

POST-FRAME CONSTRUCTION STANDARDS

(A) **General.** The provisions of this section shall, in addition to the construction standards set forth in this chapter, guide in the design approval and inspection process for the construction method known as pole or post-frame construction, utilized in the construction of non-habitable accessory buildings and patio or “three season” rooms. These standards are not intended to be substituted for, or be in conflict with the governing building code regulations of the State.

(B) **Design.** The following post-frame building design methods are considered meeting the intent of this section:

(1) Designs showing evidence of compliance with accepted engineering practices for all structural members of post-frame structures and the relative provisions of the RCO - (Residential Code of Ohio).

(2) Designs indicating compliance with the exemplified specifications of this section and the relative provisions of the RCO.

(C) **Footings.**

(1) Footings shall be designed in compliance with the RCO. Footings sizes relative to tributary load areas shown in the RCO for deck footings without roof loads, will also be considered appropriate for footers supporting post frame roof loads only.

(2) All holes for footing pads shall be inspected before placement of the concrete.

(3) Backfill material around holes, where the finish slab is above finish grade, may be compacted earth.

(4) Where subject to wind uplift forces, the base of the poles shall be anchored to a concrete or wooden collar, and shall be laterally restrained at the ground surface. The recommendations of ANSI/ASAE 486.1, the National Frame Builders Association, the National Resource Agriculture and Engineering Services, or the American Forest and Paper Association are acceptable.

(D) **Skirt boards.**

(1) Two inch thick (net) tongue and groove skirt boards, installed from the base of the slab to a point not less than eight inches above the slab or finish grade, whichever is higher are acceptable.

(2) Skirt boards must be designed to resist the lateral forces of unbalanced fill.

(E) **Finished grades.** Finished grades shall be pitched away from the exterior walls.

(F) **Post frame building additions.** Post frame additions for habitable spaces and garages as defined in the RCO, require an approved engineering design. Post frame additions for “three season” rooms meeting the requirements of this section will be permitted.

(G) **Decay-resistant wood.** All wood exposed or in contact with the ground shall be natural weather-resistant or shall be treated against decay and termites in accordance with the RCO.

(H) **Concrete slabs.** Concrete slabs shall not be placed in direct contact with load-bearing posts or skirting. Posts and skirts shall be separate from concrete slabs with pre-molded expansion joint filler or 15 lb. Felt. Slabs shall be placed in accordance with the provisions of the RCO.

(I) **Insulation.** Insulation is required in structures to be heated. The thermal resistance of insulation in walls, ceilings, and concrete slabs shall be in compliance with the Residential Code of Ohio.

(J) **Posts.** Posts shall be designed and installed in compliance with the RCO and accepted engineering practices.

(1) Posts sized in compliance with an approved, accredited post design standards are considered acceptable.

(2) In the absence of engineered drawings, the following minimums shall be acceptable for buildings not more than 40':

(a) Minimum bearing post size for posts spaced 8' on center with roof spans 30' or less shall be 4"x 6" nominal.

(b) Minimum bearing post size for posts spaced 8' on center with roof spans over 30' and 40' or less shall be 6"x 6" nominal.

(c) All non-bearing wall posts may be 4"x 6" and must extend and be connected to the roof diaphragm.

(d) The six-inch dimension of 4"x 6" posts shall be perpendicular to the exterior wall.

(e) Poles shall be continuously connected at the top of wall sections.

(f) The maximum post spacing without an engineered design shall be 8' on center.

(g) The maximum ceiling height without an engineered design shall be 12'.

(K) **Load bearing girders.**

(1) Continuous girders designed to support roof loads shall be thru-bolted with two, one half inch bolts, or by other methods approved by the Building Official.

(2) Girders spans shall be consistent with the provisions of the RCO. The following SPF #2 girder sizes for posts spaced 8" are examples:

(a) 2"x 10" for buildings up to 20' wide.

(b) 2"x 12" for buildings up to 36' wide.

(L) **Girts (side-wall purlins).** Girts shall be spaced not more than 24 inches on center for exterior wall siding and 24 inches on center for interior wall covering but spaced not less than required by the sheathing and siding manufacturer's instructions. All information in regard to girts is in reference to girts being secured to wood posts spaced not more than eight feet center to center. Nominal 2" x 4" wood girts shall be secured to each pole with 2-16d nails or approved alternate fastener. Fasteners shall be approved for contact with wood preservatives where applicable.

(M) **Roof Assemblies.** Roof construction and roofing systems not addressed in the RCO must comply with the provisions of the RCO relating to alternate methods, materials and equipment.

(N) **Wind bracing.** All walls shall be braced with panels, diagonal bracing, or other methods listed in the RCO that are adequate to resist wind forces.

ADDITIONAL BUILDING REQUIREMENTS:

- 1) Accessible permit and visible address numbers must be posted at jobsite to receive inspections.
- 2) Obtain any required electrical and plumbing inspections prior to rough or final bldg. approvals.
- 3) Footers for buildings over 400 sq.' and with an eve height 10' or less, must be 38" deep – others a minimum of 12" on undisturbed approved bearing soil. Diameters: 12" for 16' truss depth, 14" to 20' depth, 16" to 28', and 18" to 34'.
- 4) Skirting must extend to exterior grade and must be able to contain interior fill. Ground contact lumber required.
- 5) Posts shall be 8' on center 6x6's when roof span is over 24'. Minimum posts are 4x6 (6" perpendicular to wall). Posts over 12' above grade require an engineered design.
- 6) Walls within 3' of a property line must have a 1 hour fire rating on both sides of the wall. Install 5/8" drywall or rated plywood on interior and exterior of wall and soffits. Overhangs and projections shall not be permitted where within 1'8" of the property line. No window or door openings are permitted in wall.
- 7) Garage interiors must be separated from dwelling walls and attic areas by drywall. Attic separation may be by drywalling vertical gable(s) or ceiling.
- 8) Door header carrying roof loads: 16'3" opening - 2 ply 1-3/4"x11-7/8" LVL or (5ply Douglas Fir 2x12) to 30' deep. 18'3" door – 2 ply 11-7/8" LVL to 24' deep, 14" to 36' deep.
- 9) Total building height for detached structures from grade to roof peak is 16'.
- 10) Stair treads minimum 9" from nosing to nosing with 3/4" - 1 1/4" nosing. Riser max 8 1/4". All handrails to be returned to walls. One handrail is required where 4 or more risers. 36" guardrails, and risers are required on stairs and landings that are 30" above grade/floor. Artificial light is required to directly illuminate each stair section, top and bottom landings.. Maximum rise of a flight of stairs is 12'. A 3'x3' landing is required at all exterior doors 17" above grade.
- 11) Walls require structural wood panels(1/2" OSB/pl;ywood) or other engineered system.
- 12) Non pressure treated wood sheathing must be kept 8" above grade – even when under siding unless flashed to prevent decay. All other framing within 8" of the ground, or in contact with concrete, must be decay resistant
- 13) Rafters shall have rafter ties connecting opposite top plates a minimum of 4' on center or other approved design. The absence of rafter ties requires a ridge beam designed to support all loads. and be supported on each end by direct bearing or hangers. Hip and valley rafters shall be supported at the ridge by a brace to bearing wall or have a pre-approved design.
- 14) Trusses require hold down brackets on each end. Bottoms must be continuously braced perpendicular to trusses 10' on center – ("rat runs") if no drywall ceiling.
- 15) Gables must be braced to manufacturer specifications. They must bear on a beam and are not designed to carry any load. Use common trusses on ends if no bearing is provided.
- 16) Net free ventilating area of attics in heated structures must be 1/150 to 1/300 of attic square footage. Builder is responsible for ventilating materials square inch calculations.
- 17) Downs spouts are required on all new structures and are required to be connected to the storm sewer unless alternative approval (such as a drywell – see handout) has been received from the City of Wadsworth.
- 18) Concrete floors must be separated from posts and skirting by expansion joint, felt paper or other approved method.
- 19) A side hinged 2668 access door is required in all garages. Doors connected to dwelling are acceptable.
- 20) All nails, bolts, screws, or hangers in contact with ACQ or CAB treated lumber must be hot dipped galvanized, stainless steel, or have a zinc 185 coating. This includes foundation anchor bolts, and framing/siding nails. In no case can aluminum be in contact. Hanger fasteners must have similar coatings.

