

**Adopt Inst 700, previously effective 4/14/12 as Inst 600 (Document #10115) and expired 4/14/22, and reserve Inst 600, so that Inst 700 reads as follows:**

CHAPTER Inst 700 MANUFACTURED HOUSING INSTALLATION STANDARDS

PART Inst 701 PURPOSE AND SCOPE

Inst 701.01 Purpose.

(a) The purpose of this chapter is to assure the proper installation of [a] manufactured hous[e]ing as defined by RSA 205-D:1, XI.

(b) Installers have the option of installing in accordance with:

- (1) This chapter;
- (2) A design prepared by a New Hampshire licensed engineer or architect; or
- (3) The manufacturer's installation standards.

Inst 701.02 Applicability.

(a) The provisions of this standard shall apply only to manufactured housing which is:

- (1) Transportable in single or multiple sections;
- (2) In the traveling mode 8 body feet or more in width and 40 body feet or more in length; and
- (3) When erected on a site is 320 or more square feet, built on a permanent chassis and designed to be used as a dwelling with or without a permanent foundation when connected to required utilities, including plumbing, heating, air conditioning as applicable, and electrical systems.

(b) These rules shall not apply to:

- (1) Campers or recreational vehicles as defined in RSA 216-I:1, **VIII** or RSA 259:84[;]-a;
- (2) Pre-site built housing as defined in RSA 674:31-a;
- (3) Modular buildings as defined in RSA 205-C:1, XI; or
- (4) Single wide structures under 750 square feet, provided that they are not for residential or classroom use.

Inst 701.03 Scope.

(a) These [standards] **rules** shall apply to the installation of all New Hampshire new and relocated manufactured housing that is used as a residential dwelling.

(b) The [standards] **rules** pursuant to Inst 700 shall not apply to:

(1) Sites that are already occupied as of December 24, 2005; and

(2) Sites for the installation of manufactured housing, which provides temporary relief from fire, flood, or other disasters for a period of one year from the placement of the house.

(c) The exemption in (b) above shall not relieve the manufactured house owner or occupant from responsibilities for the proper use and maintenance of [a] the manufactured house. Manufactured houses installed on sites exempted from the requirements of RSA 205-D:4, II shall be installed and the sites maintained in a manner which is not detrimental to the functions of any of the systems in the house.

(d) Manufactured housing, which is installed in compliance with RSA 205-D and this chapter, shall be exempt from all state or local standards or regulations which regulate the same matters.

(e) Nothing in this chapter shall be construed to amend or repeal the provisions of RSA 31:116 relative to manufactured housing foundations in parks and RSA 47:22-b, relative to manufactured housing foundations in parks.

#### PART Inst 702 DEFINITIONS

Inst 702.01 “Anchoring equipment” means straps, cables, turnbuckles, and chains including tensioning devices, which are used to secure a manufactured house.

Inst 702.02 “Anchoring system” means “anchoring system” as defined by RSA 205-D:1, I.

Inst 702.03 “Data plate” means a plate that provides identification numbers for the house, identifying wind zone, roof load zone, and climatic zone.

Inst 702.04 “Dealer” or “retailer” means “dealer” or “retailer” as defined by RSA 205-D:1, IV.

Inst 702.05 “Diagonal tie” means a tie intended to primarily resist horizontal or shear forces and which may secondarily resist vertical, uplift, and overturning forces.

Inst 702.06 “Federal [m]Manufactured [h]Housing [e]Construction and [s]Safety [s]Standard” means “federal manufactured housing construction and safety standard” as defined by RSA 205-D:1, VI.

Inst 702.07 “Footing” means part of the support system that sits directly on the ground [f] or slab, it is between the ground [f] or slab, and the pier not including shims or caps.

Inst 702.08 “Ground anchor” means a device at the manufactured house stand designed to transfer manufactured house anchoring loads to the ground.

Inst 702.09 “Installation” means “installation” as defined by RSA 205-D:1, VII.

Inst 702.10 “Installation standards” means “installation standards” as defined by RSA 205-D:1, VIII.

Inst 702.11 “Installer” means “installer” as defined by RSA 205-D:1, IX.

Inst 702.12 “Local enforcement agency” means “local enforcement agency” as defined by RSA 205-D:X.

Inst 702.13 “Manufacturer” means “manufacturer” as defined by RSA 205-D:1, XII.

Inst 702.14 “Monolithic slab” means a concrete slab, which includes reinforcement bars along the perimeter of the slab combined with metal or fiberglass mesh for strength.

Inst 702.15 “Pad” means an area, which has been established, for the placement of the house.

Inst 702.16 “Pier” means that portion of the support system between the footing and the manufactured house, exclusive of caps, and shims.

Inst 702.17 “Set-up” means the work performed and operations involved in the placement and securing of a manufactured house or any portion thereof.

Inst 702.18 “Site” means “site” as defined by RSA 205-D:1, XIII.

Inst 702.19 “Skirting” means a weather-resistant material to enclose the space from the bottom of the manufactured house to grade.

Inst 702.20 “Stabilizing devices” means all components of the anchoring and support system such as piers, footing, ties, anchoring equipment, ground anchors, or any other materials and methods of construction which supports and secures the manufactured house to the ground.

Inst 702.21 “Support system” means a site built or site assembled system of stabilizing devices which is capable of transferring design loads and live loads required by federal regulation and other design loads unique to local house sites due to wind, seismic and soil conditions that are imposed by or upon the structure into the underlying soil bedrock without failure. It includes a combination of footings, piers, caps, and shims that will, when properly installed, support a manufactured house.

Inst 702.22 “Uncontrolled fill” means fill materials that are placed without control of the content of the fill materials or without adequate compaction to assure a bearing capacity without undue settlement. Uncontrolled fill includes fill materials containing organic matter or fills which are placed without compaction necessary to provide a uniform bearing capacity of 1000 lbs./ft.

#### PART Inst 703 INSTALLATION STANDARDS

Inst 703.01 Filing of Installation Manuals. A manufacturer of manufactured houses which are installed in New Hampshire shall file with the board, through the OPLC, every installation manual for each line made, sold, and installed. Subsequent updates or changes in a manual shall be submitted within 30 days from the date of the change, amendment, or revision to the manual.

Inst 703.02 Site Preparation Systems.

(a) This section [~~prescribes~~] **establishes** standards for siting, design, and installation of manufactured house support systems. [H] **This section** shall be applicable to all new and relocated manufactured houses when and wherever newly installed at a house site.

(b) The house shall be designed to meet the New Hampshire wind, snow roof loads, and climatic conditions as described on the manufactured house data plate. Houses that are designated on the

manufacturer's data plate in a low pounds per square foot (PSF) snow zone, which includes 30 PSF shall not be installed in a higher roof load zone.

(c) The house shall be able to be safely moved to the site, which should be free of branches, holes in the ground and hanging wires to prevent any preliminary damage to the house.

(d) A manufactured house support system shall be constructed in accordance with one of the following:

- (1) Manufacturer's installation manual instructions;
- (2) Foundation design by a New Hampshire licensed professional engineer or architect; or
- (3) This chapter.

(e) Site preparation shall be in accordance with general residential construction practices.

(f) Houses shall not be constructed in any naturally occurring seasonal drainage swale. In order to prevent moisture under the house, which can cause settling of the support system and deterioration to the house, water shall not be able to accumulate or stand under the house.

(g) Gravel or concrete slab under the house shall be crowned 1% to 2 % along the longitudinal center line of the house.

(h) All drainage shall be diverted away from the home and [~~must~~] **shall** slope a minimum of one-half inch per foot away from the foundation for the first 10 feet. Where property lines, walls, slopes, or other physical conditions prohibit the slope, the site shall be provided with drains or swales or otherwise graded to drain water away from the perimeter of the house.

(i) A vapor retarder shall be used above the gravel or below the concrete if the house is enclosed by skirting to keep ground moisture out. If overlap of the polyethylene is required, it shall be at least 12 inches at all joints.

(j) The fire separation distance shall be provided, as the state and local authority requires.

Inst 703.03 Design Requirements Including Load-Bearing Capacity.

(a) The load a pier can carry shall depend on the house, roof live load, spacing of the piers and the way piers are used to support the house.

(b) Pier concrete blocks shall be stacked with their hollow cells aligned vertically.

(c) Piers constructed of blocks stacked side by side shall be at right angles to the preceding course.

(d) Piers shall be:

- (1) Concrete blocks which have a nominal dimension of at least 8-in[.]**ch** x 8-in[-]**ch** x 16-in[-]**ch conforming to ASTM C-90**; or
- (2) Adjustable metal or concrete piers.

(e) Manufactured adjustable metal piers shall be labeled for load capacity.

(f) Caps shall be used to cap the hollow concrete blocks. All caps shall be of the same length and width as the rest of the piers on which they rest. The caps shall be of solid masonry of at least 4 inches thickness or wood of at least 2 inches of nominal thickness or ½ inch steel on piers of less than 36 inches height.

(g) Piers less than 36 inches high shall be constructed of single, open and closed cell concrete blocks.

(h) Piers between 36 inches and 67 inches high and all corner piers over 3 blocks high shall be constructed out of double interlocking blocks.

(i) Piers over 67 inches high shall be designed by a licensed New Hampshire professional engineer or architect.

(j) Mortar shall not be required for concrete block piers, unless required by the manufacturer installation instructions or design.

(k) No caps shall be needed for piers using solid blocks.

Inst 703.04 Gaps.

(a) When gaps occur during installation, pressure treated wood shims having a preventative retention of .60 per cubic foot shall be used to close the gap and level the house.

(b) Hardwood shims that are 4-inch x 6-inch shall be used to level the house and fill any gaps between the base of the I-beam and the top of the pier cap.

(c) Shims shall be used in pairs and driven tightly so they do not occupy more than one inch of vertical space. Wood plates no thicker than 2 inches shall be used to fill in any remaining vertical gaps.

(d) Manufactured pier heights shall be adjustable risers that do not extend more than 2 inches when finally positioned.

Inst 703.05 Clearance Under House.

(a) Minimum clearance of 12 inches shall be maintained beneath the lowest member of the main frame in the area of utility connections.

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

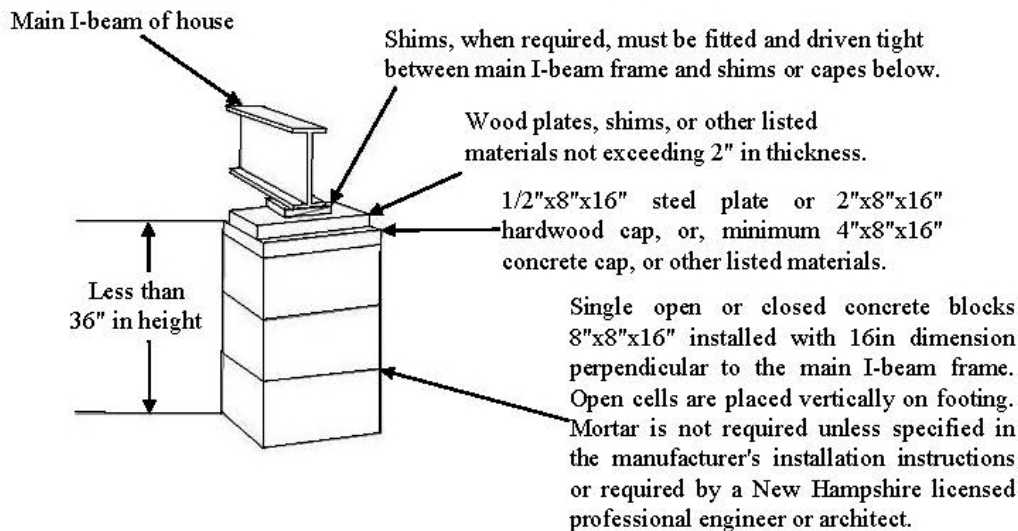
(c) None of the frame shall come in contact with the ground.

(d) Sufficient clearance shall be maintained to allow for interconnection of multi-section units for proper installation of ground anchors.

Inst 703.06 Design Procedures for Concrete Block Piers.

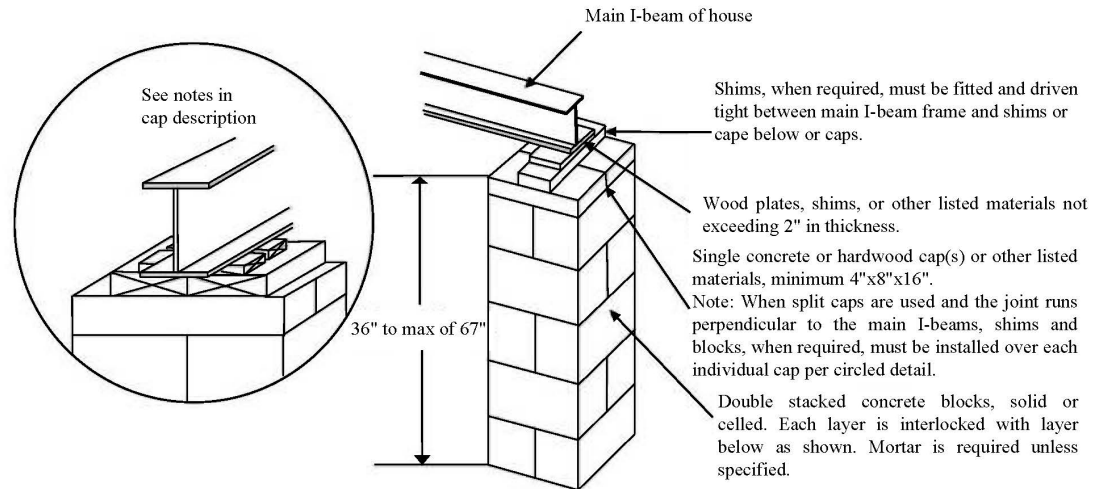
- (a) Frame piers less than 36 in[er]ches high shall be:
- (1) Permitted to be constructed of [3] one single [core or solid] **open or closed** concrete blocks 8-inch x 8-inch x 16-inch **conforming to ASTM C-90**; and
  - (2) Installed so the long sides are at right angles to the I-beam, as set forth in Figure 700-1:

**Figure 700-1 Pier Installation, Single Concrete Block**



- (b) All piers over 67 inches shall be designed by a licensed New Hampshire architect or engineer.
- (c) Piers for exterior wall openings shall be constructed of blocks that are 8-in[er]ch x 8-in[er]ch x 16-inch.
- (d) Perimeter piers shall be installed parallel to the perimeter, when required by the manufacturer's installation instructions.
- (e) Piers required at marriage line supports, perimeter piers, and piers at exterior wall openings shall be permitted to be constructed of single open or closed-cell concrete blocks 8-in[er]ch x 8-in[er]ch x 16-inch[es] to a maximum height of 54 inches. [p]Piers over 54 inches but less than 67 inches [need to] **shall** be solid grout filled and reinforced with 2 pieces of #5 reinforcement bar as set forth in Figure 700-2:

**Figure 700-2 Pier Installation, Double Concrete Block**



[<https://www.astm.org/d3953-91.html> Figure 700-2 Pier Installation, Double Concrete Block]

(f) Manufactured piers shall be listed, ~~and~~ labeled, and installed to manufacturer's instructions.

Inst 703.07 Location and Spacing of Piers. Piers shall be no more than 2 feet from either end and not more than 8 feet center to center under the main frame beams.

Inst 703.08 Perimeter Blocking. Supports shall be on both sides of side wall exterior doors and other side wall openings greater than 48 inches and under porch posts, factory installed fireplaces, and wood stoves, unless not required by the manufacturer.

Inst 703.09 Types of Footings.

(a) Footings shall provide equal load-bearing capacity and be resistant to decay. Footings shall be placed on undisturbed soil or compacted fill.

(b) Every pier shall be supported by a footing of the following type:

(1) A pad which shall be a monolithic concrete slab with Fibermix, 3000 pounds per square inch minimum reinforced with 4 rows of number 4 rebar spaced evenly in the first 4 feet of the outer edge with a bullfloat finish and complies with the following:

~~[a. Fill shall extend a minimum of 3 inches up the side of the slab;]~~

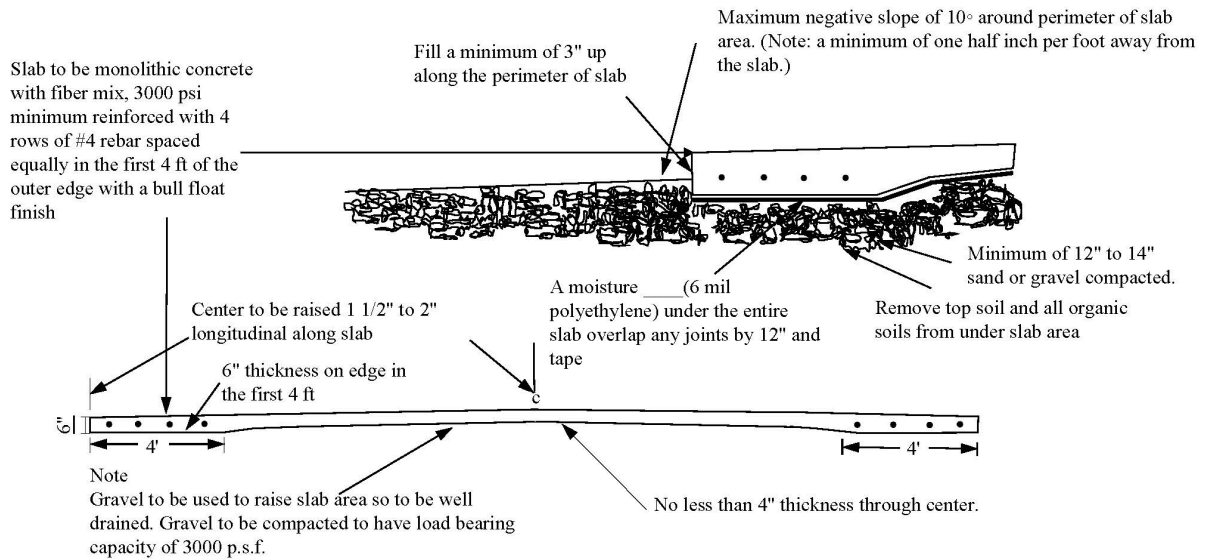
~~[b]~~**a.** Top soil and all organic soils shall be removed under the slab **and ther 3 foot extension areas;**

~~[e]~~**b.** A minimum of 12 inches to 14 inches of sand or gravel compacted **under the slab and the 3 foot extension areas;** and

**c. Fill shall extend a minimum of 3 inches up the side of the slab;**

d. Shall be at minimum as set forth in Figure 700-3; or

Figure 700-3 Slab Specifications



(2) Below frost footing, which shall be designed by a New Hampshire licensed professional engineer.

Inst 703.10 Permanent Foundations.

(a) Designs for permanent foundations such as basements, crawl spaces, or load-bearing perimeter foundations shall be permitted.

(b) An open porch shall not be installed over a basement or other enclosed space.

Inst 703.11 Special Considerations. Special elevations and anchoring techniques shall be required in a flood zone.

Inst 703.12 Anchoring Instructions, Security Against Wind.

(a) After blocking and leveling the home, the installer shall secure the house against wind. The anchoring and foundation system shall be capable of meeting the loads required by 24 CFR 3280 [ & ] **and** 3282 in effect **at the time of installation.**

(b) Anchors shall be capable of resisting a minimum total load capacity of 4,725 lbs. and a working capacity of 3,150 lbs. Anchors and anchoring equipment shall be certified by an engineer or tested to national standards and installed as specified by the anchor manufacturer.

(c) Tie-down straps shall conform to the following:

(1) Cable or steel strap with a breaking strength of at least 4,725 lbs. shall be galvanized aircraft cable at least 1/4 inches diameter or Type 1, finish B, grade 1 steel strapping 1 1/4 inches wide and 0.03 **inches** thick, conforming to the **“Standard for Strapping, Fleet Steel and Seals” (D3953-91) of the** American Society for Testing and Materials (ASTM) [D3953-91]; and



(2) Galvanized connection devices such as turnbuckles, eyebolts, strap buckles, and cable clamps shall be rated at 3,150 working load minimum.

(d) Installers shall use diagonal tie downs in both transverse and longitudinal directions for single wide and doublewide houses.

(e) The number of anchors and spacing of anchors shall conform to manufacturer’s installation instructions.

(f) Each anchor shall be manufactured and installed in accordance with NFPA 225 **Manufactured Home Installation Standard**, 20[05]21 edition.

(g) If side-wall or over the roof straps are installed on the house, they shall be connected to an anchoring device.

Inst 703.13 Installation Close-up and Finishing.

(a) Skirting shall be made out of weather resistant material[~~-It~~] **and** shall not be attached in a manner that can cause water to be trapped between the siding and trim.

(b) Ventilation shall be provided for the crawl space with skirting at a minimum of 1 [~~ft<sup>2</sup>~~] **square foot** of free area for every 600 [~~ft<sup>2</sup>~~] **square feet** of house area floor.

(c) Access openings not less than 18 inches in width and 24 inches in height and not less than 3 square feet shall exist, so water supply and sewer drain connections located under the house are accessible for inspections. For the purpose of this section, openings shall include doors, hatches, or removable panels.

(d) Dryer vents, water heater overflow drains, **and** air conditioning condensation drains shall pass through the skirting to the outside. They shall vent into the atmosphere to ensure moisture is carried beyond the perimeter of the house.

Inst 703.14 Utility Connection and Testing.

(a) The installer shall consult with the authority having jurisdiction before connecting the manufactured house to utilities.

(b) Individuals familiar with local and state codes shall be permitted to make utility site connections and conduct tests.

(c) All utility, or exterior utility installations shall conform with the state fire code, Saf-C 6000 and the state building code pursuant to RSA 155-A.

**APPENDIX**

<b>RULE</b>	<b>STATUTE</b>
Inst 701 – Inst 702	RSA 205-D:1
Inst 703	RSA 205-D:4; RSA 205-D:20, I

**APPENDIX B: Incorporation by Reference Information**

<b>Rule</b>	<b>Title</b>	<b>Obtained at:</b>
Inst 703.12(c)(1)	Standard Specification for Strapping, Flat Steel and Seals – D3953-91	American Society for Testing and Materials (ASTM) ASTM International 100 Barr Harbor Drive PO Box C700 West Conshohocken, PA 194282959 Telephone: 1-610-832-9500 Downloadable version for Purchase at: <a href="https://www.astm.org/d3953-91.html">https://www.astm.org/d3953-91.html</a> Cost is \$83.00
Inst 703.12(f)	NFPA 225, Model Manufactured Home Installation Standards, 2021 edition	National Fire Protection Association (NFPA) Telephone: 1-800-344-3555 Downloadable version is free online at: <a href="https://www.normsplash.com/Samples/NFPA/158112173/NFPA-225-2021-en.pdf">https://www.normsplash.com/Samples/NFPA/158112173/NFPA-225-2021-en.pdf</a>