4’ x 8’ Storage Shed Building Plan

# Design

The design of the shed uses conventional construction materials and basic construction techniques. It uses minimal materials. The door can be built or a purchased pre-hung door can be used.

# General Construction Notes

* Door can be framed into the end, but allow an extra stud. Adjust height as needed.
* Roofing can be composition or steel.
* Door can be pre-hung steel door or built on site per plan.
* Shed is easily moved by placing 8’ “peeler” posts under the shed. Use a tilt trailer and come-a-long to roll on. Can be transported in a pickup.
* The roof can be assembled on the ground. Attach roof with metal ties.
* Shed can be built in 6 pieces and assembled on site. Temporarily assemble walls with deck screws. Apply siding being careful not to tie walls and floor together. Layout and cut the gable end siding, but do not assemble. Stack panels flat for transport. Assemble walls to floor. Add roof.
* House wrap can be used as a vapor barrier if desired.

# 4 x 8 Shed Bill of Materials

|  |  |  |  |
| --- | --- | --- | --- |
| **Part** | **Quantity** | **Size** | **Description** |
| Floor Joist | 1 | 2x4x12’ | Fir |
| Floor Joist/Sleeper | 5 | 2x4x8’ | PT Fir |
| Flooring | 1 | 48x96x3/4” | Plywood |
| End Wall Plates | 1 | 2x4x14’ | Fir |
| Side Wall Plates | 3 | 2x4x16’ | Fir |
| Studs/Cripples | 6 | 2x4x16’ | Fir |
| Studs/Cripples | 3 | 2x4x14’ | Fir |
| Headers | 1 | 4x4x8’ | Fir (need 41”) |
| Door (framed) | 1 | 2x4x10’ | Fir |
| Door (framed) | 1 | 2x4x14’ | Fir |
| Door (pre-hung) | 1 | 3-0 | Steel Exterior |
| Siding | 6 | 48x96x1/2” | Composite Siding or T1-11 Plywood |
| Trim | 100 lf | 1x3  | RS trim (estimate) |
| Rafters | 4 | 2x4x12’ | Fir |
| Fascia | 2 | 2x4x10’ | Fir |
| Roof Blocking | 1 | 2x4x10’ | Fir (also use scrap from rafter) |
| Sheeting | 2 | 48x96x1/2” | OSB |
| Roof | 1 roll |  | Roofing Felt |
| Roof | 100 sq ft |  | Shingles or roll roof |
| Roof | 4 | 10’ | Drip edge flashing |
| Framing |  |  | 16d Sinkers |
| PT Framing |  |  | 16d HD Box nails |
| Floor/Roof/Siding/Trim |  |  | 8d EG Box nails |
| Roof |  |  | ¾” roofing nails (will stick through a bit) |
| Door | 3 | 4”  | Tee Hinge |
| Door | 1 | 4” | Hasp |

# Tools

Minimum tool list:

* Steel Tape
* Framing square
* Claw Hammer
* Staple Gun
* Utility knife
* Circular Saw
* Chalk Line
* Drill & 3/16, 3/8 bits (door)
* Phillips screw driver
* Hand saw

Optional Tools:

* Power Miter Saw
* Power Screw Driver
* Pneumatic nailers
* Clamps
* Saw horses
* Reciprocating Saw
* Cat’s Paw
* Nail Set
* Rafter (speed) square

# Directions

## Floor

Cut List

|  |  |  |  |
| --- | --- | --- | --- |
| Part | Qty | Size | Cut From |
| Box joist | 2 | 2x4x96” | 2x4x8 |
| Box Joist | 2 | 2x4x45” | 2x6x12 |
| Joist | 3 | 2x4x45” | 2x6x12 |
| Sleeper | 2 | 4x4x96 | 2x4x8 |
| Sub Floor | 1 | ¾”x4x8 | 3/4x4x8 plywood |

1. Cut Sleepers, box Joists, joists.
2. Lay out the joist location with a square on the long box joists. 24” centers.
3. Frame the joists upside down on a flat surface using 16d galvanized nails.
4. Install the sleepers.
5. Turn over the framed floor and square the framing by measuring the diagonals.
6. Install a full sheet of ¾” T&G sub floor and tack with a few 8d galvanized nails.
7. Double check square and nail 6” O.C. on the edge and 12” in the field. Interior joists can be marked with a chalk line.

## Walls

Note that the top of all walls are cut at a 4/12 angle. Set this up on the miter saw. End wall plates are also beveled.

Cut List End Walls

|  |  |  |  |
| --- | --- | --- | --- |
| Part | Qty | Size | Cut From |
| Bottom Plate | 2 | 2x4x41 |  |
| Top/Plate | 2 | 2x4x(cut to fit) |  |
| Stud | 2 | 2x4x89 1/4” (long side) |  |
| Studs | 2 | 2x4x73 1/4” (short side) |  |
| Studs | 2 | 2x4x79 ¾” (center) |  |

Cut List Door Wall

|  |  |  |  |
| --- | --- | --- | --- |
| Part | Qty | Size | Cut From |
| Top/Bottom Plate\* | 2 | 2x4x96 | 2x4x8 |
| Studs | 5 | 2x4x89 ¼” | 2x4xstud |
| Header | 1 | 4x4x41 | 4x4x6’ (or 8’) |
| Trimmer | 2 | 2x4x78 ½” | 2x4x8 |
| Cripple | 1 | 2x4x(cut to fit) |  |

Cut List Short Wall

|  |  |  |  |
| --- | --- | --- | --- |
| Part | Qty | Size | Cut From |
| Top/Bottom Plate\* | 2 | 2x4x96 | 2x4x8 |
| Studs | 5 | 2x4x73 ¼” | 2x4xstud |

\* Note: Wall top plates can be beveled on the table saw. If full width is desired rip from a 2x10x8’ board. If not be sure to assemble so the siding side is flush. Top plate on the end wall should be cut to fit.

1. Cut the studs to length. Cut the headers, trimmers, cripples, and plates (see plans).
2. Lay out stud, cripple, and trimmer locations on the top and bottom plates. Mark with a square.
3. Frame each wall as shown in the plans. Use 16d sinkers.
4. Square the framing by measuring the diagonals. Optionally you can brace the wall with a scrap of 1x4 (to keep it square).

## Vapor Barrier / Window

1. Install a vapor barrier if desired
2. Install the window.

## Siding

1. Mark the stud center locations on the top plate and the bottom of the box joist before starting. Review plans to determine how siding will overlap the wall frames.
2. Siding should be nailed with 6d or 8d EG nails. Nail edges 6” O.C. ad 12” in the field. HINT: Use a chalk line to mark the center of the studs.
3. Check to see that the framing is square.
4. Start a side and cut out openings for the door. **IMPORTANT. Door opening scrap will be used to construct the door so cut carefully.**
5. Layout the angle on the side wall. CAUTION: Allow for overlap on the end wall. Attach the siding.
6. Tilt up an end/side wall and tack together. Repeat with the other two wall. Check square and nail or screw walls together. Nail the bottom plate into the box joist between the studs (16d galvanized nails).
7. Remove the bottom plate under the door opening using a handsaw or reciprocating saw.
8. Install two corner ties on the each end plate spaced to accept the roof rafter.

## Roof Framing

Cut List Roof

|  |  |  |  |
| --- | --- | --- | --- |
| Part | Qty | Size | Cut From |
| Rafters | 7 | 2x4x69”  | 2x4x12 |
| Fascia | 2 | 2x4x120” | 2x4x10’ |
| Sheeting | 2 | ½” x 36”x72” | Rip from 4x8 sheet of OSB |
| Sheeting | 1 | ½” x 48”x72” | Rip from 4x8 sheet of OSB |
| Blocking | 8 | 2x4 (cut to fit) |  |

1. Mark rafter locations on the fascia.
2. Nail the rafters with 16d galvanized nails.
3. Pop a string line to align the blocking, cut blocking to fit and end nail in place.
4. Square the frame and add the sheeting. Narrow pieces go on the ends. Use 8d EG nails 6” on edge and 12” in the field. Pop string lines to locate interior rafters.

## Roofing

1. Install roofing felt on the sheeting.
2. Install drip flashing around the perimeter (over the trim and fascia).
3. Install the roofing material.

## Roof Installation

1. Lift the finished roof in to position.
2. Fasten using the corner brackets and screws and at least 4 hurricane ties.

## Trim

1. Trim the gable ends to lap the fascia. Nail with 6d EG nails
2. Trim the corners.
3. Trim the window.

## Door

Cut List Door

|  |  |  |  |
| --- | --- | --- | --- |
| Part | Qty | Size | Cut From |
| Vertical | 2 | 2x4x (see below, cut at 45) | 2x4x10’, 2x4x14’ |
| Top/Bottom | 1 | 2x4x (see below, cut at 45) | 2x4x10’, 2x4x14’ |
| Middle | 5 | 2x4x (cut to fit) | 2x4x14’ |

1. Note a 36” pre-hung door may be used.
2. Check the size of the rough in opening. Cut door frame ½” smaller (see plan) than the opening. Top/Side come from one board.
3. Assemble the top/bottom/sides of frame with deck screws. You may wish to pre-drill to prevent splitting.
4. Locate the center piece and drill 1 ½”-2” deep 3/8” holes to counter sink the deck screws. Install two screws per side.
5. Trim the scrap piece of siding to the door size. Check square before cutting.
6. Use the square piece of siding to square the door. Glue and nail (6d EG) the siding to the door,
7. Trim the edges with trim lumber.
8. Trim the door frame.
9. Install the door with hinges and hasp.