

ADVISORY COMMITTEE COMMENT FORM FOR PROPOSED CODE CHANGES

(This form must be submitted electronically)

SAC-1, MN 1303.1600 Subp. 2. Soil under slab on grade construction for buildings.
Author/requestor: Ron Shaffer for SAC (Structural Advisory Committee)

Email address: rShaffer@braunintertec.com

Telephone number:

Firm/Association affiliation, if any: MNSEA, SAC

Proposed Code Change - Language

(MN 1303.1600 FOOTING DEPTH FOR FROST PROTECTION.)

Subp. 2. **Soil under slab on grade construction for buildings.** When soil, natural or fill, is sand or pit run sand and gravel, and of depth in accordance with minimum footing depth requirements for each zone, slab on grade construction which is structurally designed to support all applied loads is permitted. Sand must contain less than 70 percent material that will pass through a U.S. Standard No. 40 sieve and less than five percent material that will pass through a No. 200 sieve (five percent fines), or be approved by an engineer competent in soil mechanics.

Exception: Slab on grade construction may be placed on any soil except peat or muck for detached one story private garage, carport, and shed buildings not larger than 1,300 square feet.

Footings for interior bearing walls or columns may be constructed to be integral with the slab on grade for any height building. Footings for exterior bearing walls or columns may be similarly constructed for any height building when supporting soil is as described in this subpart. Footing design must reflect eccentric loading conditions at slab edges, soil bearing capacity, and the requirements of International Building Code, chapter 19.

Proposed Code Change – Need and Reason

MN 1303.1600 Subp. 2, adopted in 2003, referenced Group U occupancies. While the 2000 IBC did include this occupancy designation, the model residential code (2000 IRC) did not. Therefore, this section was amended in 2007 to correct this inaccuracy with the intent that the basic historical premise of the section should remain intact. In using the 1976 Uniform Building Code (UBC) as a historical reference, part of section 1502(a) allowing 3,000 square feet for garages in mixed occupancy buildings was misapplied to detached one story garages and similar buildings. By using this historical reference section 1502(a) correctly, detached one story private garages, carports and shed buildings would be limited to 1,000 square feet. This change is required to return this code section to its intended and historical limitations.

Proposed Code Change – Cost/Benefit Analysis

There is a potential cost increase to a small percentage of buildings. In practical terms, most detached one story private garage, carport, and shed buildings over 1,000 square feet are built with a post and beam structure with the posts extending to minimum frost depth. Per MN 1800.5900, an Occupancy Group U class of building over 1,000 square feet in area or greater than 1-story is not exempt from the requirement for Minnesota licensed design professional. The structural engineer of record's design would be required to protect the structure from effects of frost heave.

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).

X change language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s). MN 1303.1600 Subp. 2. Soil under slab on grade construction for buildings.

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). MN 1309.0010 Subp. 4 Seismic or earthquake provisions.

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? Contractors, building owners.

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. In-line with national standards.

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