



Charter Township of Garfield

Grand Traverse County

3848 VETERANS DRIVE

TRAVERSE CITY, MICHIGAN 49684

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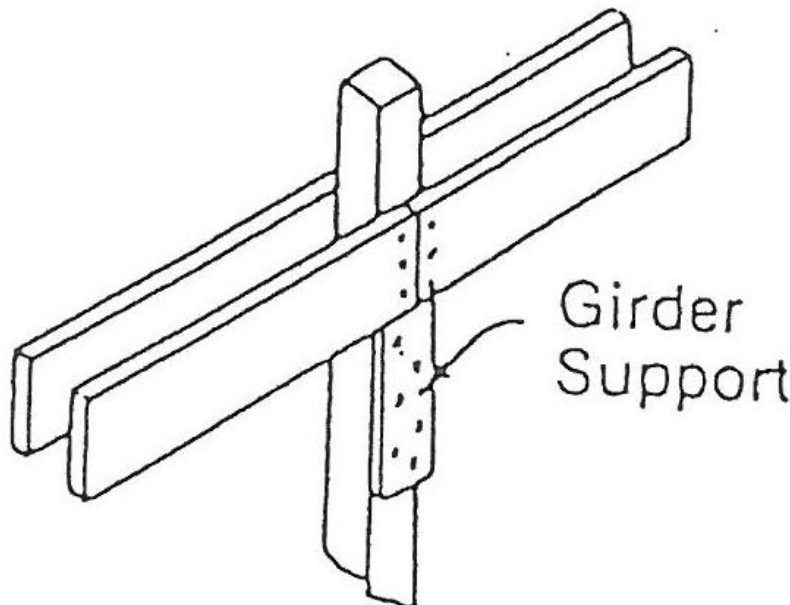
RESIDENTIAL POLE BUILDING REQUIREMENTS

(R101.2)

1. Plans for pole buildings must indicate: Footer size and depth, pole size and spacing, number of carrier plates with the size, grade and species, header sizes, truss spacing, girt spacing, floor material, type of roofing, a floor plan indicating the size of the building, and roof overhangs. In addition to the above information, the following information must also be included on the drawings (106.1 and 106.1.1 and R301.1)
2. The minimum size of footings both diameter and thickness shall be shown. (see that attached chart) (R401.2)
3. Poles with an above grade (or interior floor surface) height of more than 10' require engineering analysis with sealed prints. The Michigan Residential Code only addresses wall height up to 10'. (Table R602.3(5) and R602.3.1)
4. Foam insulation, unless otherwise approved, cannot be left exposed on the inside of the building. If used, other foam insulation, must be covered with ½" gypsum board or other equivalent thermal barrier. (R316.4)
5. Trusses shall be tied to carrier plates for wind uplift with a mechanical fastener. (R802.11.1.1 and R802.10.3 SBCA – BCSI 2013)
6. All nails into treated wood must be corrosion resistant including girt nails. (R317.3)
7. If carrier plates are designed to have trusses bearing on poles, then these trusses must bear on or at the poles. (R301.1)
8. Where the number of required nails into the carrier would split the carrier plate, a vertical piece of lumber shall be placed under the carrier with the remaining nails placed into this piece. See girder support below.

The following inspections of pole buildings are required:

- A. Holes after concrete is placed.
- B. Framing, prior to insulation or exterior siding (truss drawings are required to be submitted prior to this inspection)
- C. Final



POLE BUILDING HAND OUT – 2015 MRC

Guidelines for code compliance when constructing unheated, detached, pole style residential accessory buildings.

Tables shown are based on: Roof, slope = 4:12 minimum
 Soil types of sand, silty sand or clayey sand
 Ground snow load = 60 psf
 Footing depth = 42" minimum

Conditions other than those listed above void the applicability of these tables.

		20 Foot Wide Building		24 Foot Wide Building		28 Foot Wide Building		30 Foot Wide Building	
Post Spacing	Grade (a)	Truss Carrier Beam	Footing Size & Load	Truss Carrier Beam	Footing Size	Truss Carrier Beam	Footing Size	Truss Carrier Beam	Footing Size
4 FEET	A	1.75" x 5.5"	15" dia.	1.75" x 5.5"	16" dia.	1.75" x 5.5"	18" dia.	1.75" x 5.5"	19" dia.
	B	2" x 10"	&	2" x 10"		2" x 10"		2" x 12"	
	C	2" x 8"	2,370#	2" x 8"		2" x 10"		2" x 12"	
6 FEET	A	1.75" x 7.25"	18" dia.	1.75" x 7.25"	20" dia.	1.75" x 9.25"	22" dia.	1.75" x 9.25"	23" dia.
	B	2-2" x 10"	&	2-2" x 10"		2-2" x 10"		2-2" x 12"	
	C	2-2" x 10"	3,560#	2-2" x 10"		2-2" x 10"		2-2" x 12"	
8 FEET	A	1.75" x 9.25"	21" dia.	1.75" x 9.25"	23" dia.	1.75" x 11.25"	26" dia.	1.75" x 11.25"	26" dia.
	B	2-2" x 12"	&	3-2" x 10"		3-2" x 12"		3-2" x 12"	
	C	2-2" x 12"	4,740#	3-2" x 10"		3-2" x 12"		3-2" x 12"	
10 FEET	A	1.75" x 11.25"	24" dia.	1.75" x 11.875"	26" dia.	2-1.75" x 9.25"	28" dia.	2-1.75" x 9.25"	29" dia.
	B	3-2" x 12"	&	4-2" x 12"		5-2" x 12"		5-2" x 12"	
	C	3-2" x 12"	5,930#	4-2" x 12"		4-2" x 12"		4-2" x 12"	
12 FEET	A	2-1.75" x 9.25"	26" dia.	2-1.75" x 11.25"	28" dia.	2-1.75" x 11.25"	31" dia.	2-1.75" x 11.25"	32" dia.
	B	5-2" x 12"	&	5-2" x 12"		6-2" x 12"		NO	
	C	4-2" x 12"	7,110#	5-2" x 12"		5-2" x 12"		6-2" x 12"	
14 FEET	A	2-1.75 x 11.25"	28" dia.	2-1.75 x 11.875"	31" dia.	3-1.75 x 11.25"	33" dia.	3-1.75 x 11.25"	34" dia.
	B	6-2" x 12"	&	NO		NO		NO	
	C	6-2" x 12"	8,290#	6-2" x 12"		NO		NO	
16 FEET	A	3-1.75" x 11.25"	30" dia.	3-1.75" x 11.25"	33" dia.	3-1.75" x 11.875"	35" dia.	4-1.75" x 11.25"	37" dia.
	B	NO	&	NO		NO		NO	
	C	NO	9,480#	NO		NO		NO	
18 FEET	A	3-1.75" x 11.25"	32" dia.	4-1.75" x 11.25"	35" dia.	4-1.75" x 11.875"	37" dia.	3-1.75" x 14"	39" dia.
	B	NO	&	NO		NO		NO	
	C	NO	10,660#	NO		NO		NO	

Table and more information continued on reverse side

Lumber Grade Legend

A – Laminated Veneer Lumber, Fb = 2,600 psi, Fv = 285 psi, E = 1,900,000 psi

B – Hem-Fir #2 grade or better, Fb = 850 psi, Fv = 150 psi, E = 1,300,000 psi

C – Southern Yellow Pine #2 or better, Fb = 975 psi, Fv = 175 psi, E = 1,600,000 psi

A 4"x6" is typical post size. Engineering is required for all walls that are 10 feet high or greater to ensure proper wind bracing and pole size. Minimum thickness for pad footings is 6" for footings up to 16" diameter, 8" thick for footings over 16" and up to 22" diameter and 10" thick for footings over 22" diameter. To determine footing diameter size, use the post spacing that equals half of the total of the spacing on either side of the post.

Roof trusses for sooth metal roof covering can be installed on up to 48" on center **if permitted by the truss manufacturer.** Trusses for non-slippery shingle roof covering shall be no more than 24" on center **as permitted by the truss manufacturer.** Purlins are to be 2"x4" minimum and spaced a maximum of 24" on center.

Tables shown are based on: Roof slope = 4:12 minimum
 Soil types of sand, silty sand or clayey sand
 Ground snow load = 70 psf
 Footing depth = 42" minimum

		20 Foot Wide Building		24 Foot Wide Building		28 Foot Wide Building		30 Foot Wide Building	
Post Spacing	Grade (a)	Truss Carrier Beam	Footing Size	Truss Carrier Beam	Footing Size	Truss Carrier Beam	Footing Size	Truss Carrier Beam	Footing Size
4 FEET	A	1.75" x 5.5"	19" dia.	1.75" x 7.25"	20" dia.	1.75" x 7.25"	21" dia.	1.75" x 7.25"	24" dia.
	B	2" x 12"		2" x 12"		2-2" x 10"		2-2" x 10"	
	C	2" x 12"		2" x 12"		2" x 12"		2-2" x 10"	
6 FEET	A	1.75" x 9.25"	23" dia.	1.75" x 9.25"	25" dia.	1.75" x 9.25"	26" dia.	1.75" x 11.25"	29" dia.
	B	2-2" x 12"		3-2" x 10"		3-2" x 10"		3-2" x 12"	
	C	2-2" x 12"		2-2" x 12"		3-2" x 10"		3-2" x 12"	
8 FEET	A	1.75" x 11.25"	27" dia.	1.75" x 11.875"	28" dia.	2-1.75" x 9.25"	30" dia.	2-1.75" x 11.25"	33" dia.
	B	3-2" x 12"		4-2" x 12"		4-2" x 12"		5-2" x 12"	
	C	3-2" x 12"		3-2" x 12"		4-2" x 12"		5-2" x 12"	
10 FEET	A	2.75" x 11.25"	30" dia.	2-1.75" x 11.25"	32" dia.	2-1.75" x 11.25"	33" dia.	3-1.75" x 11.25"	37" dia.
	B	5-2" x 12"		6-2" x 12"		6-2" x 12"		NO	
	C	5-2" x 12"		5-2" x 12"		6-2" x 12"		NO	
12 FEET	A	2-1.75" x 11.875"	33" dia.	3-1.75" x 11.25"	35" dia.	3-1.75" x 11.25"	37" dia.	4-1.75" x 11.25"	41" dia.
	B	NO		NO		NO		NO	
	C	6-2" x 12"		NO		NO		NO	
14 FEET	A	3-1.75 x 11.25"	35" dia.	3-1.75 x 11.875"	37" dia.	4-1.75 x 11.25"	39" dia.	3-1.75 x 14"	44" dia.
	B	NO		NO		NO		NO	
	C	NO		NO		NO		NO	
16 FEET	A	4-1.75" x 11.25"	38" dia.	4-1.75" x 11.875"	40" dia.	4-1.75" x 14"	42" dia.	4-1.75" x 14"	47" dia.
	B	NO		NO		NO		NO	
	C	NO		NO		NO		NO	
18 FEET	A	4-1.75" x 14"	40" dia.	4-1.75" x 14"	42" dia.	4-1.75" x 14"	45" dia.	4-1.75" x 16"	50" dia.
	B	NO		NO		NO		NO	
	C	NO		NO		NO		NO	