**Section 870.110 Support Systems**

Each manufactured home shall be installed on a support system capable of supporting a total of 80 pounds per square foot.

a) Footings. Footings must be placed on level, firm, undisturbed soil or compacted or controlled fill that is free of grass and organic materials, compacted to a minimum load bearing capacity of 2,000 pounds per square foot. Pre-owned homes for which the manufacturer of the home is no longer in business or for which the installation instructions are not available may be placed on an existing footing system if the system meets the requirements of this Section.

1) Area. The area in square inches of the footings is based on the width of the home, the roof design loads, the soil load-bearing capacity and the intended spacing of the piers. (See 870.Tables A-G.)

2) Types. Footings may consist of the following:

A) Individual pier footings consisting of precast or poured-in-place individual pier footing concrete at least 3½ inches thick with a 28-day compressive strength of 3,000 pounds per square inch.

B) Concrete runners a minimum of 3½ inches thick under each I-beam or perpendicular to the I-beams at no more than 8 foot intervals.

C) Concrete pads a minimum of 3½ inches thick the approximate dimension of the home.

D) Pressure treated wood having a 0.60 retention in accordance with the AWPA C22-03 Standard.

E) Acrylonitrile butadiene styrene (ABS) footing pads in accordance with pad manufacturer installation instructions and listed for the required load capacity and type of installation. Support devices and piers must not overlap the footings.

F) A support system approved by a licensed professional engineer.

b) Piers. Piers or load-bearing supports or devices shall be designed and constructed to transmit the vertical live and dead loads to the foundation below. In order to properly support the home, the piers must be of the proper type, size, location and spacing. Piers shall be installed directly under the main frames of the home. Piers shall be no more than two feet from each end of the frame and adequately spaced. (See 870.Tables A-G.) Piers may be concrete blocks or adjustable metal or concrete devices approved and listed for the required load capacities. Load bearing supports or devices shall be listed and labeled, or shall be designed by a licensed professional engineer in Illinois, and shall be approved for the use intended, prior to installation.

1) Types. Non-mortared concrete blocks conforming to ASTM C 90-96 Type N with a nominal size of 8 inches by 8 inches by 16 inches shall be installed with the 16 inch dimension perpendicular to the main frame (I-beam), the open cells vertical, stacked level. A 2 or 4 inch thick 8 inch by 16 inch solid concrete cap block that conforms to ASTM C 90-96 Type N shall be placed on the top of each stack. The vertical load shall not exceed 8,000 pounds per single stack and 14,000 pounds for a double stack. The blocks must be stacked on a solid base pad in accordance with the soil bearing capacity. As many as 2 wood plates not exceeding 3 inches in combined thickness and 2 shims not exceeding 1 inch total thickness must be used to fill any gap between the concrete cap and main frame. Hardwood shims must be a minimum of 3 inches wide and 6 inches long fitted tight between cap or wood plate and main frame.

2) Clearance and Height. A minimum clearance of 12 inches must be provided between the ground and the bottom of the frame. If piers exceed 36 inches in height, they shall be double blocked. If the height exceeds 80 inches, the pier must be double blocked and mortared with rebar. If the home is placed in an area subject to flooding, a licensed professional engineer in Illinois shall design a support and anchoring system that will resist flood forces. The Federal Emergency Management Agency has information that may assist in the design.

3) Load-Bearing Openings. In addition to the piers under the main I-beams of the home, piers must be placed under openings in the perimeter walls and center-mating wall openings greater than 4 feet. (See 870.Tables E-G.)

4) Elevated Manufactured Homes. When more than ¼ of the area of a home is installed so that the bottom of the main frame is more than 7 feet above ground level, the home support system shall be designed by a licensed professional engineer in Illinois and installation shall be approved by the Department prior to the installation.