

# Steps in Building a Shed

The design and location of your new shed will depend on how it will be used - a shed for storing tools will be much simpler than one you intend to use as a small shop. For example, a large shed for housing wheeled equipment will need a ramp leading up to a double barn-style door or an overhead garage door and perhaps a concrete floor. A shed that doubles as a workshop may have plywood floors, insulated walls, windows for light and ventilation, overhead lights, and a few GFCI electrical outlets.

Although no rule says a shed must match the style of the house, using elements of roof design, siding treatment, or paint colour can help unify the property and make the shed an attractive feature of your yard rather than an obvious add-on.

Put your shed in a convenient location, but also take into account such things as terrain and soil drainage, easy access to utilities, sun exposure, and view.

## Building Codes and Permits

The building codes you must follow for a shed differ depending on whether it will just be for storage or will have plumbing, heating, wiring, and interior walls. Another set of rules could apply if you want to house livestock. Contact your local building department before you begin. In some localities, you may not need to get a building permit if the shed is under a certain size and is not built on a permanent foundation. There may also be rules about location (setbacks from property lines or existing structures on your property), size, and roof design that will affect your plan. After determining what codes apply, choose a plan that fulfils your overall requirements and can be built within your budget.

### Project Basics



<b>Project:</b>	Moderate to difficult, depending on type of shed
<b>Estimated Project Time:</b>	2 to 6 days, depending on whether working from a kit or from scratch
<b>Start Tips:</b>	Check local codes before you begin.
<b>Safety Tips:</b>	Wear safety goggles, hearing protection, and a dust mask when cutting lumber with a circular saw.
<b>Recommendation:</b>	Do-it-Yourself

### Tools and Materials:

2x4s and 2x6s for frame  
 Circular saw  
 Safety goggles  
 Hearing protection  
 Dust mask

Window (optional)  
 Ladder  
 String  
 Roofing materials (including roof sheathing, tar paper, roll roofing or

Work gloves  
Drill/driver  
Hammer  
Measuring tape  
Framing square  
4-ft. level  
3/4- or 5/8-inch plywood or OSB sub flooring  
Nails/screws  
Plywood or other sheathing

shingles, roofing nails, staples and  
staple hammer, etc.)  
Siding  
Door (1x8 boards or plywood, or stock  
double doors)  
Door hardware and other hardware

## Instructions

### Plans, Kits, and Prefabs

#### *Plans*

Building a shed from a plan with stock materials is well within the range of most do-it-yourselfers. A good set of plans will provide detailed materials and cutting lists, clear diagrams, and step-by-step instructions that people with basic carpentry skills should be able to handle. Typically, when starting with a level site, building a small shed from scratch will take at least two or three weekends.

#### *The Kit Advantage*

Easy-to-build kits for the do-it-yourselfer are available in wood, vinyl, or metal. Prices often are comparable to the retail cost of the materials alone. Most retailers also offer professional installation or can refer you to a local contractor. The assembled kit can range from a barely acceptable and not the least bit attractive utility shed to a fine-looking, durable building that rivals house construction.

The pieces are all pre-cut; some elements, such as roof trusses or wall sections, may be preassembled. Depending on the shed size, design, and the degree to which the kit comes preassembled, you and a helper may be able to erect the shed in as little as a few hours with only a hammer, drill/driver or screwdriver, measuring tape, and level. A weekend of work is probably more typical. Kits may or may not come with materials for a floor, but you must always provide the foundation.



Fig. 1 (Courtesy of Summerwood Products)

#### *Prefabs*

If you want a nearly instant outbuilding, you can buy a prefab (Fig. 1). Some of these units are delivered and set up by trained installers or subcontractors. Others come in kit form for you to erect on site. Before you buy, compare construction details, options, services, prices, warranties, and the company's reputation. You probably will be responsible for some or all of the site preparation. You may be able to support a small shed on pressure-treated landscape timbers or a bed of gravel. Larger shed will need piers or a foundation matched to the structure.

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## Foundations

The foundation provides a stable base for the shed. The type you need depends on the size and weight of the structure, and to some extent the type of ground it rests on. A small shed of less than 100 square feet generally can sit on pressure-treated 4x4 skids or concrete blocks that have been cut into the sod and set level. If there is minimal or no frost heave in your area, you can also pour concrete into parallel trenches 8 to 10 inches wide and 12 inches deep. Skids may be considered nonpermanent foundations and eliminate the need for a permit. Be sure to check before building.

A larger shed will generally require a traditional foundation - pier-and-girder, concrete or block wall, or concrete slab - with footings that extend below the local frost line.

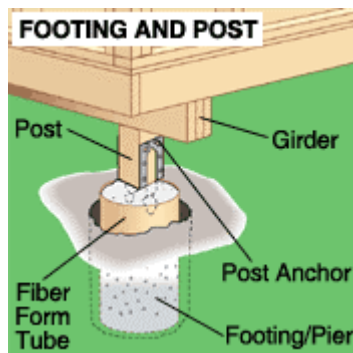


Fig. 2

One of the most economical and easiest ways to support a heavy shed is with a combination of concrete piers and posts. Even on a sloping site, you can pour piers into preformed tubes that extend a few inches above ground, and insert a post anchor in each one before the mix hardens. Then you can mount posts and cut them all off at the same level to support the shed floor frame. (Fig. 2)

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## Building a Storage Shed

If you're a first-time builder with only basic tools and skills, work from a reliable plan with detailed instructions. Take the lead from professional kit builders, and pre-cut your lumber, or at least all the pieces as needed for each stage (such as for floor, wall, and roof systems).

**Note:** Below is a general overview concerning several of the steps involved when building a basic storage shed. For the details on foundations, flooring, framing, roofing, installing windows and doors, siding, etc., refer to your actual plan and to publications on these topics. Keep in mind that the procedures mentioned below might differ from those for your particular plan.

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Fig. 3

### 1) Build the Flooring

After the foundation is built, use 2x6s to build a frame of floor joists set 16 in. on centre, and attach 3/4- or 5/8-inch plywood or OSB sub flooring. (Fig. 3)



Fig. 4

### 2) Frame Up the Walls

Frame up the four walls with 2x4 studs set 16 inches on centre. Depending on the style and size of shed you are building, the dimensions for each wall may vary. Also remember that one wall will include a doorframe for the door you will install in a later step. Check each wall for square, and nail on plywood or other sheathing. (Fig. 4)



Fig. 5

### 3) Raise the Walls

With a helper, raise the first wall into position, adjusting it until it is plumb. Use a 2x4 brace to keep the first wall in position (Fig. 5). Install the other walls, following your plan's instructions, again checking for alignment.



Fig. 6

#### 4) Make and Install the Roof Trusses

You can make your own roof trusses by joining timbers with plywood gussets or truss plates, or use solid rafters (Fig. 6). Create one truss per stud bay.



Fig. 7

Set and brace the end roof trusses first. Then you can string guidelines, and tip up and nail the trusses between them (Fig. 7). Install roof sheathing next.



Fig. 8

You can finish the gable ends of the roof structure with an extra layer of framing covered by a rake board. (Fig. 8)



You can also install an overhang on the sides that protects the siding. Add a fascia and soffit, and rake board to the eaves. (Fig. 9)

Fig. 9



### 5) Install a Window

If you'll be working in the shed, you can cut out the sheathing over a framed opening, and install a small window for natural light. (Fig. 10)

Fig. 10



### 6) Add Trim and Siding

Install the trim as needed, including around the doorframe, window, and corners. Corner trim may seem like an elaborate extra, but corner boards make it possible to install full-wall siding with no joints. (Fig. 11)

Fig. 11



Fig. 12

Using a style of siding that matches your house, install siding on the outside of the shed; leave the sheathing unfinished on the inside. (Fig. 12)



Fig. 13

To keep out the weather, run a liberal bead of flexible exterior caulk, such as silicone, between the trim and siding. (Fig. 13)



Fig. 14

### **7) Finish the Roof**

Apply tarpaper to the roof and either roll roofing or strip shingles. (Fig. 14)



Fig. 15

### **8) Install the Doors**

>Use stock double doors, or build one large door on site out of plywood or boards jointed on a braced back frame. Because an oversize door is heavy and may get rough use, hang it with at least three hinges bolted to the shed frame. (Fig. 15)



Fig. 16

### **9) Paint the Trim**

With two coats of paint on the trim; the shed is ready for use. (Fig. 16)