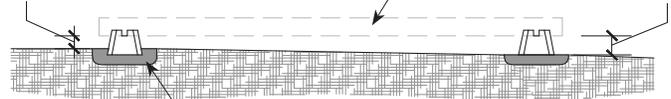
- Level Grade

2-4" deep gravel bed dug into grade. add/subtract gravel under pavers to level floor framing.

floor framing positioned in slots in precast piers.

top piers may be dug into gravel to allow for level floor framing

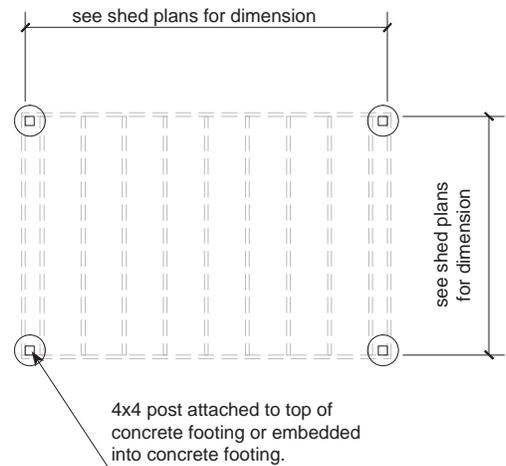
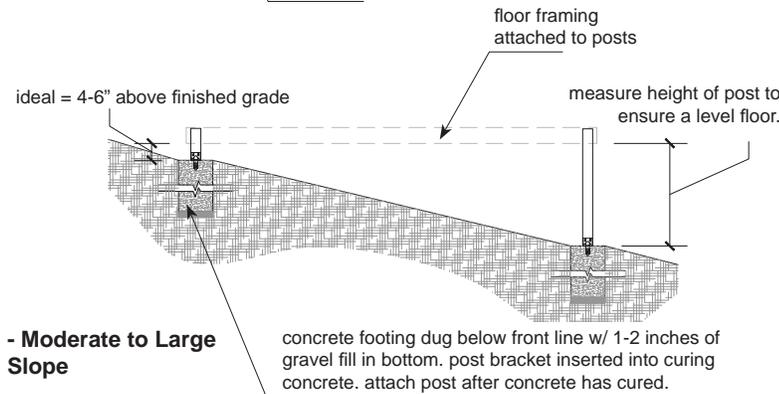
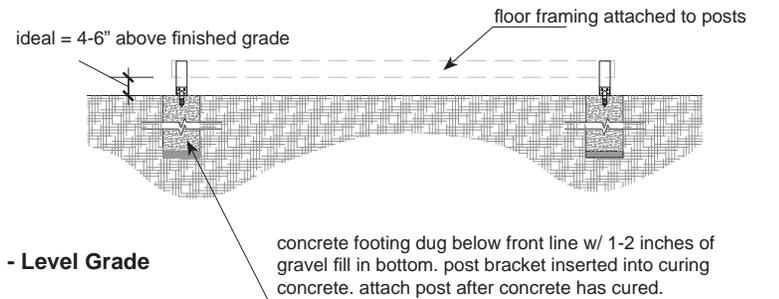
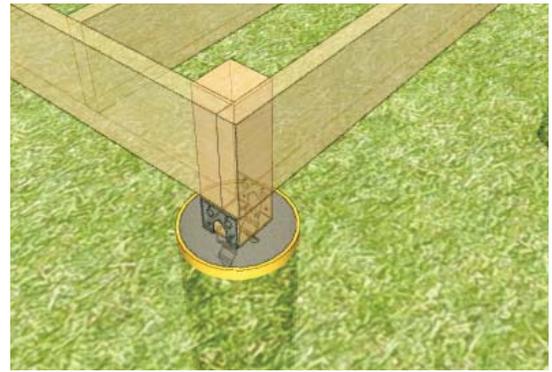
add gravel to ensure level floor framing.



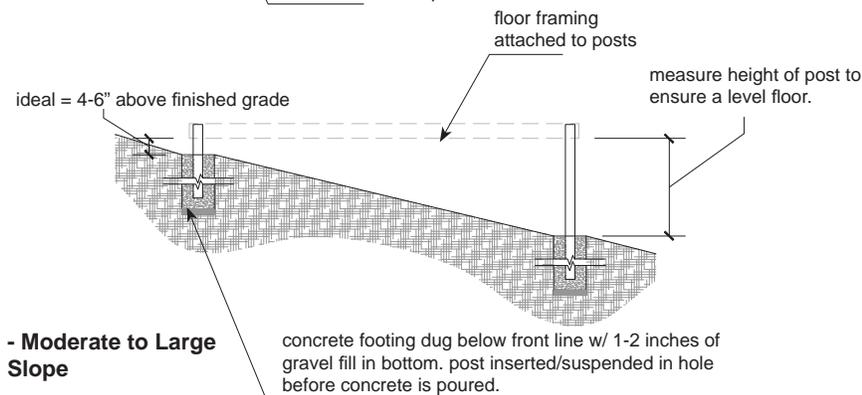
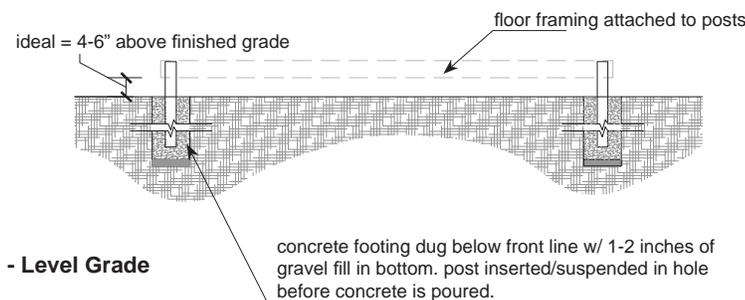
- Slight Slope

2-4" deep gravel bed dug into grade. add/subtract gravel under pavers to level floor framing.

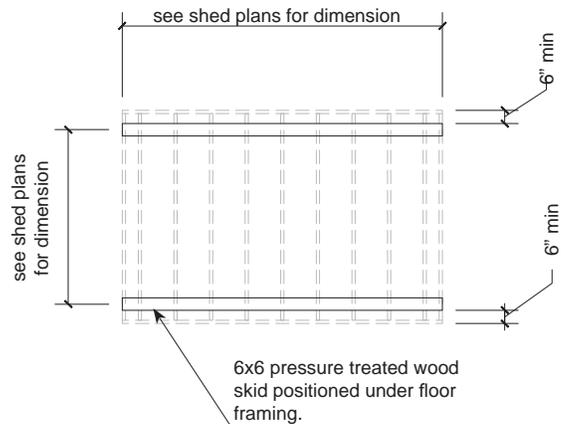
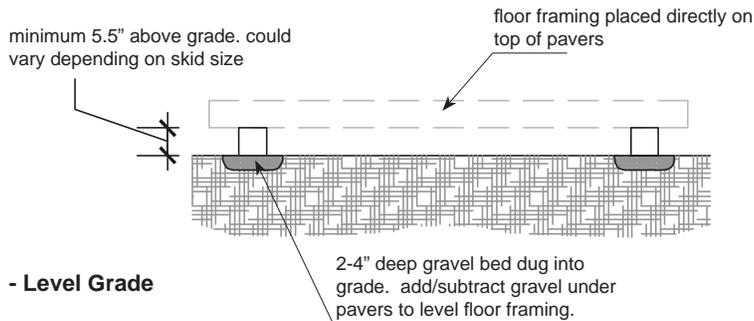
C. Concrete Footings: This is the most stable footing option and is suitable for most conditions. Holes are dug under each corner of the floor assembly and concrete tube forms are inserted into the holes. After the tubes are filled with concrete, a bracket is attached to the top of the footing to receive a 4x4 post. Alternatively, the post can be suspended to about 6-10 inches above the top of the hole and the hole can be filled with concrete (pressure treated lumber only). The depth of the hole is dependent on your location. Please consult your local building inspector or a local contractor for depth of footings (you want to be below the frost line to avoid heaving on the footings).



- Alternative - Embedded Posts



D. Skid Footings: Skid footings are simple, quick to install and strong, but are usually only suitable for flat site projects. Two long beds of compacted gravel are dug parallel to each other. The gravel beds should be the length of the floor framing and set apart by a distance that will leave 6 inches (max) of overhang on both sides. On top of the gravel beds you simply place 6x6 beams that act as the foundation. Other size beams that can be used include 4x6, 8x8 or gang nailed composite beams made from smaller dimensional lumber. The floor framing is then built on top of the skids and can be attached by toe nailing or bracket fasteners.



Other Footing Options (not shown here)

- Stacked Timber Footings - Lap jointed 4x4 timbers joined with rods. This is a very sturdy footing, but is labor intensive and a bit of an overkill for most sheds.
- Slab-on-grade – Just like it sounds, a slab-on-grade foundation is a concrete slab poured directly into a recess cut into the ground with the edges thickened to handle the loads of the outer walls. This type of footing is a bit of an overkill but is very stable. This type of foundation is also susceptible to cracking due to freeze and thaw cycles.

You should discuss the best option for your site, shed and geographic region with your local building inspector. Most footing options will provide the same look for the final product and it's just a matter of stability and compliance with local codes.

Step-by-Step Instructions

1. Choose and install footing per the footing options found on pages 10-14
2. Construct floor platform.
 - a) Cut rim joists from pressure treated 2x8 wood boards. Cut long member to full length of floor (see fig.1) and cut short member to 3" shorter than full depth of floor to account for the thickness of the long members.
See fig.1 for dimensions

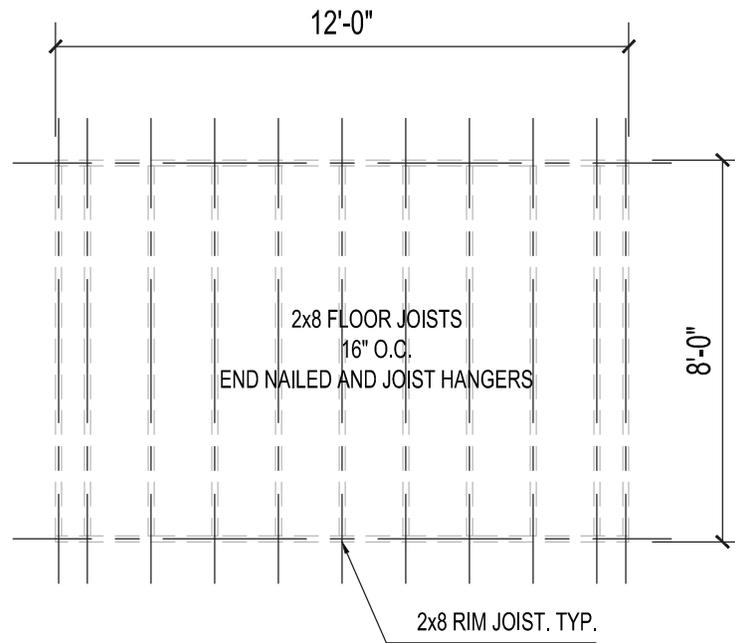


fig.1 - Floor Framing Plan

- b) Nail or screw (recommended) the members together (pre-drill holes for screw option). Ensure that the frame is square by use of either a framing square or by measuring both diagonals and adjusting the frame until they are equal.
- c) Nail temporary diagonal braces in two opposing corners to maintain the square of the frame.
- d) Lift and attach/place the frame into the footing. Use nails or galvanized decking screws (recommended) to attach the frame to wood piers (if applicable). Use a level on all rim boards to ensure that the entire frame is level.

NOTE: This step can be done by 1 person but it is recommended to have two people working together.

- e) Nail or screw (recommended) floor joists to the rim joists @ 16" on center. It is easiest to mark the 16" spacing directly on the rim joists to aid in positioning the floor joists. Keep floor joists level with the top of the rim joists.
- f) Attach metal joist hangers to both ends of each floor joist using galvanized nails.
- g) Detach temporary bracing attached in Step 2-c.

See fig.2 for the resulting assembly

- h) Attach 3/4" exterior grade plywood or OSB (oriented strand board) to the floor framing. Use nails or 2" deck screws (recommended). To ensure that fasteners hit the framing below, it is best to mark the position of the joists on the plywood (optional – snap chalk lines at locations of framing).
- i) Allow plywood to overhang framing and use a chalk line to mark cut line at edge of framing. Set circular saw to cut 3/4" depth and cut along these lines.

See fig.3 for resulting assembly.

3. Construct roof trusses. (this may seem out of order, but based on the methods used, this is the best time to do this)
 - a) Mark out a diagram of the roof truss (see fig.4 and supplement at the end of this packet). Make sure to draw both edges of each member as this will help when it comes time to cut the members. To find peak, measure up from center point of bottom and connect lines to top of bottom chord. Over time, the lines will where off.

NOTE: If you change the slope from the design, the dimensions in fig.4 will not be accurate.

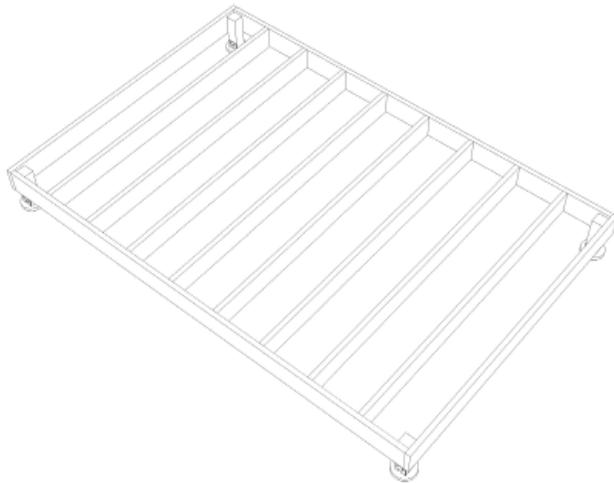


fig.2 - Floor Framing Assembly

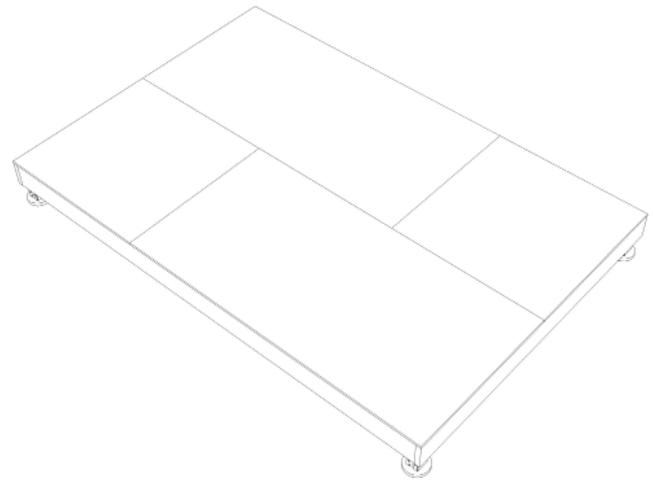
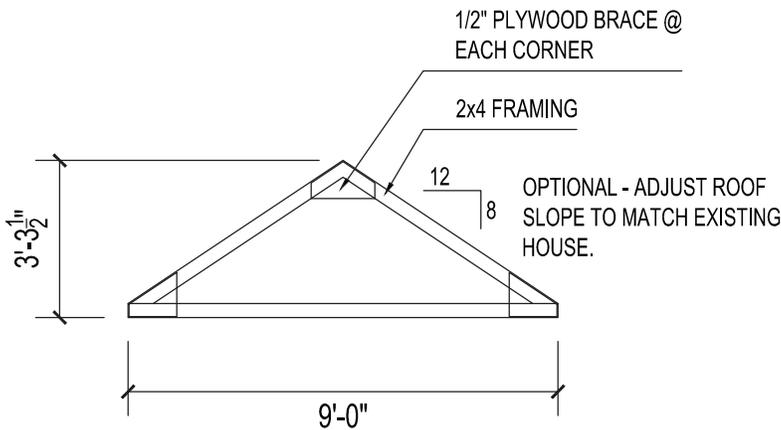


fig.3 - Floor Framing Assembly with sheathing



ROOF TRUSSES SPACED 16" O.C. TOE NAILED TO TOP PLATE. PROVIDE HURRICANE STRAPS WHERE REQUIRED BY CODE.

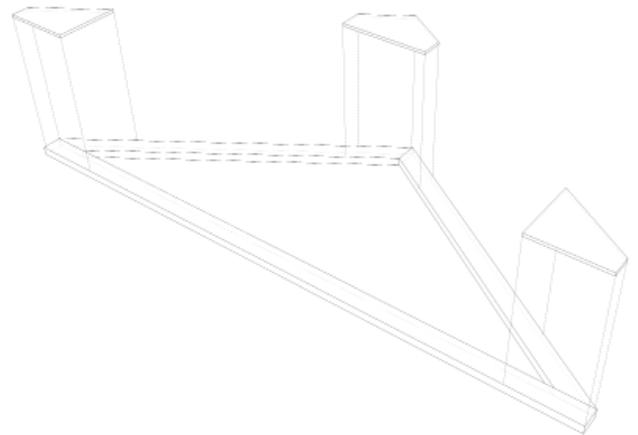


fig.4 - Roof Truss Framing

fig.5 - Roof Truss Assembly

- b) Cut all the bottom chords from 2x4 boards. The number of trusses should equal the number of floor joists cut in Step 2.
 - c) Use the traced outline of the truss to mark the angled cuts on the top chords. Cut all the top chords using a chop saw or radial arm saw set to the proper angle.
 - d) Cut the joint braces from 1/2" or 3/4" exterior grade plywood or OSB. These pieces don't need to be sized exactly but should not overhang the truss members when attached (1/8" inset from edges of truss members is ideal).
NOTE: Use smaller scrap pieces from floor sheathing for these pieces.
 - e) Position the truss members on top of the traced outline. Optional – Nail the members together.
NOTE: The optional nailing is not the primary fastening method.
 - f) Nail the braces to the truss members, being careful to maintain the alignment of the members.
See fig.5
 - g) Repeat Steps 3-e and 3-f for each roof truss and set all the trusses to the side until it is time to construct the roof.
4. Construct end wall frame. (we are presenting only one construction technique for this design, but there are other framing methods. Feel free to use your experience to build this design using your preferred construction method)
- a) Mark the diagram from step 3-a to aid in cutting the top chords of the end wall. Draw a line 1.5" from and parallel to

the top of the top chord. Mark a vertical line 6" in from the edge of the truss frame diagram, designating the bottom end of the top plate.

- b) Use this modified diagram to mark 2x4 boards for cutting. Cut 4 members to this size. 2 for each wall.
- c) Cut 2 members to the total length of the wall for sill plates. For walls with doors, the sill will be cut once the wall is raised into place and fastened.
- d) Mark the angle from the vertical to the top chord on the short side of a 2x4 and cut 4 boards so that the length of the board is 8'-0" (unless otherwise noted in fig.6a or fig.6b)
- e) Layout the 5 cut members on the floor platform per fig.6a or fig.6b.
- f) Nail all the members together, checking for square as you go.
- g) Position the wall frame 3.5" from the edge of the floor, check for square and toe nail it into place from the bottom side. This will help as you raise the wall into place, acting as a pivot point and also helping keep the wall aligned as you construct it.

NOTE: For the second wall on some designs, this step may not be possible. In that case, allow the frame to overhang the floor platform.

- h) Mark the center of each stud on both the bottom and top chords.
- i) Use the constructed frame to mark the lengths and angles of each wall stud (2x4 boards).
- j) Cut all full length studs and position in frame.

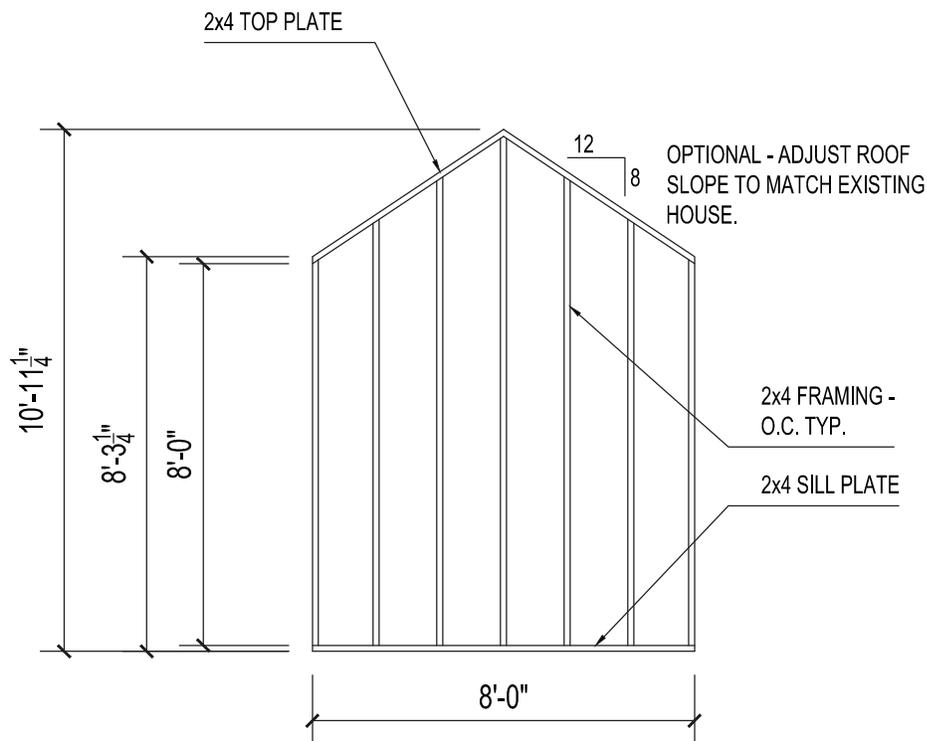


fig.6a & 6b - End Wall Framing

- k) Nail all studs to the frame, using the marks to ensure that the studs are vertical.
- l) For walls with windows or doors:
 - 1. Small Windows (<24" wide framed opening required):
 - i. Review manufacturer's requirements for framed window opening dimensions and adjust dimensions from those in design.
 - ii. Cut two members to the width of the opening and nail in place per fig.6a or fig.6b. Adjust positioning based on required framed opening. See manufacturer's requirements.
 - 2. Large Windows (>24" wide framed opening required):
 - i. Review manufacturer's requirements for framed window opening dimensions and adjust dimensions from those in design.

- ii. Cut a 2x4 members to the width of the opening per fig.6a or fig.6b. Adjust positioning based on required framed opening. See manufacturer's requirements.
- iii. Cut 2 members to the width of the opening plus 3".
- iv. Cut a piece of 1/2" plywood or OSB to match the size of the 2x4 member.
- v. Place the plywood between the 2 members and nail the sandwich together to create the header.
- vi. Cut 2 members to length so that the top of the member is at the head height of the window opening (king studs)
- vii. Nail the king studs to the full length studs on either side of the window opening.
- viii. Nail the header through both the full length studs and toe nailed through the king studs.
- ix. Nail the sill in place through the double studs on each side.
- x. Cut cripple studs to a length from the floor sill to the bottom of the window sill member. Cut enough members to allow for 16" on center spacing.
- xi. Cut cripple studs to a length from the top of the header to the bottom of the top chord.
- xii. Nail the cripple studs into the frame.

NOTE: In most construction headers are larger than 2x4, but in the case of the smaller loads expected with such a small roof area, the use of 2x4 headers should suffice. If you choose to use deeper headers, please adjust the window head height to allow the header to fit (if necessary).

3. For walls with doors:

- i. Review manufacturer's requirements for framed window opening dimensions and adjust dimensions from those in design.
- ii. Cut 2 members to the width of the opening plus 3".
- iii. Cut a piece of 1/2" plywood or OSB to match the size of the 2x4 member.
- iv. Place the plywood between the 2 members and nail the sandwich together to create the header.
- v. Cut 2 members to the length from the floor sill to the height of the header.
- vi. Nail these two members to the full length studs on either side of the door opening and through the sill.
- vii. Nail the header through both the full length studs and toe nailed through the king studs.
- viii. Cut cripple studs to a length from the top of the header to the bottom of the top chord.
- ix. Nail the cripple studs into the frame.

NOTE: In most construction headers are larger than 2x4, but in the case of the smaller loads expected with such a small roof area, the use of 2x4 headers should suffice. If you choose to use deeper headers, please adjust the window head height to allow the header to fit (if necessary).

See fig.8a for resulting assembly.

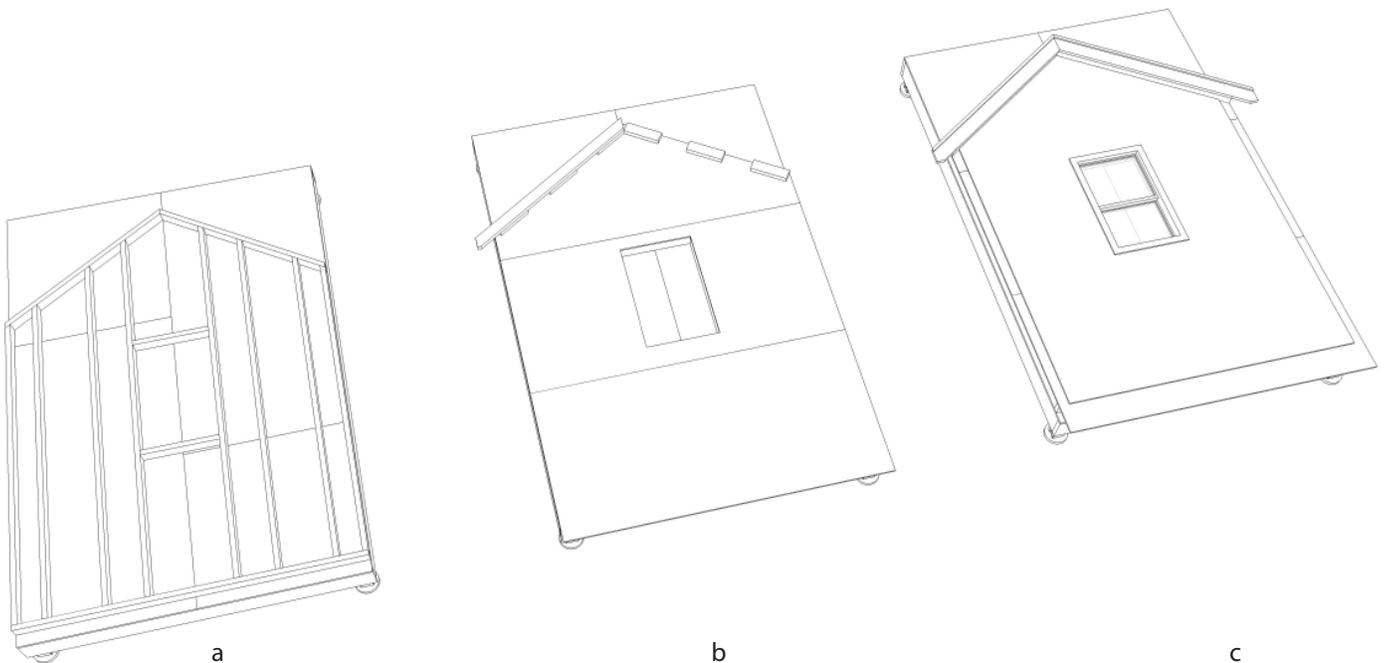


fig.8 - Wall Framing Assembly - Progression

5. Attach sheathing and trim to end wall frame
 - a) Attach 1/2" exterior grade plywood or OSB (oriented strand board) to the wall framing. Bottom of sheathing should start 8.75" below the sill plate to cover the edge of the sill and the rim joist, extending 1/2" below the rim joist. Use nails or 2" deck screws (recommended). To ensure that fasteners hit the framing below, it is best to mark the position of the joists on the plywood (optional – snap chalk lines at locations of framing).
 - b) Allow plywood to overhang framing and use a chalk line to mark cut line at edge of framing. Set circular saw to cut 1/2" depth and cut along these lines.
 - c) Seal all joints in the sheathing with adhesive sealing tape.
 - d) Run a line of sealing tape along each side of the wall as there will be more nails here for siding and trim.
 - e) For walls with windows:
 1. Mark and cut sheathing at window opening.
 2. Place adhesive sealing tape around sides and sill of window opening. Tape the sill first and run the tape up the sides and overlapping the sealant type on the sides.
 - f) For walls with doors:
 1. Cut plywood/OSB to size before attaching.
 2. Place adhesive sealing tape along sides of door opening. (Not applicable to walls with custom-built double doors)
6. Attach drip edge to bottom of wall.
 - a) Cut metal drip edge to 6" less than the total width of the wall. Drip edge profile should allow for a piece of 1" trim to fit under.
 - b) Attach the drip edge with nails to the sheathing at the bottom of the sill plate. The trim will be attached once the wall is raised into place.
 - c) Run a line of adhesive sealant tap at the top of the drip edge.
7. Attach blocking for fascia trim
 - a) Use scrap 2x4 pieces to start blocking for fascia trim. Attach a series of short pieces along the top edge of the sheathing.
 - b) Cut a 2 member so that it runs from the peak of the top plates and runs to 6" past the edge of the wall. Cut the overhanging end to a vertical. Measure down 3.5" from the top of this end and cut horizontally. These faces will later be used to attach the front fascia and soffit boards.
 - c) Attach these members to the blocking from Step 6-a.
See fig.8b for resulting assembly.
8. Attach soffit trim to fascia blocking
 - a) Cut a piece of 1" trim to length, running from the underside of the peak to the edge of the wall. Don't worry about bevel cuts as the ends will not be seen once the shed is finished.
NOTE: All trim should be prefinished. Options include prefinished cedar or PVC options depending on availability.
 - b) Attach this piece to the underside of the fascia blocking.
 - c) Cut a second piece of 1" trim to run from the edge of the wall to the previously attached soffit piece. The top will need to be back cut to allow for a clean joint.
 - d) Attach this piece to the underside of the fascia blocking.
9. Attach fascia to blocking
 - a) Cut 2 pieces of 1x6 and 2 pieces of 1x1 trim to meet at a clean vertical seam at the peak and allow to overhang the wall by 9-12". The ends will be cut off at a later stage.
 - b) Attach the 1x6 members to fascia blocking so that the top is 1/2" past the top of the blocking. Use a scrap piece of 1/2" plywood to measure spacing. This overhang will cover the edge of the roof sheathing.
 - c) Attach the 1x1 members along the top edge of the 1x6 members. These pieces help dress up the gable ends of the roof.
10. Create story lines for installation of siding (see Step 12 for siding)
 - a) The story lines are created before the window is installed (Step 11) so that the lines can be snapped without interference from the window.
 - b) Define a story line along both sides of the wall. The marks should define the top of each row of shingles. This will allow you to see the marks as you go up the wall and not have to resnap lines at each course.
 - c) Snap chalk lines using the story line as a guide.
NOTE: This step should be done even on walls with doors to save time once the wall is in place.
11. Install window (if applicable)
 - a) Follow the manufacturer's specifications to prep the window for installation.
 - b) Insert the window into the opening.

- c) Nail the window flashing to the wall.
 - d) Run adhesive sealant tape around all sides of the window, over the window flashing.
12. Install siding (while there are many siding options, this design uses cedar shakes on the end walls)
- NOTE: For walls with doors, skip this step and proceed to step 13.*
- a) Install a row of #1 wood shingles along the top of the drip edge. #1 shingles are denser than cedar shakes and provide a good platform for nailing of the first visible course. This row of siding will not be visible after installation.
 - b) Aligning the top edge of the cedar shakes to the first line you created in Step 10, install the first visible row, providing a 1/8" gap between each shake to allow for expansion.
 - c) Repeating the previous step, install each consecutive course of shakes as you go up the wall. Make sure to offset the seams from the course below.
 - d) When you reach the window, cut the shakes to size so that the bottom edge aligns with the current course. Also notch around the corner of the window. This helps to ensure that you don't have a long seam at the edge of the window which could lead to leakage.
 - e) Continue up the wall until you reach the trim at the top. When you cut the shakes along the top edge, you don't need to be exact as this edge will be covered by a piece of trim at a later stage.
- See fig.8c for resulting assembly.
13. Raise the wall into place
- a) With the help of 1 or 2 others, tilt the wall assembly into place.
 - b) Use a level to ensure that the wall is plumb
 - c) When the wall is in place and plumb, use a long scrap of 2x4, nailed to the side of the wall and to the floor at a diagonal to brace the wall in place.
 - d) Nail the sill plate to the platform, through the rim joist. Do not nail the sill plate where doors are located.
 - e) Also nail the overhanging plywood to the rim joist.
14. Repeat steps 4 through 13 for the opposite end wall.
- See fig.9 for resulting assembly (bracing not shown).

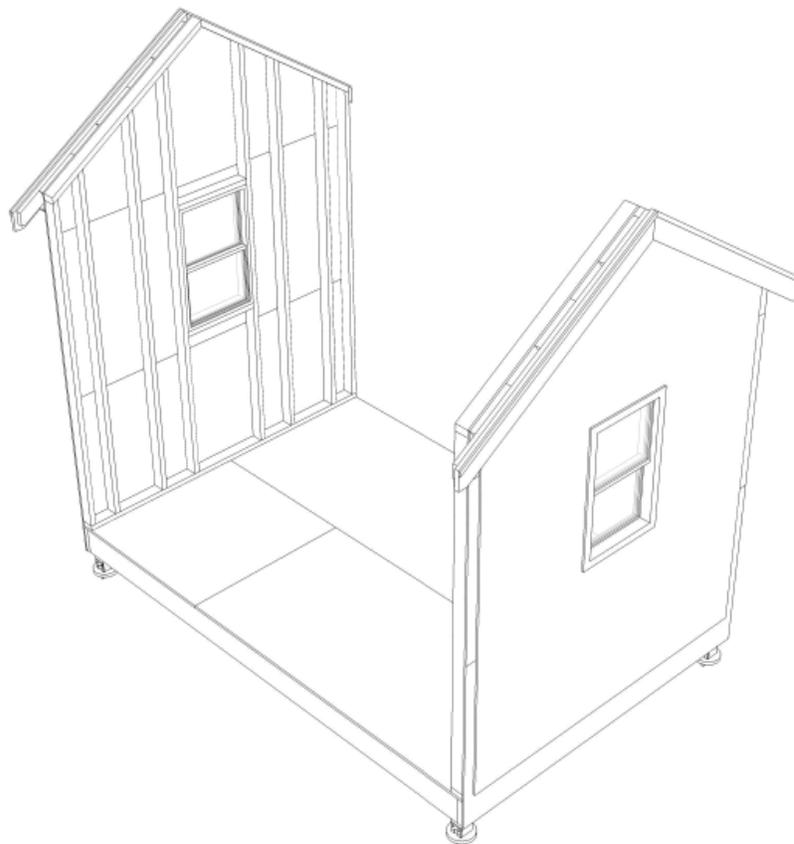


fig.9- Wall Framing Assembly - End Walls in Place

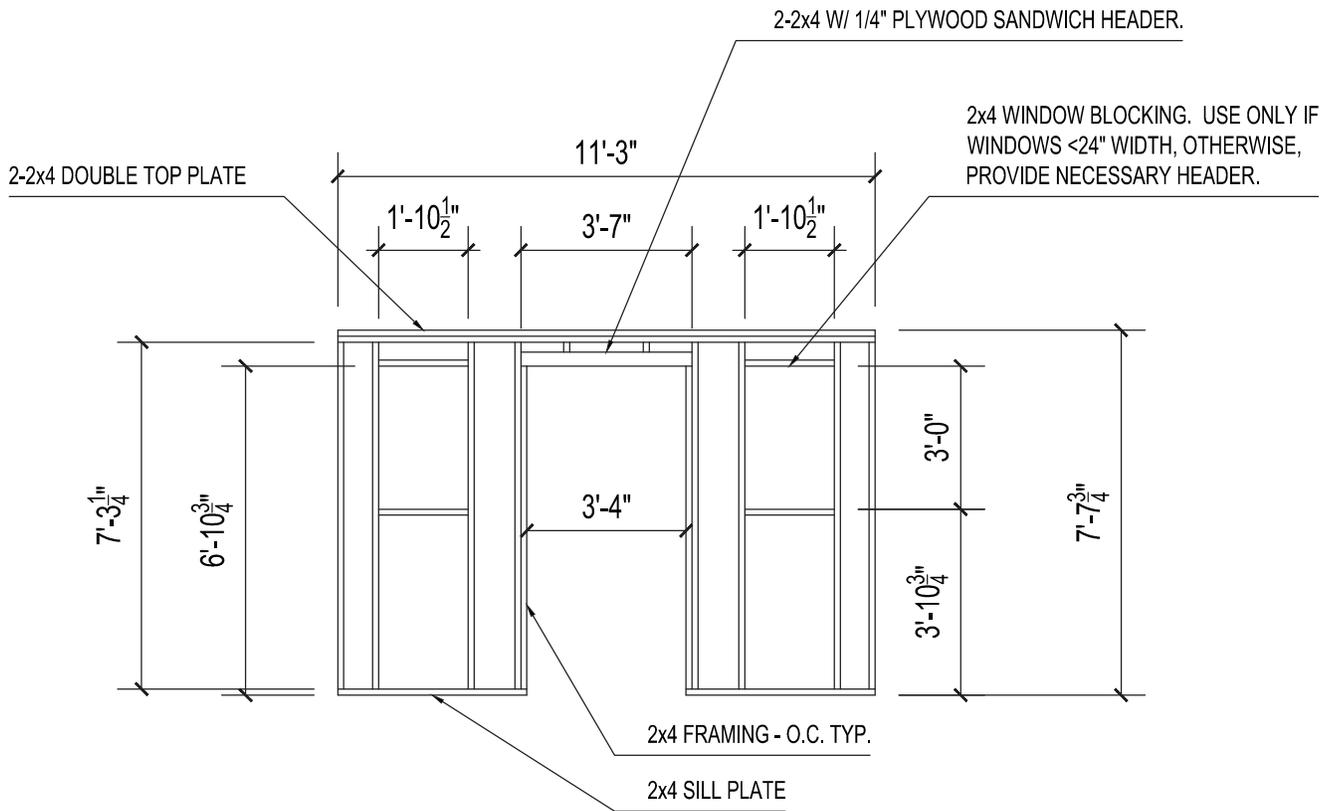


fig.10- Front Wall Framing

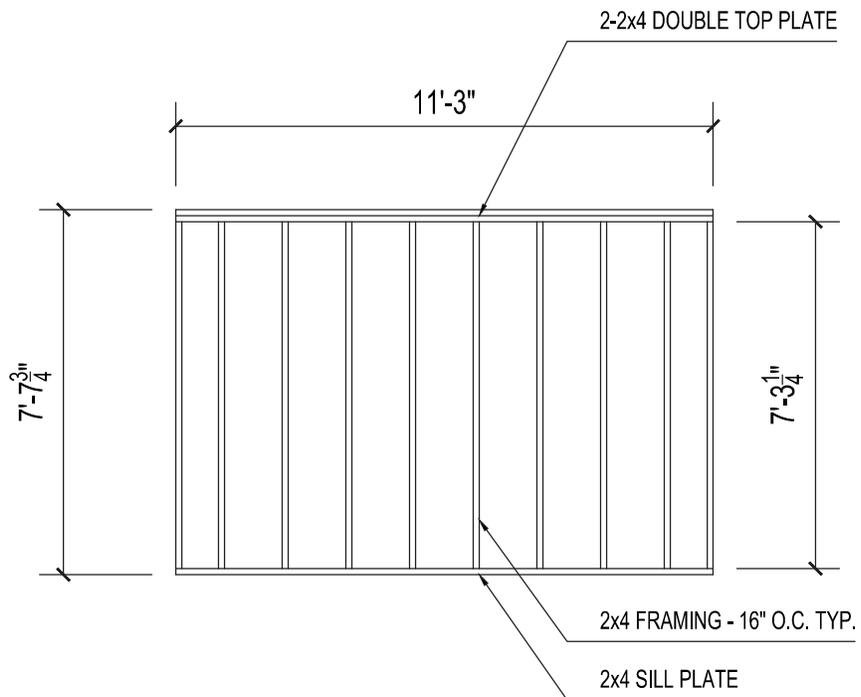


fig.11- Rear Wall Framing

15. Construct rear wall framing.
 - a) Cut 3 2x4 members to 7" short of the total length of the shed. See fig.10 (rear wall) or fig 11 (front wall) for the actual dimension.
 - b) Cut all studs to 7'-3 1/4" (unless otherwise noted in fig.10 or fig.11) The number of studs can be found in fig.10.
 - c) Position 2 of the long members and 2 of the wall studs on the floor frame, nail them together and check for square. Space will be tight as this wall is exactly the same length as the remaining space on the platform.
 - d) Mark the center of the wall studs on both the top and bottom members, spacing should be 16" on center. See fig.10 for layout.
 - e) Attach the full length studs through both the sill and top plates.
 - f) Attach the third full length member to the top plate, creating a double top plate.
 - g) For walls with windows or doors:
 1. Small Windows (<24" wide framed opening required):
 - i. Review manufacturer's requirements for framed window opening dimensions and adjust dimensions from those in design.
 - ii. Cut two members to the width of the opening and nail in place per fig.10 or fig.11. Adjust positioning based on required framed opening. See manufacturer's requirements.
 2. Large Windows (>24" wide framed opening required):
 - i. Review manufacturer's requirements for framed window opening dimensions and adjust dimensions from those in design.
 - ii. Cut a 2x4 members to the width of the opening per fig.10 or fig.11. Adjust positioning based on required framed opening. See manufacturer's requirements.
 - iii. Cut 2 members to the width of the opening plus 3".
 - iv. Cut a piece of 1/2" plywood or OSB to match the size of the 2x4 member.
 - v. Place the plywood between the 2 members and nail the sandwich together to create the header.
 - vi. Cut 2 members to length so that the top of the member is at the head height of the window opening (king studs)
 - vii. Nail the king studs to the full length studs on either side of the window opening.
 - viii. Nail the header through both the full length studs and toe nailed through the king studs.
 - ix. Nail the sill in place through the double studs on each side.
 - x. Cut cripple studs to a length from the floor sill to the bottom of the window sill member. Cut enough members to allow for 16" on center spacing.
 - xi. Cut cripple studs to a length from the top of the header to the bottom of the top chord.
 - xii. Nail the cripple studs into the frame.

NOTE: In most construction headers are larger than 2x4, but in the case of the smaller loads expected with such a small roof area, the use of 2x4 headers should suffice. If you choose to use deeper headers, please adjust the window head height to allow the header to fit (if necessary).

3. For walls with doors:
 - i. Review manufacturer's requirements for framed window opening dimensions and adjust dimensions from those in design.
 - ii. Cut 2 members to the width of the opening plus 3".
 - iii. Cut a piece of 1/2" plywood or OSB to match the size of the 2x4 member.
 - iv. Place the plywood between the 2 members and nail the sandwich together to create the header.
 - v. Cut 2 members to the length from the floor sill to the height of the header.
 - vi. Nail these two members to the full length studs on either side of the door opening and through the sill.
 - vii. Nail the header through both the full length studs and toe nailed through the king studs.
 - viii. Cut cripple studs to a length from the top of the header to the bottom of the top chord.
 - ix. Nail the cripple studs into the frame.

NOTE: In most construction headers are larger than 2x4, but in the case of the smaller loads expected with such a small roof area, the use of 2x4 headers should suffice. If you choose to use deeper headers, please adjust the window head height to allow the header to fit (if necessary).

16. Raise the wall into place
 - a) With the help of 1 or 2 others, tilt the wall assembly into place.
 - b) Use a level to ensure that the wall is plumb
 - c) When the wall is in place and plumb, attach the wall to the adjacent end walls on both sides. Ensure that both walls are still plumb before nailing everything together.
 - d) Nail the sill plate to the platform, through the rim joist. Do not nail the sill plate where doors are located.
17. Repeat Steps 16 & 17 for the front wall.

See fig.12 for resulting assembly

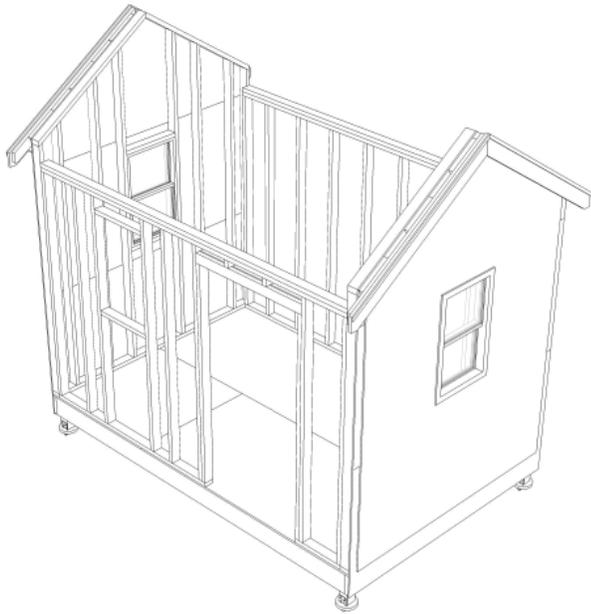


fig.12- Shed Framing Assembly

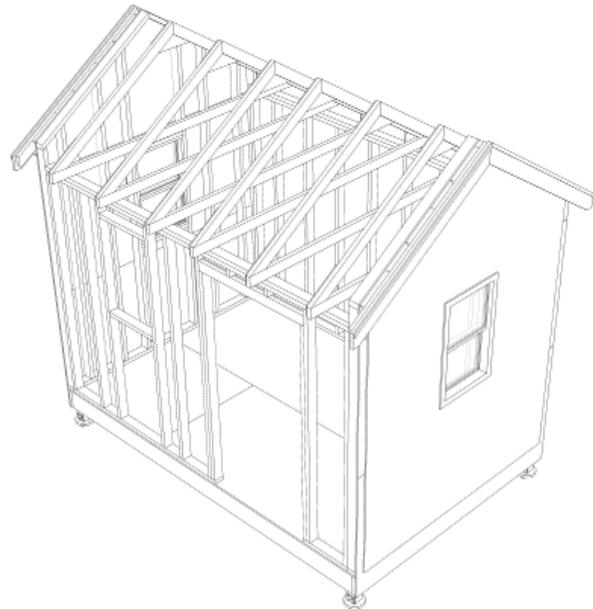


fig.13- Shed Framing Assembly with Roof Trusses Installed

18. For wall with doors
 - a) Using a hand saw, cut the sill plate at the king stud.
19. Install roof trusses
 - a) While on a ladder, mark the top plates on both sides where each roof truss will be attached.
 - b) While still on the ladder, have someone hand you each truss.

NOTE: Do not attempt to carry the trusses up the ladder as this is dangerous and can lead to serious falls.
 - c) Position each roof truss at the the marks you made earlier.
 - d) Toe nail each truss to the top plate
 - e) use a scrap piece of 1" material to brace the trusses until the sheathing can be installed.
 - f) Provide any necessary hurricane strapping as required by local codes.

See fig.13 for resulting assembly
20. Install roof sheathing
 - a) Use a ladder and the assistance of another person.

NOTE: Do not attempt to carry plywood up the ladder as this is dangerous and can lead to serious falls.
 - b) Attach 1/2" exterior grade plywood or OSB to the roof framing. Pretreated products are recommended, eliminating the need for tar paper. Start the sheathing at the bottom edge of the roof trusses and work your way up.
 - c) Overlap the second side sheathing over the first side.
 - d) Tape each seam with adhesive sealant tape, including the ridge
21. Install rear wall sheathing (while there are many options for sheathing the rear wall, we are presenting a design that uses 1/2" ribbed tongue & groove, prefinished siding. If the rear of your shed is more prominent, you may want to go with standard plywood/OSB sheathing and a siding option. Make sure to leave a 3" space on either side for trim)
 - a) Cut the sheathing panels to length so that they overhang the rim joist by 1/2" (match the same overhang as the end wall sheathing).
 - b) Nail the sheathing to the studs, covering the ends of the end walls as well as the framing for the rear wall.
 - c) For rear walls with windows:
 1. Cut all pieces to size, with notches and holes before attaching to framing.
 2. Place adhesive sealing tape around sides and sill of window opening. Tape the sill first and run the tape up the sides and overlapping the sealant type on the sides.
 3. Trim will be provided around these windows to cover tape and window flashing.
 - d) For rear walls with custom-built double doors:
 1. Apply adhesive sealant tape along the bottom of the wall opening and down the face of the wall.
 2. Trim will be provided under this door to cover the tape.

22. Install front wall sheathing
 - a) Measure and cut each 1/2" exterior grade plywood or OSB sheathing piece to fit around windows and doors. Sheathing should completely cover the rim joist and overhang downward by 1/2" (match the same overhang as the end wall sheathing).
 - b) Attach to wall framing, covering the ends of the end walls.
 - c) For windows:
 1. Place adhesive sealing tape around sides and sill of window opening. Tape the sill first and run the tape up the sides and overlapping the sealant tape on the sides.
 - d) For single doors:
 1. Apply adhesive sealing tape along bottom & sides of door opening. (Not applicable to walls with custom-built double doors). Run the tape up the sides and overlapping the sealant tape on the sides.
 - e) For custom-built double doors:
 1. Apply adhesive sealant tape along the bottom of the wall opening and down the face of the wall.
 2. Trim will be provided under this door to cover the tape.
23. Install windows (front and rear walls)
 - a) Follow the manufacturer's specifications to prep the window for installation.
 - b) Insert the window into the opening.
 - c) Nail the window flashing to the wall.
 - d) Run adhesive sealant tape around all sides of the window, over the window flashing.
24. Install bottom trim on end walls.
 - a) Cut a 1x9 piece of trim to the length of the previously installed drip edge
 - b) Position under drip edge and nail through sheathing to rim joist
 - c) Repeat on both end walls.
25. Install door trim.
 - a) For single doors:
 1. For pre-manufactured single doors, the only trim piece is under the door. Cut a 1x9 piece of trim to the width of the door opening.
 2. Nail member directly to the sheathing.
 - b) For custom-built double doors:
 1. Cut a piece of 1x9 trim to a length that is 8" longer than the door opening. (front and rear walls only)
 2. Nail member directly to the sheathing.
 3. Cut 2 pieces of 1x4 trim to the height from the top of the trim piece installed in the previous step to the top of the door opening.
 4. Nail those pieces along the edge of the door opening.
 5. Cut a piece of 1x4 trim to cap the frame around the opening.
 6. Nail this member along the top of the door opening.
26. Install window trim for rear wall windows (if applicable)
 - a) Some windows may come with a trim kit, but in the case yours don't, this trim will help hide the flashing and tape from previous steps.
 - b) Cut 2 pieces of 1x4 trim to the height of the window and nail to either side of the window.
 - c) Cut 2 pieces of 1x4 trim to the length to cover both side trim pieces. Another option is to make these pieces slightly longer than the length of the window + 2 trim pieces.
27. Install end wall single doors (if applicable)
 - a) Follow the manufacturer's instructions for installing their doors.
 - b) Ensure that the door is square in the opening and attach appropriately.
28. Install end wall siding (only applicable to walls with doors)
 - a) Install a row of #1 wood shingles along the top of the drip edge. #1 shingles are denser than cedar shakes and provide a good platform for nailing of the first visible course. This row of siding will not be visible after installation.
 - b) Aligning the top edge of the cedar shakes to the first line you created in Step 10, install the first visible row, providing a 1/8" gap between each shake to allow for expansion.
 - c) Repeating the previous step, install each consecutive course of shakes as you go up the wall. Make sure to offset the seams from the course below.
 - d) When you reach the top of the door, cut the shakes to size. Also notch around the corner of the window. This helps to ensure that you don't have a long seam at the edge of the door which could lead to leakage.
 - e) Continue up the wall until you reach the trim at the top. When you cut the shakes along the top edge, you don't need to be exact as this edge will be covered by a piece of trim at a later stage.

29. Install fascia & soffit trim to front and rear
- Cut a 1x5 piece of trim to a length to fit between the overhanging trim of the end walls.
 - Nail the trim to the ends of the roof trusses and framing of the end walls. Use a piece of scrap to align the top of the fascia so that the outside edge is in line with the plane of the roof sheathing.
 - Using a hand saw cut the overhanging trim of the end walls.

See fig.14 & fig.15

- The first cut should be vertical, aligning the new face with the front/rear fascia.
- The second cut should be horizontal, aligning the face with the bottom of the front/rear fascia.

- Cut a 1x5.5" piece of trim to the same length as the fascia.
- Nail the trim to the underside of the roof trusses and nail through the fascia board.

See fig.16

- Repeat on rear of shed.

30. Install corner trim (there are precast corner trim members available (PVC), but in this instance, we are presenting a method for trim using individual members)

- Cut 1x4 trim members to run from the bottom of the end wall bottom trim to the underside of the soffit on the end wall.
- Miter cut those pieces to fit with the slope of the soffit on the end walls.
- Nail those pieces directly to the sheathing w/ a 1" overhang.
- Cut 1x4 trim members to run from the bottom of the end wall trim to the underside of the soffit on the front and rear walls.
- Nail those pieces directly to the sheathing .

See fig.17

31. Install remaining roof trim

- Cut a triangular piece of trim to fit the gap at the end of each soffit.
- The bottom edge should be approximately 5" but should be verified before cutting.
- Cut another piece with a mitered top edge and aligning with the bottom of the soffit.

See fig.19

- Nail both members in place
- Repeat process for all four corners.

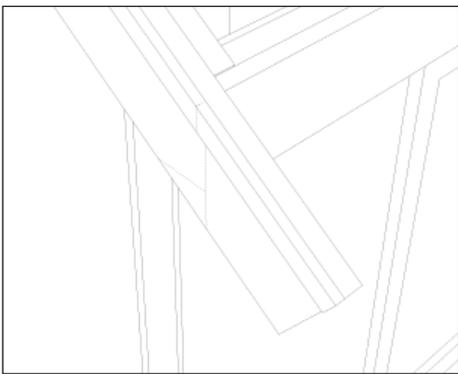


fig.14- Trim Detail

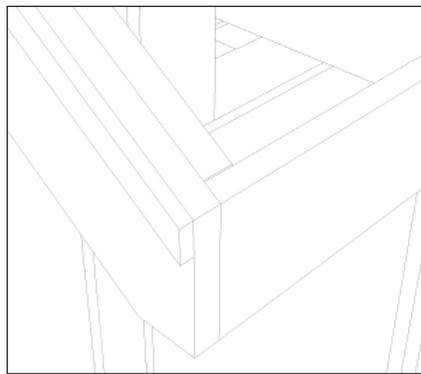


fig.15- Trim Detail

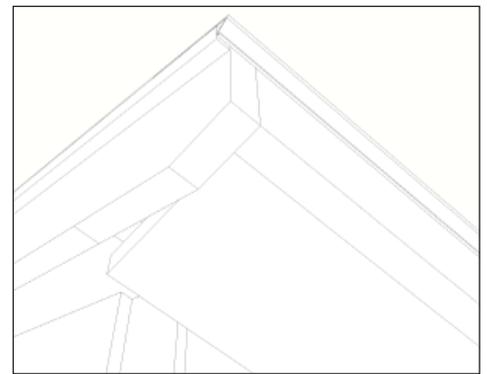


fig.16- Trim Detail

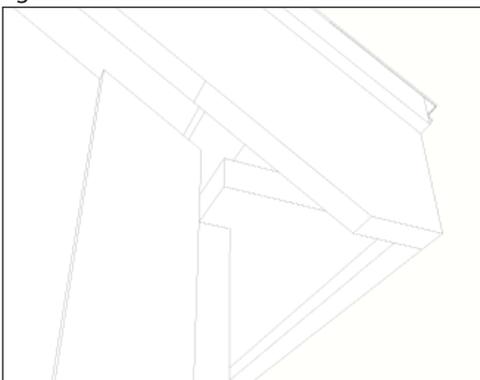


fig.17- Trim Detail

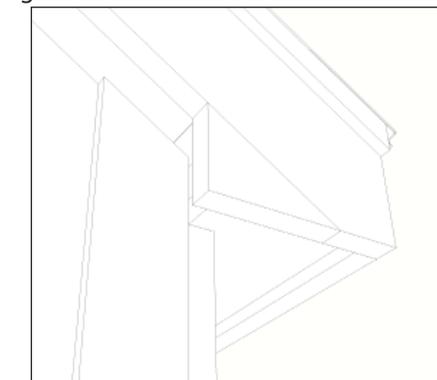


fig.18- Trim Detail

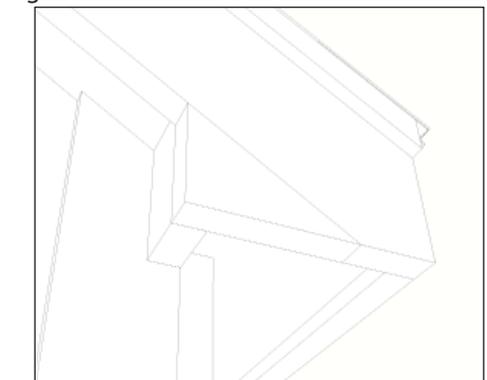


fig.19- Trim Detail

32. Install front wall siding (while there are many options for siding, this design utilizes standard lap siding. Materials for this siding vary from wood to composite materials)
 - a) Create a story pole for the spacing of the siding.
 - b) Ensure that the spacing of the siding allows for the top course to be full. There will be a 4" piece of trim at the top of the wall.
 - c) Start the siding with a starter course or trim piece.
 - d) Nail each course at the top of each siding board.
Optional – Nail at both top and bottom of each course. This is a more secure attachment but is more labor intensive.
 - e) Cut siding around windows and doors and notch as necessary.
33. Install trim at the top of front and rear walls.
 - a) Cut a piece of 1x4 trim to a length from corner trim to corner trim.
 - b) Nail directly to the sheathing, covering the top of the last course of siding.
 - c) Repeat on the rear wall.
34. Install roof drip edge
 - a) Cut the metal drip edge to length, running from edge to edge of the roof.
 - b) Nail into place, with the bottom touching the fascia.
 - c) Run a line of adhesive sealant tape along the top of the drip edge.
35. Shingle the roof (while there are several options for roofing, this design calls for standard asphalt shingles. You should try to match the roofing of your house)
 - a) Start by installing a starter course of ½ shingles. This starter course should align with the edge of the metal drip edge, previously installed.
 - b) Start the first course of full shingles by overhanging a full shingle by 1/4" to 3/8" past the edge of the starter course. Install full shingles side by side until you overhang the last shingle over the opposite side.
 - c) Check with the shingle manufacturer for nail pattern. It may also be a good idea to check with local codes in high wind areas, as there may be a stricter requirement on nail patterns.
 - d) Cut the first shingle of the second course per the manufacturer's specifications and start the second course with the overlap, also specified by the shingle manufacturer.
 - e) Install full shingles side by side until you overhang the last shingle over the opposite side.
 - f) Repeat the process for each course until you reach the top of the roof.
 - g) Repeat the process on the opposite side of the roof.
 - h) Snap a chalk line at the edge of the roof and use a utility knife to cut off the overhanging shingles.
36. Roof ridge shingles. (there are many options for roof ridge caps, this design uses trimmed full shingles)
 - a) Cut tabbed shingles into single tabs and taper the cut inward at the end of the notch.
 - b) Nail down the first piece at the edge of the roof.
 - c) Overlap the next piece and nail down.
 - d) Repeat until you reach the other side.
37. Install custom-built double doors (if applicable)

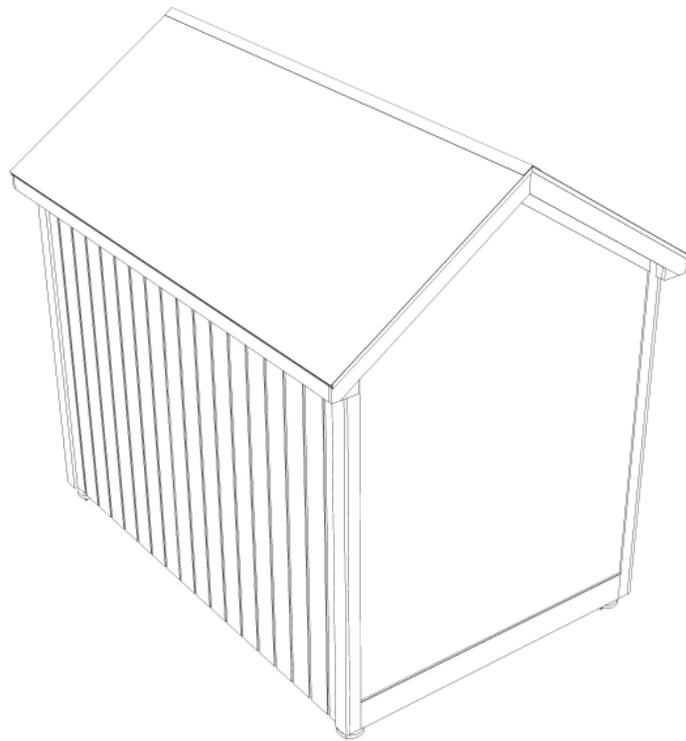
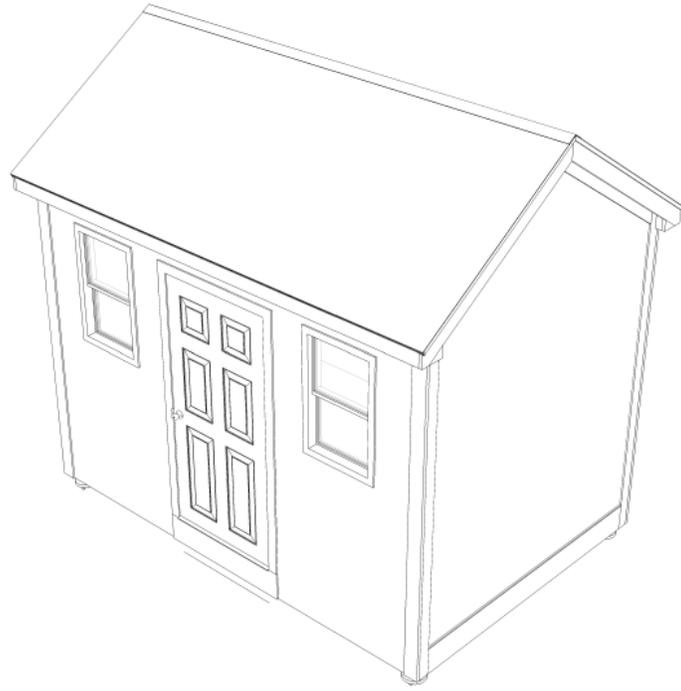
(see supplement at end of this packet for instructions on building doors)

 - a) With the help of an assistant, hold the door in place and attach hinges to the door trim installed earlier.
 - b) Optionally, you can countersink the hinges into the trim.
 - c) Adjust the door before inserting all fasteners to ensure that the doors swing correctly and align with the opposite door.
 - d) Install hardware, including pulls and slide lock.
38. Install ramp (if applicable)

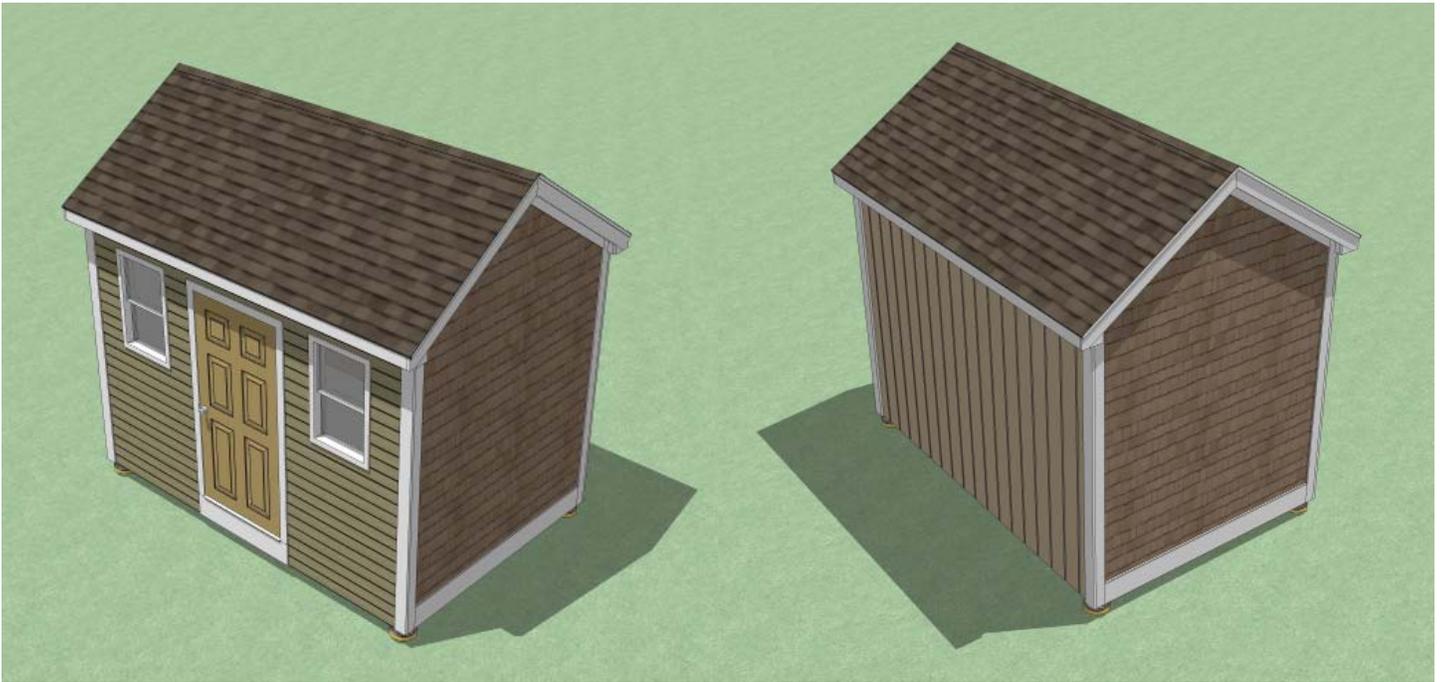
(see supplement at end of this packet for instructions on building and installing ramp)
39. Apply any paint or finishes to surfaces.
40. Fill your new shed with your stuff.

If you have extra materials, you can create some features on the inside of your shed.

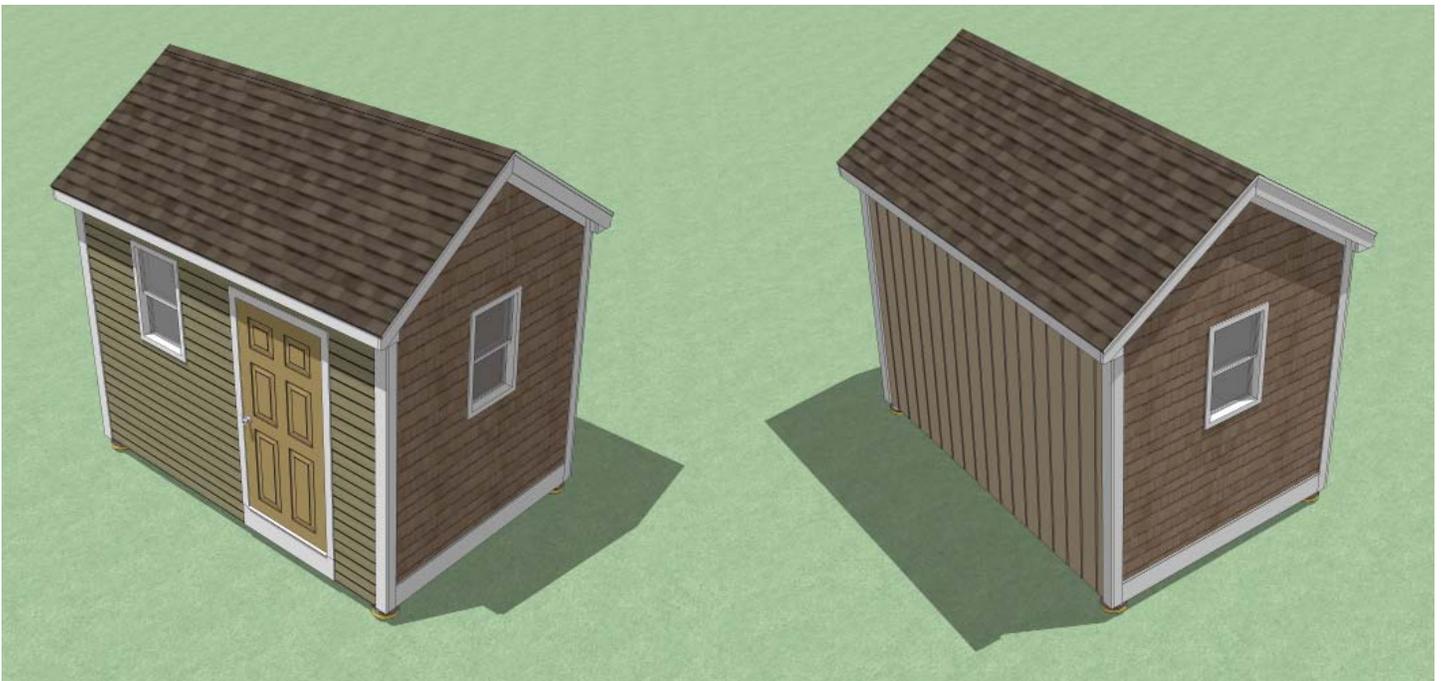
- Use extra 2x4 attached to studs at 6" to 12" above the floor to hold tall implements (rakes, shovels, etc)
- Use extra 2x4 attached at 3'-4' above the floor to attach hooks to hold implements
- Use extra 2x4 and plywood/OSB to create work shelves.
- Use extra 2x4 and plywood/OSB to create triangular shelves in corners
- Store extra wood in the spaces of the roof trusses
- Use your imagination to create the storage or work solutions you need.



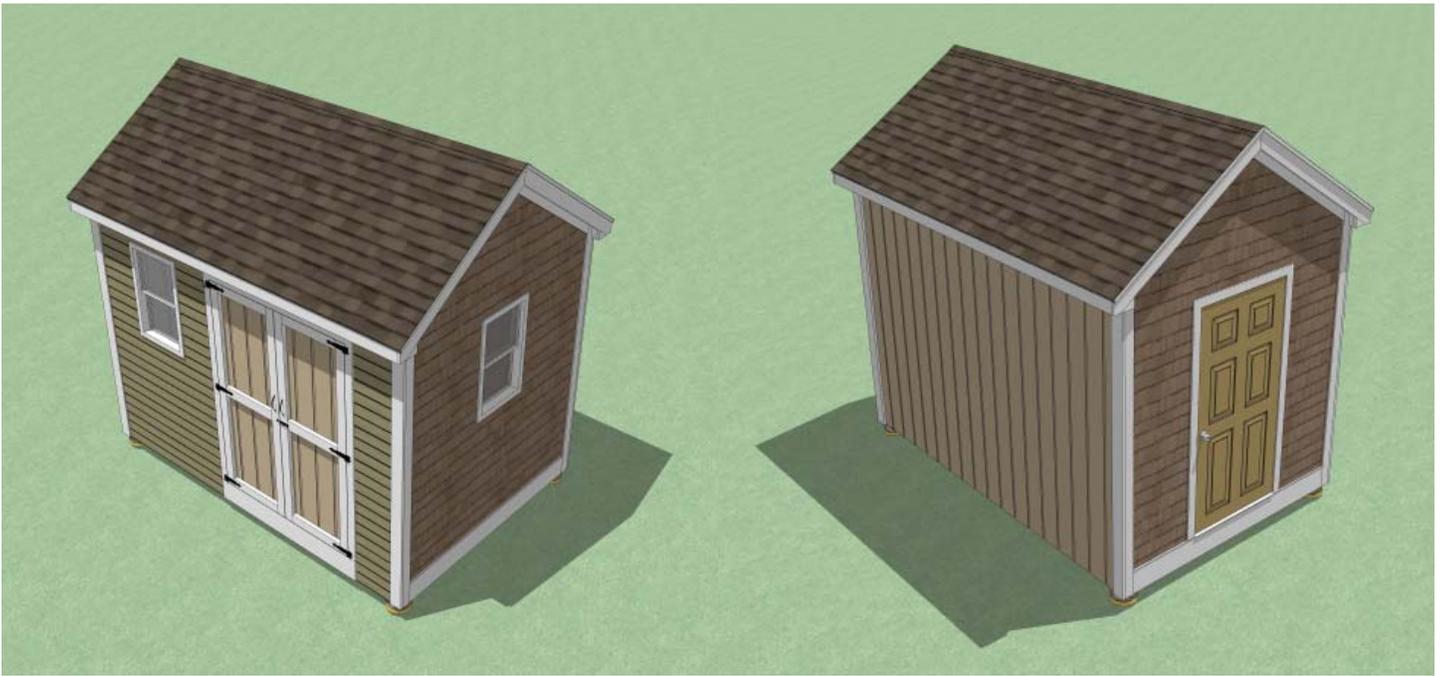
Design Variants



VARIANT #1

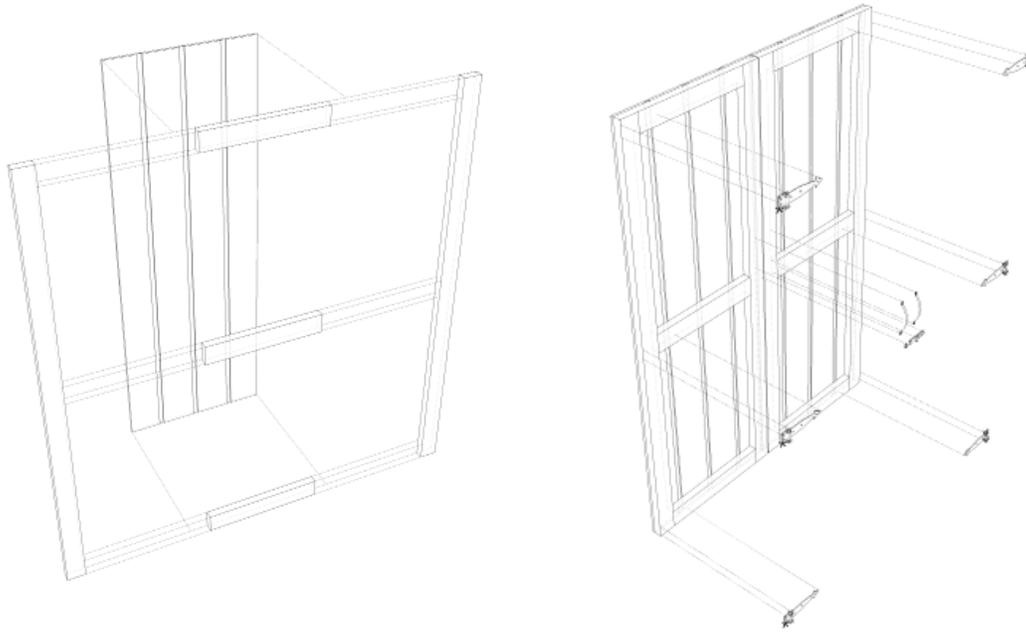


VARIANT #2



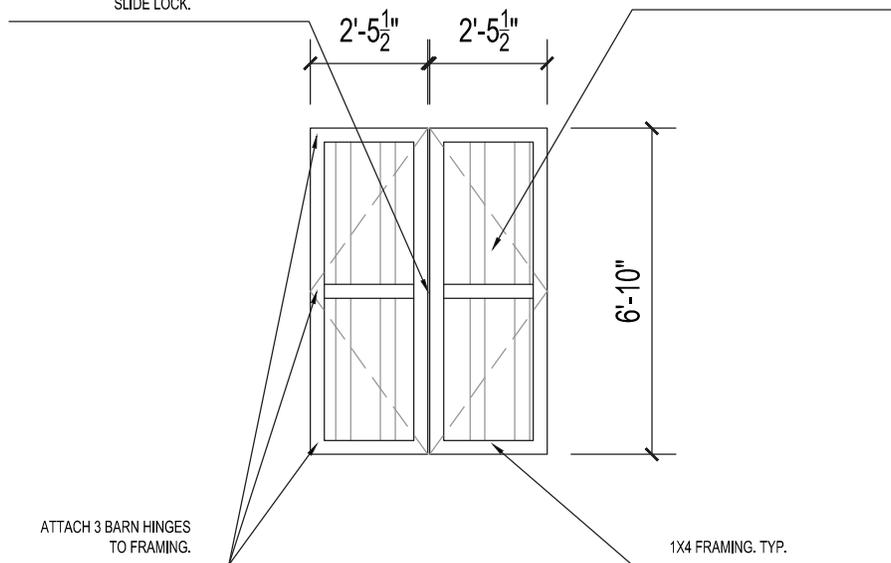
VARIANT #3

Custom-Built Double Doors



PROVIDE DOOR HARDWARE,
INCLUDING DOOR PULLS AND
SLIDE LOCK.

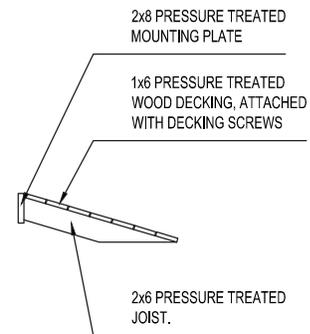
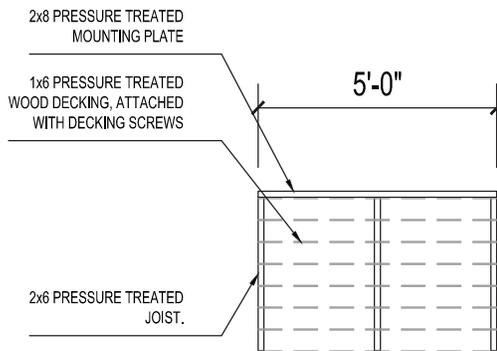
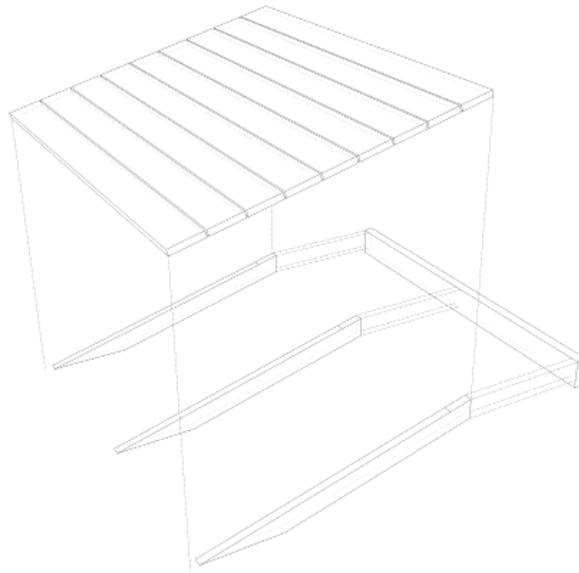
1/2" RIBBED TONGUE & GROOVE
SHEATHING (PREFINISHED),
ATTACHED TO BACKSIDE OF FRAME.



Materials List

<i>Material</i>	<i>Quantity</i>		
1x4 Prefinished Trim - 8'	6	Slide lock	1
1/2" Ribbed Tongue & Groove Board (Prefinished) - 4'x8'	2	Opt. - Interior slide locks (sill or head)	1-2
Barn-style hinges	6	Nails	
Door handles	2	Screws	

Ramp



DIMENSIONS, SLOPE AND QUANTITY OF DECKING MEMBERS DEPENDENT ON HEIGHT OF SHED FLOOR FROM GRADE.

Materials List

<i>Material</i>	<i>Quantity</i>
2x8 Pressure treated board 8'	1
2x6 Pressure treated board 8'	2
quantity may vary depending on field conditions	
1x6 Pressure treated wood decking 8'	7
quantity may vary depending on field conditions	
alternatively, composite decking can be used	
Screws	

Thank You for Choosing Shed Plans 4U

