

**MN Licensed Manufacturer's
Foundation/Footing & Anchor Placement**

7/20/04

MM-1920 Century Homes

- **Single wide homes:** *(copyright 2004)*
 - The bottom of the footing on which the pier is to be placed **must be** located below the frost line.
 - Ground anchors **should be** installed to their full depth, below the local frost line and at least 12 inches above the local water table. *Anchor manufacturer's testing is completed with anchors installed to their full depth.*
- **Multiple section homes:** *(copyright 2004)*
 - Footing same as singlewide.
 - Ground anchors same as singlewide.

MM-1010 Champion Home Builders Co.

- **Single & Multiple section homes:** *(copyright 2004)*
 - To preclude the harmful effects of ground frost heave, footings **must be** below the frost line or otherwise protected from the effects of ground frost heave. *(DAPIA approved addendum for park/community installation on file.) (DAPIA approved, dated 6/2/04, addendum for insulated foundation systems on file.)*
 - Ground anchors **shall be** embedded below the frost line and be above the water table.

MM-2090 Chief Industries, Inc.

- **Single section homes:** *(copyright 1997)*
 - It is **recommended** that bottom of all footings be below local frost line.
 - Ground anchors **should be** embedded below the frost line and be at least 12" above the water table.
- **Double section homes:** *(copyright 1997)*
 - Footing same as singlewide.
 - Ground anchors same as singlewide.

Note: Chief Industries has not submitted an installation manual for triple-wide homes, if they manufacture such a unit.

MM-2240 CMH Hodgenville, Inc. (past name Schult & Oakwood)

- **Single & Multiple Section Homes** *(copyright 2004)*
 - All piers **must** rest on footings that are protected from the effects of frost heave. Place footings below the frost line according to local requirements or provide insulated skirting to the house sufficient enough to prevent the soil under the home from freezing. *Engineer*

design required verifying insulation sufficient to prevent freezing. (DAPIA approved option for park installations on file.)

- **Ground anchors shall be installed to their full depth, embedded below the frost line, and be at least 12” above the water table.**

MM-2250 CMH Manufacturing West, Inc. (past name Schult)

- **Singlewide & Multiple section homes footing and ground anchor requirements the same as MM-2240 CMH Hodgenville, Inc.**

MM-1930 Dutch Housing, Inc.

- **Single & Multiple section homes: (DAPIA approved 2002)**
 - **Conventional footings. In areas subject to ground frost heave, place footings below the frost line. (DAPIA approved option for park installations on file.)**
 - **Ground anchors shall be embedded below the frost line and shall be at least 12” above the water table.**

MM-2080 Dutch Housing , Inc. d.b.a. Fortune Homes

- **Single & Multiple section homes:**
 - **Conventional footings. In areas subject to ground frost heave, place footings below the frost line. (DAPIA approved option for park installations on file.)**
 - **Ground anchors shall be embedded below the frost line and shall be at least 12” above the water table.**

MM-1940 Fairmont Homes

- **Single section homes: (copyright 2004)**
 - **The bottom of the footing on which the pier is to be placed must be located below the frost line.**
 - **Ground anchors should be installed to their full depth, below the frost line and at least 12” above the local water table. Anchor manufacturer’s testing is completed with anchors installed to their full depth.**
- **Multiple section homes: (copyright 2004)**
 - **Footing same as singlewide.**
 - **Ground anchors same as singlewide.**

(DAPIA approved addendum for park installations on file)

MM-2100 Fleetwood Homes of Indiana, Inc.

- **Single section homes: (copyright 2004)**
 - **In areas where the ground is subject to freezing, the footing pads must extend below the frost line established by the local**
 - **Install end of anchors below the frost line.**
- **Multiple section homes: (copyright 2004)**

- **Footing same as singlewide.**
- **Ground anchors same as singlewide.**

Memo from Fleetwood to this division dated 7/15/04: Fleetwood will not be adding an addendum for frost in parks in MN. But we will be allowing a local engineer to design a foundation for a specific park.

MM-2000 Four Seasons Housing, Inc.

- **Single section homes:** *(no copyright received by division in December of 2003)*
 - **To avoid the effects of frost heave the footings shall be placed below the frost line. Check local building codes to determine a safe depth for the footings.**
 - **Make certain that the anchors are installed below the frost line and a minimum of 12” above the water table.**
- **Doublewide section homes:** *(no copyright received by division in December 2003)*
 - **Footing same as singlewide.**
 - **Ground anchors same as singlewide.**

Note: Four Seasons Housing has not submitted an installation manual for triple-wide homes, id they manufacture such a unit.

Four Season’s addendum for park installation approved by DAPIA on July 30, 2004.

MM-1760 Friendship Homes of MN Inc.

- **Single section homes:** *(copyright 2004)*
 - **The bottom of the footing on which the pier is to be placed must be located below the frost line.** *(Addendum for park installations DAPIA approval dated 7/1/04 on file, revised addendum DAPIA approved 1/25/05 on file.)*
 - **Ground anchors should be installed to their full depth, below the local frost line and at least 12” above the local water table.** *Anchor manufacturer’s testing is completed with anchors installed to their full depth.*
- **Multiple section homes:** *(copyright 2004)*
 - **Footing same as singlewide.**
 - **Ground anchors same as singlewide.**

MM-2020 Hart Housing Group, Inc.

- **Single section homes:** *Company does not manufacture singlewide homes.*
- **Multiple section homes:** *(No copyright on manual, copy on file received by division in December of 2003.)*
 - **To preclude the harmful effects of ground frost heave, footings must be placed below the frost line. Consult local authorities to determine frost penetration.** *(DAPIA approved option for park installations on file.)*

- **Be sure** anchor augers are installed below the frost line. During periods of frost heave, be prepared to adjust tension on the straps to take up slack.

MM-2150 Highland Manufacturing Company, LLC

- **Single & Multiple section homes:** *(Copyright 1996, copy submitted to this division 2002.)*
 - If footings are placed on frost susceptible soil, such as clay or silt, heaving and/or settlement may occur. In areas where temperatures go below freezing, it is **recommended** that the pier footings be located below the frost line.
 - The ground anchors **must be** installed to their full depth in accordance with the manufacturer's instructions and **must** extend below the frost line and be at least 12" above the water table.

MM-1850 Homark Company, Inc.

- **Single section homes:** *(No copyright date, file copy of manual received with 2003 and 2004 license renewal.)*
 - Climate conditions must also be taken into account. If footings are placed on a frost-susceptible soil, such as clay or silts, heaving and/or settlement may occur. In areas where temperatures go below freezing, it is important that the pier footings **be located** below the frost line.
 - Ground anchors **should** be embedded below the frost line and be at least 12" above the water table.
- **Multi-section homes:** *(no copyright date, revised June 1999)*
 - Footing same as single section.
 - Ground anchors same as single section.

MM-1132 Homette Corporation (Skyline from WI)

- **Single & Multiple section homes:** *(copyright October 2000)*
 - For frost-susceptible soils, to preclude the harmful effects of ground frost heave, footings **should** usually be placed below the frost line.
 - Ground anchors **should** be embedded below the frost line and be at least 12" above the water table.

MM-2180 Indiana Building Systems (Holly Park)

- **Single section homes:** *(no copyright date, approved by DAPIA in September 1999)*
 - Consideration **shall** be given to the type of soil and frost line conditions where the home is to be located when designing and installing the foundation footings or supports. We **recommend** that you contact a local engineer and inquire as to the type of footings required in your area.

- Ground anchors **should** be embedded below the frost line and be at least 12” above the water table.
- **Double wide homes:** *(no copyright date, approved by DAPIA in January 2000)*
 - The bottom of footings **must** be below the frost line as required by state and local codes. *(DAPIA approved addendum for park installation dated 9/2/04 on file.)*
 - Ground anchors **should** be embedded below the frost line and be at least 12” above the water table.

Note: Indiana Building Systems has not submitted an installation manual for triple-wide homes, if they manufacture such a unit.

MM-1151 Liberty Homes, Inc.

- **Single & Multiple section homes:** *(copyright March 2002)*
 - For homes, which are to be set in areas susceptible to frost, in order to prevent the potentially harmful effects of frost heave, footings **should** be placed below the frost line or the home **must** be installed in such a manner as to provide a stable environment. *(Liberty DAPIA approved addendum dated 8/28/04 on file.)*
 - Freezing climates **be sure** anchor augers are installed below the frost line. During period of frost heave, be prepared to adjust tension on the straps to take up slack.

MM-1990 Patriot Manufacturing, Inc.

- **Single & Multiple section homes:** *(copyright February 2002)*
 - If the installer and/ or homeowner cannot make a determination, then footings **shall** be installed as illustrated by the following chart *(Federal Frost Depth Map in Manual)*. Patriot Homes cannot honor warranty claims that result from “frost heave” due to footings being set at an insufficient depth or where soil content contains excessive moisture, which accelerates the forming of ice lenses. The soil bearing capacity **shall** be determined at the footing depth, below frost depth.
 - Anchors are to be installed per instructions: to be full depth, below frost line and augers of tiedowns are to be minimum of 12” above water table.

MM-2210 Redman Homes, Inc. d.b.a Commander Homes

- **Single & Multiple section homes:** *(no copyright date, approved by DAPIA in May 2002) (DAPIA approved, dated 6/2/04, addendum for insulated foundation systems on file.)*
 - In areas subject to ground frost heave, **place** footings below the frost line. Consult local authorities to determine frost depth.

- **Be sure** anchor augers are installed below the frost line. During periods of frost heave, be prepared to adjust tension on the straps to take up slack.

MM-2040 Redman Homes, Inc.

- **Single & Multiple section homes:** *(copyright November 2001)*
 - In areas subject to ground frost heave, **place** footings below the frost line. Consult your local authorities to determine frost depth. In absence of local code, use the frost penetration map (*Federal Frost Depth Map in Manual*). *(DAPIA approved, dated 6/2/04, addendum for insulated foundation systems on file.)*
 - **Be sure** anchor augers are installed below the frost line.

MM-2200 Skyline Corporation

- **Single & Double section homes:** *(copyright August 2005)*
 - For frost-susceptible soils, to preclude the harmful effects of ground frost heave, footings **shall** be placed below the frost line. Consult local authorities to determine frost penetration. *(DAPIA approved installations instructions received 1/27/06 allowing ground set waiver.)* **In parks, alternates to frost depth footings maybe allowed by local authority having jurisdiction.**
 - Soil anchors **must** be installed as directed by the anchor manufacturer installation instructions and should describe the correct anchor placement with regard to direction, water table level and frost line location.

Note: Skyline has not submitted an installation manual for triple-wide homes, if they manufacture such a unit.

MM-2230 Superior Homes, LLC

- **Single section homes:** *(no copyright date, DAPIA approved August 2003)*
 - The footing on which blocks are placed **must** be on firm ground to assure minimum settling; pour concrete at least 4” thick is recommended.
 - Ground anchor **should** be embedded below the frost line and at least 12” above the water table.
- **Double section homes:** *(no copyright date, DAPIA approved August 2003)*
 - Footing the same as single section.
 - Ground anchors the same as single section.

Note: Superior Homes has not submitted an installation manual for triple-wide homes, if they manufacture such a unit.

MM-2260 The Fall Creek Home LLC

- **Single & Multiple section homes:** *(no copyright, DAPIA approval August 03)*
 - Under the design requirements section of the manual it is stated as follows. All piers **must** rest on footings that either extend below the frost line or are otherwise protected from frost effects, and are placed on either undisturbed soil or compacted fill. *(DAPIA approved option, dated 9/17/04, for community/park installation above frost depth on file.)*
 - Be sure anchor augers **are** installed below the frost line.

MM-1230 Wick Building Systems Inc.

- **Single & Multiple section homes:** *(copyright 2001)*
 - All footings **must** either extend below the frost line or be protected from the effects of frost heave. *(DAPIA approved option for park installation dated 9/1/04 on file.)*
 - Ground anchors **must** be embedded below the frost line and be at least 12” above the water table.

Revision 7/22/04 (Champion Homes)

Revision 7/26/04 (The Fall Creek Home LLC)

Revision 8/19/04 (ChampionHome Builders, Redman Homes, Inc., and Redman Homes Inc, d.b.a. Commander Homes)

Revision 8/23/04 (Friendship Homes of MN)

Revision 8/27/04 (Fairmont Homes, Inc.)

Revision 9/2/04 (Friendship Homes of MN, Fairmont Homes, Inc., and Century Homes)

Revision 9/2/04 (Wick Building Systems, Inc.)

Revision 9/7/04 (Liberty Homes, Inc.)

Revision 9/13/04 (Indiana Building Systems-Holly Park)

Revision 9/23/04 (The Fall Creek Home, LLC)

Revision 11/24/04 (Skyline installation conflict in their approved manual)

Revision 1/25/05 (Friendship Homes of MN revised addendum)

Revision 1/27/06 (MM-2200 Skyline Corp. Alternates to frost depth footings in parks)

Revision 2/21/06 (Four Season's addendum to frost depth footings in park communities)