

ADVISORY COMMITTEE COMMENT FORM
FOR PROPOSED CODE CHANGES
 (This form must be submitted electronically)

IRC-53, R403.1.1

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Proposed Code Change - Language

R403.1.1 Minimum size. Minimum sizes for concrete and masonry footings shall be as set forth in Table R403.1 and Figure R403.1(1). The footing width, W, shall be based on the load-bearing value of the soil in accordance with Table R401.4.1. Spread footings shall be at least 6 inches (152 mm) in thickness, T. Footing projections, P, shall be at least 2 inches (51 mm) and shall not exceed the thickness of the footing. The size of footings supporting piers and columns shall be based on the tributary load and allowable soil pressure in accordance with Table R401.4.1. Footings for wood foundations shall be in accordance with the details set forth in Section R403.2, and Figures R403.1(2) and R403.1(3). Footing sizes for decks shall be in accordance with Table R403.2.

Insert new table:

Table R403.2
Minimum Size Footings for Decks

CLASS OF MATERIAL	LOAD-BEARING PRESSURE (lbs/sq. ft.)	AREA SUPPORTED (Sq. ft.)	FOOTING DIAMETER (in.) ^{a, b, c}
Sedimentary and foliated rock	4,000	28	8
		35	9
		43	10
		53	11
		63	12
		74	13
		85	14
		98	15
		112	16
Sandy gravel and/or gravel (GW and GP)	3,000	126	17
		141	18
		21	8
		26	9
		33	10
		39	11
		47	12
		55	13
		64	14
		74	15
84	16		
94	17		

		106	18
Sand, silty sand, clayey sand, silty gravel and clayey gravel (SW, SP, SM, SC, GM, and GC)	2,000	14	8
		18	9
		22	10
		26	11
		31	12
		37	13
		43	14
		49	15
		56	16
		63	17
		70	18
Clay, sandy clay, silty clay, clayey silt, silt and sandy silt (CL, ML, MH and CH)	1,500	10	8
		13	9
		16	10
		20	11
		23	12
		27	13
		32	14
		37	15
		42	16
		47	17
		53	18

- Footing diameter is measured at the base of the footing or pier.
- Minimum pier diameter shall be 8 inches.
- Minimum footing depth shall be 8 inches.

$$A = \text{Load Bearing Pressure } \{ \pi(\text{Footing Diameter (in.)}/2)^2/144\}/50$$

Proposed Code Change – Need and Reason

Deck permits are one of the most common construction permits issued by building departments. While there are prescriptive requirements for most components of buildings constructed under the Minnesota Residential Code, there are no prescriptive requirements for deck footings. Section R301.1.3 requires that components not conforming to the code be designed in accordance with accepted engineering practice. Decks are designed by homeowners and contractors and plans reviewed by building department permit techs or plan reviewers. None of these folks are likely to be engineers or have formal engineering training. It is necessary to have prescriptive direction in the code to limit the liability placed on building departments when they attempt to validate footing sizes. Most of the time footing sizes are determined by the building department regardless of rules, laws, policies or directives. The proposed table allows a deck designer to establish a minimum footing size based on soil types and area supported. For example, using the proposed table, a deck constructed on type CL soils would require a footing diameter of 8 inches to support 10 square feet of deck. A total load of 50 pounds was used.

R301.1.3 Engineered design. When a building of otherwise conventional construction contains structural elements exceeding the limits of Section R301 or otherwise not conforming to this code, these elements shall be designed in accordance with accepted engineering practice. The extent of such design need only demonstrate compliance of nonconventional elements with other applicable provisions and shall be compatible with the performance of the conventional framed system. Engineered design in accordance with the *International Building Code* is permitted for all buildings and structures, and parts thereof, included in the scope of this code.

Proposed Code Change – Cost/Benefit Analysis

This proposal will have no impact on construction costs.

Other Factors to Consider Related to Proposed Code Change

1. Is this proposed code change meant to:

change language contained in a published code book? If so, list section(s).

change language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).

delete language contained in a published code book? If so, list section(s).

delete language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).

neither; this language will be new language, not found in the code book or in Minnesota Rule.

2. Is this proposed code change required by a Minnesota Statute or new legislation? If so, please provide the citation to the Statute or legislation.

No

3. Will this proposed code change impact other sections of a published code book or of an amendment in Minnesota Rule? If so, please list the affected sections or rule parts.

No

4. Will this proposed code change impact other parts of the Minnesota State Building Code? If so, please list the affected parts of the Minnesota State Building Code.

No

5. Who are the parties affected or segments of industry affected by this proposed code change?

Code officials, building designer, contractors, homeowners.

6. Can you think of other means or methods to achieve the purpose of the proposed code change? If so, please explain what they are and why your proposed change is the preferred method or means to achieve the desired result.

No

7. Are you aware of any federal requirement or regulation related to this proposed code change? If so, please list the regulation or requirement.

No