

NORTH FAYETTE TOWNSHIP

DEPARTMENT OF COMMUNITY DEVELOPMENT

QUICK GUIDE FOR A RESIDENTIAL DECK OR PORCH ROOF PERMIT



Commonly Referred to as a Shed Roof or Lean-to



Commonly Referred to as a Gable Style Roof



## DECK OR PORCH ROOF CONSTRUCTION REQUIREMENTS

### GENERAL REQUIREMENTS

- All fasteners (nails, screws, bolts) used with treated wood must be approved for contact with treated wood (i.e. typically galvanized or stainless steel).
- The correct type of fasteners must be installed for each connector. (The most common mistake found in the field is using non-structural decking screws or roofing nails for hurricane clips and post to beam anchors).
- A roof cannot be structurally attached to manufactured home in any way; although flashing material only may be installed between the two (2) roofs to keep water from seeping between them.
- The minimum pitch for shingles is 2:1. Shingles shall not be used when the pitch is less than 2:1 unless approved by a registered design professional (i.e. architect or engineer.)
- Snow and ice guard shall be installed for a minimum of 24-inches from the roof eave if enclosing or planned to be enclosed in the future.
- **Roof posts CANNOT be set on a typical slab on grade without a footer.**

### FOOTINGS

- Footings must be a minimum of 36-inches in depth. If solid rock is encountered less than 36-inches in depth, the footer may be poured at that depth.
- Typically, there shall be a minimum of 6-inches-8-inches of concrete under the posts.
- Posts in direct contact with the ground shall be approved for ground contact lumber.
- Footings may be round or square.
  - Typical size ranges from 12-inches to 20-inches square or;
  - 12-inches to 18-inches round.
  - Footings shall be much larger in size if supporting both a deck and roof.
- Footings holes may be backfilled with concrete or soils to grade.
- If holes are filled with concrete to grade, proper post base anchors shall be installed per the manufactured installation instructions.
- Posts and/or post base anchors shall be centered on footings.

### FRAMING

- Minimum post sizing shall follow the attached chart in this guide.
- Minimum roof rafter size, spacing and spans shall follow the attached chart in this guide.
- Minimum beam size and spans shall follow the attached chart in this guide.
- Beams shall be connected to posts per the attached figures in this guide.
- Flashing shall be corrosion resistant metal or approved nonmetallic material that is compatible with the substrate of the structure and the roofing materials.
- Roof rafters shall have a minimum of 1 ½" bearing by way of a Birds-Mouth or C-Cut at the beams.
- Roof rafters for a cathedral ceiling shall have minimum of 1-inch X 4-inch collar ties at a minimum of 4-feet apart.
- Ridge boards shall be a minimum of once (1) size larger than the roof rafters.

- When installing pre-engineered roof trusses; the roof truss specs must be provided and on the job site for the framing/final inspection.
- Roofs shall not obstruct any bedroom egress window.
- If the posts supporting the roof posts are not installed directly on footers, they must be stacked directly on top of the deck posts with blocking to fill in all spaces.
  - Exception: the roof post may extend away from the deck post a maximum equal to the distance of the size of the beam.
    - For example: If a double 2X10 is used for the deck beam, the roof post can extend a maximum of 10-inches way from direct bearing on the post as long as the post is on top of the beam and the cavity is filled with blocking.
- If a beam will be supported at the house wall; a properly supported "beam pocket" shall be installed and appropriate hangers shall be installed if not resting on the "beam pocket".

THE NEXT SEVERAL PAGES OF THIS GUIDE CONTAIN A SAMPLE DRAWING OF A SHED AND GABLE STYLE ROOF.

**(NOTE: THESE SAMPLE DRAWINGS ARE NOT FOR CONSTRUCTION; NOT TO SCALE; AND FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE USED; AND WILL NOT BE ACCEPTED AS YOUR CONSTRUCTION PLANS)**

THIS GUIDE ALSO CONTAINS MANY CHARTS AND INFORMATION FROM THE INTERNATIONAL RESIDENTIAL CODE REGARDING ROOF REQUIREMENTS THAT WILL GUIDE YOU IN THE CORRECT DESIGN OF YOUR ROOF.

**FOR A BUILDING PERMIT, YOUR DRAWINGS AND DETAILS MUST CONTAIN THE FOLLOWING INFORMATION**

- Footer depth; size (round or square) and thickness under the post or how the posts will be properly supported by existing deck posts.
- Style (i.e. gable or shed) and pitch of roof.
- Roofing materials, including snow/ice guard.
- Roof rafter size, spacing, span and how they will bear a minimum of 1 1/2"-inches (i.e. birds-mouth or c-cut).
- Hurricane clips will be installed at all roof rafters and/or trusses.
- Beam size and span between posts as well as the post to beam connection method and beam connection at house method if gable style roof.
- Ledger board attachment details including size, type and spacing of fasteners and flashing type.
- Roof truss specifications if obtained up front. (If not, they may be provided at the framing/final inspection.)

**BE SURE TO PROVIDE ALL OF THE ABOVE INFORMATION WHEN SUBMITTING FOR A PERMIT!**

## MINIMUM POST SIZING

4 x 4 – 6-feet 9-inches for three (3) ply beam (triple header) or 8-feet for two (2) ply beam (double header).

4 x 6 – 8-feet

6 x 6 – 14-feet

## MAXIMUM RAFTER SPANS FOR TYPICAL SPRUCE-PINE-FIR # 2 GRADE LUMBER

2 x 6 at 12-inches on center – 13-feet, 9-inches

2 x 6 at 16-inches on center – 11-feet, 11-inches

2 x 6 at 24-inches on center – 9-feet, 9-inches

2 x 8 at 12-inches on center – 17-feet, 5-inches

2 x 8 at 16-inches on center – 15-feet, 1-inches

2 x 8 at 24-inches on center – 12-feet, 4-inches

2 x 10 at 12-inches on center – 21-feet, 4-inches

2 x 10 at 16-inches on center – 18-feet, 5-inches

2 x 10 at 24-inches on center – 15-feet, 1-inches

2 x 12 at 12-inches on center – 24-feet, 8-inches

2 x 12 at 16-inches on center – 21-feet, 5-inches

2 x 12 at 24-inches on center – 17-feet, 6-inches

## HEADER SIZES AND SPANS

TABLE R602.7(3)  
GIRDER AND HEADER SPANS\* FOR OPEN PORCHES  
(Maximum span for Douglas fir-larch, hem-fir, Southern pine and spruce-pine-fir<sup>b</sup>)

SIZE	SUPPORTING ROOF						SUPPORTING FLOOR	
	GROUND SNOW LOAD (psf)							
	30		50		70			
	DEPTH OF PORCH <sup>c</sup> (feet)							
	8	14	8	14	8	14		
2-2 x 6	7-6	5-8	6-2	4-8	5-4	4-0	6-4	4-9
2-2 x 8	10-1	7-7	8-3	6-2	7-1	5-4	8-5	6-4
2-2 x 10	12-4	9-4	10-1	7-7	8-9	6-7	10-4	7-9
2-2 x 12	14-4	10-10	11-8	8-10	10-1	7-8	11-11	9-0

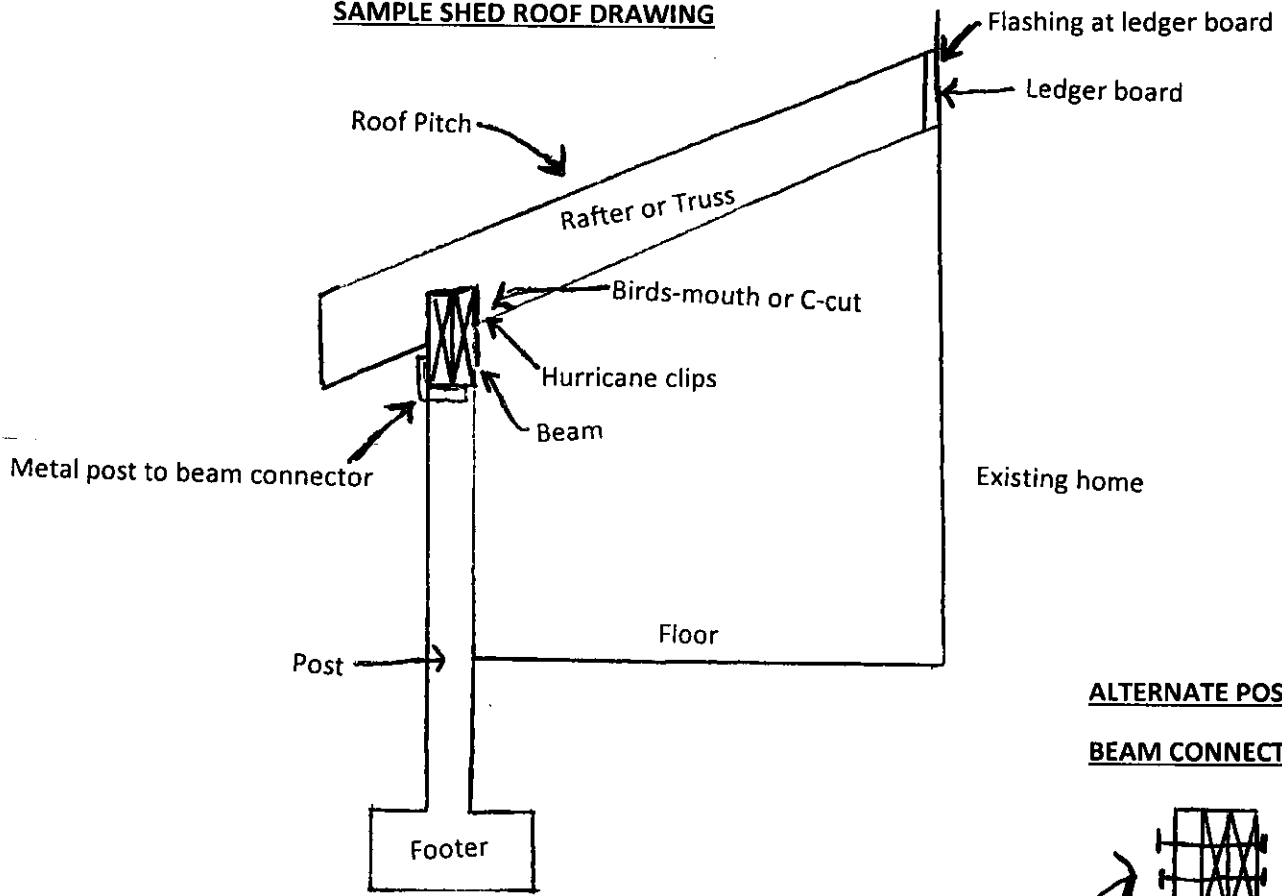
For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa.

a. Spans are given in feet and inches.

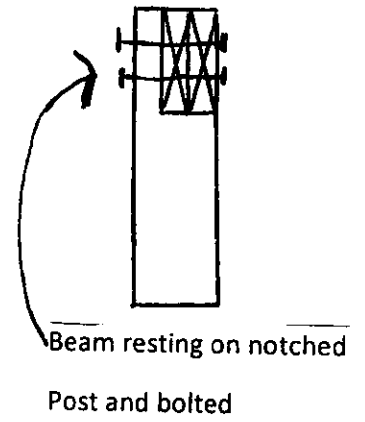
b. Tabulated values assume No. 2 grade lumber, wet service and incising for refractory species. Use 30 psf ground snow load for cases in which ground snow load is less than 30 psf and the roof live load is equal to or less than 20 psf.

c. Porch depth is measured horizontally from building face to centerline of the header. For depths between those shown, spans are permitted to be interpolated.

**SAMPLE SHED ROOF DRAWING**



**ALTERNATE POST TO BEAM CONNECTION**



**SAMPLE GABLE DRAWING**

