STORAGE SHED





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Storage Shed

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Enjoying your backyard can be relaxing, but it can also get crowded. There's lawn furniture, gardening tools and supplies, camping gear, maybe even pool equipment. And don't forget the bicycles, tools, and other odds and ends that just can't find a parking place in the garage or basement. An outdoor storage facility is the answer to your bulky storage problems. When you build one with durable pressure-treated Southern Pine, you can count on long-lasting protection for all those items you need to stash away and secure.

This plan is adaptable to meet your storage needs. Three flooring options are specified, and an optional ramp can be built to help get a wheelbarrow or riding mower in or out more easily. Inside, the 2x4 stud wall will simplify the installation of shelves or hardware from which to hang tools and other items. The pressure-treated exterior siding can be painted, stained, or left to weather naturally to a silver-gray color.

When you complete this project, get back to relaxing in your outdoor living environment, knowing that everything is "in its place."

MATERIALS LIST

To build this storage shed, you will need the following quantities of pressure-treated Southern Pine lumber:

NUMBER OF PIECES	MATERIAL	LENGTH	SERVICE CONDITION
2	4x6	10'	Ground Contact
2	2x8	10'	Ground Contact
11	2x8	8'	Above Ground
18	2x6	10'	Above Ground
49	2x4	8'	Above Ground
6	2x4	10'	Above Ground
7	2x6	12'	Above Ground
1	1x6	10'	Above Ground
4	1x8	10'	Above Ground
2	1x4	8'	Above Ground
8	1x2	8'	Above Ground

Plus: 11 sheets, 4'x8', pressure-treated plywood siding, pattern T-111, 1/2" thick.

OTHER MATERIALS NEEDED

- 6d, 8d, 10d, 12d hot-dip galvanized or stainless steel nails (See Fastener Advisory)
- 3 pairs of galvanized butt hinges, Stanley F1798P or similar
- Water-repellent sealer
- Construction adhesive for pressure-treated wood
- Door handles and closure hardware (lock & hasp) of your choice.

Roofing Materials: (to cover 120 sq.ft.):

- 15 lb. roofing felt
- 5 sheets, 4'x8' sheathing plywood, 1/2" thick, pressure-treated
- Galvanized standard eave drips: 2-10', 4-6'
- Roofing nails
- Fiberglass or asphalt shingles

TOOLS REQUIRED

- Circular or crosscut saw
- Hammer
- Square
- Stakes, line, level
- Carpenter's rule or tape
- Screwdriver

CONSTRUCTION OPTIONS

ADVISORY: Eastener & Connector

Fastener & Connector Performance for Treated Wood

Metal products in contact with pressure-treated wood must be corrosion resistant. Examples include flashing, termite shields, fasteners (e.g. nails, screws, and bolts), and all connecting hardware (e.g. joist hangers, straps, hinges, post anchors, and truss plates).

The International Residential Code, Section R319.3 states, "Fasteners for pressure-preservative treated wood shall be of hot-dipped galvanized steel, stainless steel, silicon bronze or copper. **Exception:** One-half inch (12.7mm) diameter or greater steel bolts."

Traditionally, the treated wood industry has recommended hot-dip galvanized or stainless steel fasteners and connectors for wood products treated with Chromated Copper Arsenate (CCA). Hot-dip galvanized or stainless steel fasteners and connectors continue to be recommended for use with alternative wood preservatives (e.g. Alkaline Copper Quat – ACQ – and Copper Azole), but additional clarification is needed to ensure adequate corrosion protection.

Type 304 or 316 stainless steel is recommended for maximum corrosion resistance in more severe exterior applications, such as swimming pools and salt-water exposure. Furthermore, stainless steel fasteners are generally required below grade for permanent wood foundations.

Hot-dip galvanized fasteners and connectors are generally acceptable for above grade applications. Hot-dip galvanized *fasteners* should meet *ASTM A153* (with 2 ounces of zinc coating per square foot minimum for marine use) and hot-dip galvanized *connectors* should meet *ASTM A653*, Class G185 sheet with 1.85 ounces of zinc coating per square foot minimum. Fasteners and connectors used together should be of the same type (e.g. hot-dip nails with hot-dip joist hangers).

Do not use standard carbon-steel or aluminum products in direct contact with pressure-treated wood. Spacer materials or other physical barriers are recommended to prevent direct contact. In addition, electroplated galvanized metal products generally have a thinner layer of protection compared to hot-dip galvanized and are typically not accepted by the building codes for use in exterior applications.

Fasteners and connectors coated with proprietary anti-corrosion technologies (other than stainless steel or hot-dip galvanized) are also available for use with treated wood. Consult individual hardware manufacturers for specifics regarding the performance of their products with treated wood.

This plan calls for a very heavy-duty 2x6 floor. It is designed to support heavy lawn equipment and large containers. If your storage needs are less demanding, consider a floor of 3/4" exterior grade plywood (three 4'x8' sheets required), or a floor of pressure-treated 1x6 boards (eighteen 10' lengths required).

CONSTRUCTION STEPS

1. Determine exact location of your storage shed. Position 4x6 skids at ground level parallel to the front and rear of the shed. Use stakes, line, and level to aid placement of skids.

2. Cut the two 10' 2x8s to 9'-11" and four of the 8' 2x8s to 7'-8" long. Build the 2x8 base frame with these members, using 10d nails and construction adhesive. Use a double 2x8 on each side. Refer to plan and detail section "D".

3. Toe-nail base frame to 4x6 skids using 12d nails and construction adhesive. Check to be sure base is level and square.

4. Install seven 2x8 floor joists (cut 7'-8") 16" on center, according to plan. Attach to base frame using 10d nails (end nailing), 12d nails (toe-nail), and construction adhesive. Check each joist/frame joint for square.

5. Attach a 10' 2x4 (trimmed to 9'-11") to top front and rear edge of base frame; use 10d nails. This becomes a plate for 2x4 stud wall.

6. Install 2x6 floor. Trim the eighteen 10' 2x6s to 9'-11". Attach to base frame and floor joists using 10d nails and construction adhesive.

7. Fabricate the rear 2x4 stud wall using 7'-7½" lengths. Use a double 2x4 on each end, with studs 16" on center, plus an extra stud at the center. Nail studs to 9'-11" 2x4 top and bottom members using 10d nails. Refer to plan and detail section C. Attach finished wall frame to 2x4 plate with 10d nails and construction adhesive.

8. Fabricate the two side wall 2x4 frames using 7'-7½" lengths 16" on center. Start at the center of the 7'-4" wall section and space studs as shown on the plan. Nail studs to 2x4 top and bottom members using 10d nails. Attach finished wall frame to ends of floor boards using 10d nails and construction adhesive.

9. Fabricate front wall 2x4 framing using 7'-7½" lengths. End sections are double-end 2x4s with a center stud nailed to common 2x4s top and bottom. Finished wall frame is 2'-10½" wide. Attach to 2x4 plate using 10d nails and construction adhesive. At the doors, the inside 2x4s are cut 6'-9" from top of base frame to support double 2x6 header (4'-3" long) over door opening. Use 10d nails for all framing assembly. Refer to Sections A & B for details.

10. Connect wall frame sections with 2x4 top plates. Use 7'-11" lengths at the sides and 9'-4" lengths front and rear; attach with 10d nails. Front and rear top plates become rafter supports. Wall framing is complete; check for square.

11. Cut 2x6 rafters from 12' lengths. Refer to plan for roof slope and notch detail.

12. Cut two 2x4 supports for the 1x6 ridge board; make each support 2'-9" long. Notch one end to receive 2x6 end rafters. Toenail into place at center of side walls using 12d nails. Attach 1x6 ridge board using 8d nails and construction adhesive. Ridge board should extend 1" above 2x4 center support.

13. Install roof rafters 2'-0" on center. Nail to ridge board using 10d nails; toe-nail to rafter support using 12d nails. Framing is complete.

14. Enclose wall framing with treated plywood siding panels. Attach to stude using 6d nails and construction adhesive.

15. Attach 1x8 fascia to ends of rafters using 6d nails and construction adhesive.

16. Cover roof framing with 1/2" sheathing plywood; use 6d nails and construction adhesive. Add a layer of roofing felt. Attach galvanized eave drips to roof edges with roofing nails. Install shingles with roofing nails.

17. Complete trim work. Install corner trim to cover plywood siding joints, using 1x2 material. Add 1x4 trim to cover siding panel joint on side walls; trim 8' lengths to fit between corner trim. Cut 1x8 material for exterior gable trim, matching the profile of the rafters. Attach flush with edges of roofing and 1x8 fascia. Install all trim using 8d nails and construction adhesive.

18. Build the two doors. Cut two panels of treated siding 2'-0" wide by 6'-8" high. Attach the 2x4 frame as shown in the plan. Hinge side of 2x4 frame is flush with edge of panel. Recess top and door handle side of frame 1" from edge of siding panel. Recess bottom member of door frame 2" to clear floor boards when door is closed. Add diagonal 2x4 brace. Build frame using 10d nails and construction adhesive. Attach siding to frame using 6d nails and construction adhesive. Hang doors using the galvanized butt hinges and screws. Add your choice of door handles, plus some kind of lock and hasp for security, if desired.

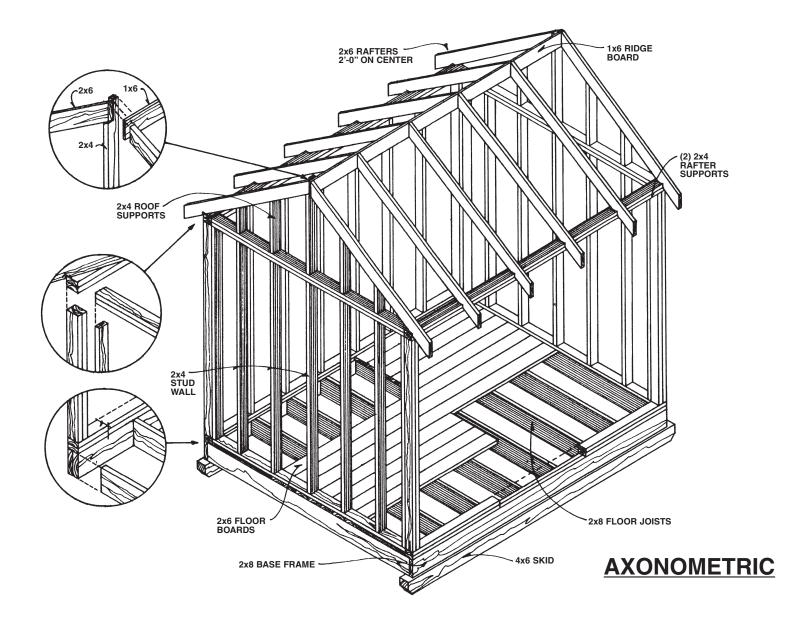
19. Refer to the plan if you want to build the optional 3'x4' ramp to help you move heavy tools and equipment in or out more easily. Cut a 2x8 diagonally for the sides; add a 4' length to the ends, plus a 2x6 and 2x4 brace inside. Use 10d nails and construction adhesive to build this simple frame. Attach a treated siding plywood panel to the top using 6d nails and construction adhesive.

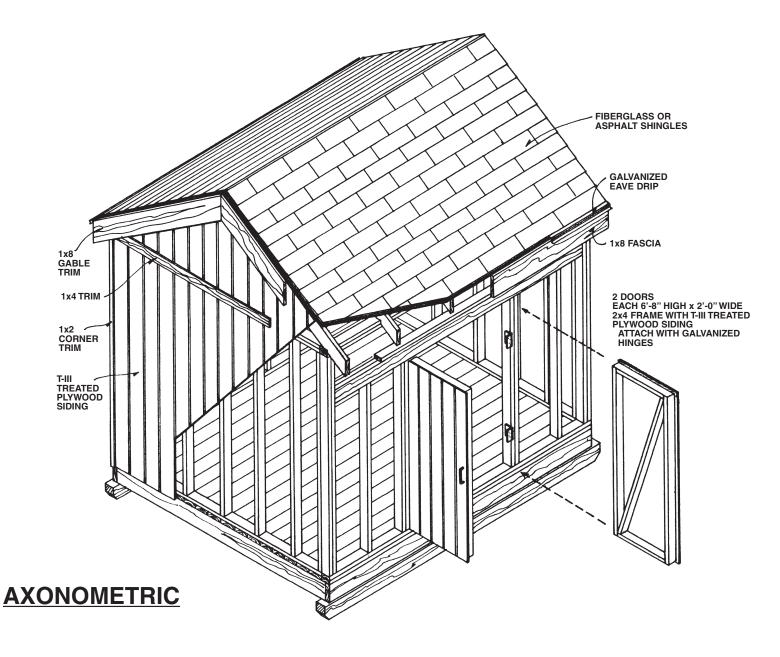
20. Now that construction is complete, apply a coat of water-repellent sealer to the floor and all exterior wood surfaces.

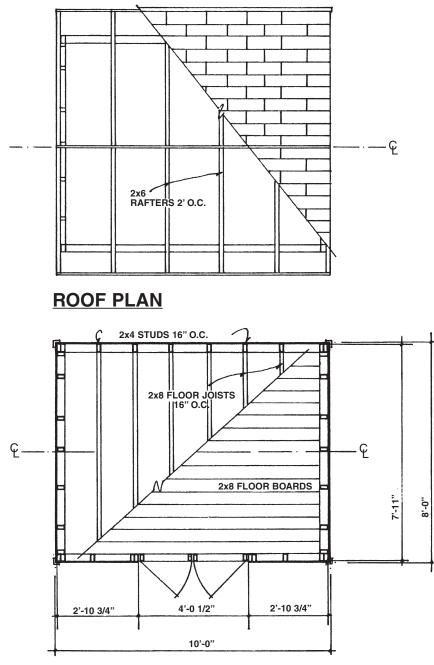


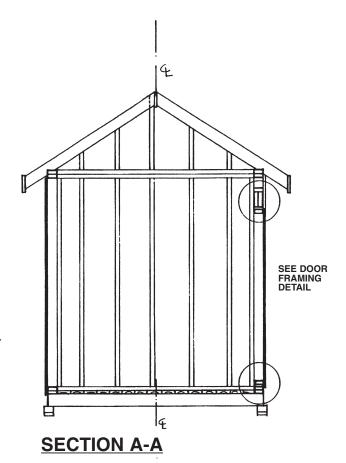
These plans and the information contained herein will help you achieve the best possible results in working with Southern Pine lumber products. The conditions under which lumber is used in construction vary widely, as does the quality of workmanship. Since neither the Southern Pine Council nor its members control the method of use or the quality of workmanship in structures built with lumber, they do not warrant lumber performance or design in completed structures.

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FLOOR PLAN