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be used to fill in any remaining vertical gaps.

(d) *Manufactured pier heights*. Manufactured pier heights must be selected so that the adjustable risers do not extend more than 2 inches when finally positioned.

§3285.305 Clearance under homes.

A minimum clearance of 12 inches must be maintained between the lowest member of the main frame (I-beam or channel beam) and the grade under all areas of the home.

§ 3285.306 Design procedures for concrete block piers.

(a) Frame piers less than 36 inches high.

(1) Frame piers less than 36 inches high are permitted to be constructed of single, open, or closed-cell concrete blocks, 8 inches "8 inches "16 inches, when the design capacity of the block is not exceeded.

(2) The frame piers must be installed so that the long sides are at right angles to the supported I-beam, as shown in Figure A to this section.

(3) The concrete blocks must be stacked with their hollow cells aligned vertically and must be positioned at right angles to the footings. (4) Horizontal offsets from the top to the bottom of the pier must not exceed one-half inch.

(5) Mortar is not required, unless specified in the installation instructions or required by a registered professional engineer or registered architect.

(b) Frame piers 36 inches to 67 inches high and corner piers.

(1) All frame piers between 36 inches and 67 inches high and all corner piers over three blocks high must be constructed out of double, interlocked concrete blocks, as shown in Figure B to this section, when the design capacity of the block is not exceeded. Mortar is not required for concrete block piers, unless otherwise specified in the installation instructions or required by a professional engineer or registered architect.

(2) Horizontal offsets from the top to the bottom of the pier must not exceed one inch.

(c) All piers over 67 inches high. Piers over 67 inches high must be designed by a registered professional engineer or registered architect, in accordance with acceptable engineering practice. Mortar is not required for concrete block piers, unless otherwise specified in the manufacturer installation instructions or by the design.

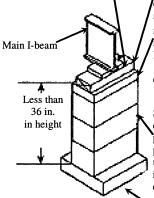
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Figure A to § 3285.306 Typical Footing and Pier Design, Single Concrete Block.

Shims, when required, are to be used in pairs, installed in opposite directions and be fitted and driven tight between main I-beam frame and shims or caps below.

Hardwood plates, shims, or other listed materials not exceeding 2" in thickness.



¹/₂"x 8"x16" steel caps, 2"x8"x16" hardwood caps, or minimum 4"x8"x16" concrete caps, or other listed materials. See §3285.304(b)(2) for cap requirements. Note – steel caps must be protected by a minimum of a 10 mil coating of an exterior paint or an equivalent corrosion resistant protection.

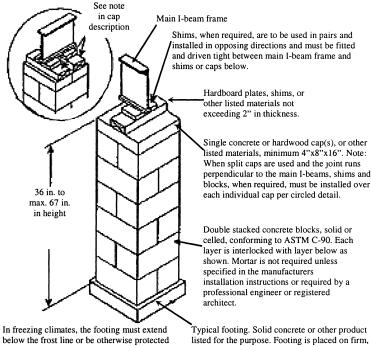
Single open or closed concrete blocks 8"x8"x16" conforming to ASTM C-90 installed with 16" dimension perpendicular to the main I-beam frame. Open cells are placed vertically on footing. Mortar is not required unless specified in the manufacturers installation instructions or required by a registered professional engineer or registered architect.

In freezing climates, the footing must extend below the frost line or be otherwise protected from the effects of frost heave as permitted here-in Typical footing. Solid concrete or other product approved for the purpose. Footing is placed on firm undisturbed soil or on controlled fill, free of grass and organic matter.

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Figure B to 3285.306(b) Typical Footing and Pier Installation, Double Concrete Block.



In freezing climates, the footing must extend below the frost line or be otherwise protected from the effects of frost heave as permitted here-in.

§ 3285.307 Perimeter support piers.

(a) Piers required at mate-line supports, perimeter piers, and piers at exterior wall openings are permitted to be constructed of single open-cell or closed-cell concrete blocks, with nominal dimensions of 8 inches \times 8 inches \times 16 inches, to a maximum height of 54 inches, as shown in Figure A to this section, when the design capacity of the block is not exceeded.

(b) Piers used for perimeter support must be installed with the long dimension parallel to the perimeter rail.

§3285.308 Manufactured piers.

(a) Manufactured piers must be listed and labeled and installed to the pier manufacturer's installation instructions. See 3285.303(d)(2) for additional requirements.

(b) Metal or other manufactured piers must be provided with protection against weather deterioration and corrosion at least equivalent to that provided by a coating of zinc on steel of .30 oz./ft.² of surface coated.

§3285.309 [Reserved]

undisturbed soil or on controlled fill, free of grass

and organic matter.

§ 3285.310 Pier location and spacing.

(a) The location and spacing of piers depends upon the dimensions of the home, the live and dead loads, the type of construction (single-or multi-section), I-beam size, soil bearing capacity, footing size, and such other factors as the location of doors or other openings.