

foundation system. Such walls, framing and connections shall have a design safe loading resistance of not less than 10 (479 Pa) and no more than 20 pounds per square foot (958 Pa); or

4. Where wind loading values of this code exceed 20 pounds per square foot (958 Pa), the construction documents shall include documentation prepared and sealed by a registered design professional that:
  - 4.1. The walls and partitions below the design flood elevation have been designed to collapse from a water load less than that which would occur during the design flood.
  - 4.2. The elevated portion of the building and supporting foundation system have been designed to withstand the effects of wind and flood loads acting simultaneously on all building components (structural and nonstructural). Water loading values used shall be those associated with the design flood. Wind loading values shall be those required by this code.

**322.3.5 Enclosed areas below design flood elevation.** Enclosed areas below the design flood elevation shall be used solely for parking of vehicles, building access or storage.

**322.3.6 Construction documents.** The construction documents shall include documentation that is prepared and sealed by a registered design professional that the design and methods of construction to be used meet the applicable criteria of this section.

### SECTION 323 STORM SHELTERS

**323.1 General.** This section applies to the construction of storm shelters when constructed as separate detached buildings or when constructed as safe rooms within buildings for the purpose of providing safe refuge from storms that produce high winds, such as tornados and hurricanes. In addition to other applicable requirements in this code, storm shelters shall be constructed in accordance with ICC/NSSA-500.

### SECTION 324 POST FRAME ACCESSORY STRUCTURES

**324.1 Post frame accessory structures.** The following requirements serve as minimum standards for post and frame structures within all of the following structural limitations:

1. Residential accessory structures,
2. Single story,
3. Solid exterior structural sheathing or metal roof, and solid wall panels,
4. No attic storage (attic storage would require engineered design trusses),
5. Maximum building width of thirty six feet including the overhang,
6. Maximum wall height of sixteen feet,

7. Maximum mean roof height of twenty feet, and
8. Maximum post spacing of eight feet (unless truss sit directly on post).

Post and frame structures and portions thereof outside the above structural limitations of this standard shall be accompanied by structural calculations as required by the residential building official or designed under the provisions of Section 116.2 of the Residential Code of Ohio (RCO). Post and frame structures shall comply with the structural design requirements of Section 301 of the RCO.

**324.2 Definition.** Post frame accessory structures consist of primary members (wood posts, beams & single span roof trusses or ceiling joist and rafters) and secondary members (wood roof purlins, wall girts, bracing & sheathing) where all loads are transmitted from the sheathing and the secondary members to the primary members which transfer all combined loads to the soil through vertical posts bearing on footings embedded in the ground. See Figure 324.

**324.3 Footings and foundations.** Footings and foundations shall comply with applicable provisions of Section 401. Post frame structures shall have poured in-place concrete footings installed below all posts. The top of the footing shall be a minimum of 48 inches below finished grade and have footing diameters complying with Table 324.3.

**TABLE 324.3  
POST FRAME PIER FOOTING DIAMETERS<sup>a, b, c, d</sup>**

	Building width (length of truss) including overhang (feet)			
	24	28	32	36
Diameter (inches) 20# roof snow load	18	20	22	22
Diameter (inches) 30# roof snow load	18	22	24	26

- a. Pier footing thickness shall be a minimum one-half of the diameter of the footing.
- b. Based upon 2000 PSF soil bearing capacity and truss loads of 20 or 30 PSF live or snow load top chord, 10 PSF dead load top chord, 5 PSF dead load on the bottom chord and no live load on the bottom chord.
- c. Fractional widths shall be rounded to the next higher pier footing diameter.
- d. Table not to be used in Ohio case study areas.

**324.4 Column and wall construction.** Columns shall be three (3) ply un-spliced, reinforced spliced or solid wood and shall not be less than 4 inch by 6 inch nominal size. Columns shall comply with the requirements of Section 319 and shall be restrained to prevent lateral displacement.

**324.4.1 Uplift protection:** Columns shall have uplift protection by the following methods:

1. Two 2 × 6 × 12 inch column uplift protection blocks attached to each side of the base of the column. The column uplift blocks shall be placed horizontally, attached per Table 324.7 and comply with Section 319;
2. 12 inch high, concrete collar poured on top of footing around the post, with 2-#5 × 9 inch rebar placed through the post at 3 inches and 9 inches from bottom