

CODE CHANGE PROPOSAL FORM

(Must be submitted electronically)

Author/requestor: **C. Scott Anderson**

Date: **6/13/24 Revised 7/8/24**

Email address: **c.scott.anderson@minneapolismn.gov**

Model Code: **2024 IBC**

Telephone number: **612-246-7303**

Code or Rule Section: **1809.5 +
1809.5.1 + 1010.1.5**

Firm/Association affiliation, if any: **City of Minneapolis**

Topic of proposal: **Frost Protection and
Landings at Exterior Exit Doors**

Code or rule section to be changed: **1805.9 + 1809.5.1 + 1010.1.5**

Intended for Technical Advisory Group ("TAG"):

General Information

Yes No

- | | | |
|----------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| A. Is the proposed change unique to the State of Minnesota? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Is the proposed change required due to climatic conditions of Minnesota? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| C. Will the proposed change encourage more uniform enforcement? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| D. Will the proposed change remedy a problem? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| E. Does the proposal delete a current Minnesota Rule, chapter amendment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Would this proposed change be appropriate through the ICC code development process? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Proposed Language

1. The proposed code change is meant to:

- change language contained the model code book? If so, list section(s). **1809.5 + 1809.5.1**
- change language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).
- delete language contained in the model code book? If so, list section(s).
- delete language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).
- add new language that is not found in the model code book or in Minnesota Rule.

1809.5 + 1809.5.1 + 1010.1.5

2. Is this proposed code change required by Minnesota Statute? If so, please provide the citation.

No

3. Provide *specific* language you would like to see changed. Indicate proposed new words with underlining and ~~strikethrough~~ words proposed for deletion. Include the entire code (sub) section or rule subpart that contains your proposed changes.

1809.5 Frost protection.

Except where otherwise protected from frost, foundations and other permanent supports of *buildings* and *structures* shall be protected from frost by one or more of the following methods:

1. Extending below the frost line ~~of the locality.~~ in accordance with 1303.1600.
2. Constructing in accordance with ASCE 32.
3. Erecting on solid rock.

~~**Exception:** Freestanding buildings constructed in accordance with Minnesota Rules, Chapter 1303, shall not be required to be protected.~~

Exception: Free-standing *buildings* meeting all of the following conditions shall not be required to be protected:

1. Assigned to *Risk Category I*.
2. Area of ~~600~~ 1,000 square feet (56 m²) or less ~~for of light-frame construction or 400 square feet (37 m²) or less for other than light-frame construction.~~
3. Eave height of 10 feet (3048 mm) or less.

Shallow foundation shall not bear on frozen soil unless such frozen condition is of a permanent character.

1809.5.1 Frost protection at required exits.

1010.1.5.1 Landings at Exterior Exit Doors

Frost protection ~~in accordance with 1809.5~~ shall be provided ~~at for exterior landings for at all required exterior exit doors.~~ exits with outward swinging doors. Frost protection shall only be required to the extent necessary to ensure the unobstructed opening of the ~~required exterior exit doors.~~

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

No

Need and Reason

1. Why is the proposed code change needed? Please provide a general explanation as well as a specific explanation for any changes to numerical values (heights, area, etc.)

Section 1809.5.1 is relocated to 1010.5 as it is addressing landings and it is more likely that this requirement will be identified here than in the foundations section.

The model code only addresses out swinging doors. This revision addresses all exit doors regardless of the direction of the swing. Some structures may not require MOE doors to swing out yet do require accessible MOE. Not providing frost protection for the landings will increase the risk that frost heave will reduce the accessibility of the MOE. It also has the significant potential of creating a severe tripping hazard at the door threshold. While

the potential tripping hazard will still exist at the edge of the landing it has at least been moved beyond the door threshold thus giving people the opportunity to avoid it. The word "required" has been removed because all exit doors need to be safe. Section 1010.1 requires that all doors provided for egress purposes in excess of those required for egress are required to meet the requirements of chapter 10. Therefore frost protection should also be extended to all doors provided for egress purposes.

The Mn amendment referencing to chapter 1303 should be deleted. There are no freestanding buildings identified in 1303. There is a reference to soils under slab on grade buildings that I believe is the intent of this reference so I have modified the model code language to match up with the current Mn allowance of 1,000 s.f. and deleted the allowance for other than light frame construction.

2. Why is the proposed code change a reasonable solution?
It addresses a life safety issue unique to cold weather climates.
3. What other factors should the TAG consider?
None

Cost/Benefit Analysis

1. Will the proposed code change increase or decrease costs? Please explain and provide estimates if possible.
This is an editorial change and should not impact the cost of construction. Structures are required to have foundations. A stoop or landing is a structure per the IBC definition.
2. If there is an increased cost, will this cost be offset by a safety or other benefit? Please explain. If the benefit is quantifiable (for example energy savings), provide an estimate if possible.
No cost change
3. If there is a cost increase, who will bear the costs? This can include government units, businesses, and individuals.
NA
4. Are there any enforcement or compliance cost increases or decreases with the proposed code change? Please explain.
No
5. Will the cost of complying with the proposed code change in the first year after the rule takes effect exceed \$25,000 for any one small business or small city ([Minn. Stat. § 14.127](#))? A small business is any business that has less than 50 full-time employees. A small city is any statutory or home rule charter city that has less than ten full-time employees. Please explain.
No

Regulatory Analysis

1. What parties or segments of industry are affected by this proposed code change?
Architects, Contractors, Developers, Building Owners, Contractors, Building Officials

2. Can you think of other means or methods to achieve the purpose of the proposed code change? What might someone opposed to this code change suggest instead? Please explain what the alternatives are and why your proposed change is the preferred method or means to achieve the desired result.

No

3. What are the probable costs or consequences of not adopting the code change, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals?

Egress doors could become unusable during cold weather conditions thus trapping people inside a structure.

4. Are you aware of any federal or state regulation or requirement related to this proposed code change? If so, please list the federal or state regulation or requirement and your assessment of any differences between the proposed code change and the federal regulation or requirement.

no

***Note: Incomplete forms may be returned to the submitter with instruction to complete the form. Only completed forms can considered by the TAG.

Reference Old Version

CODE CHANGE PROPOSAL FORM

(Must be submitted electronically)

Author/requestor: C. Scott Anderson *Date:* 6/13/24 Revised 7/8/24 9/19/24

Email address: c.scott.anderson@minneapolismn.gov *Model Code:* 2024 IBC

Telephone number: 612-246-7303 *Code or Rule Section:* 1809.5.1 + 1010.1.5

Firm/Association affiliation, if any: City of Minneapolis *Topic of proposal:* 1809.5.1 + 1010.1.5

Code or rule section to be changed: 1809.5.1 + 1010.1.5

Intended for Technical Advisory Group ("TAG"):

General Information

Yes No

- | | | |
|----------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| A. Is the proposed change unique to the State of Minnesota? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Is the proposed change required due to climatic conditions of Minnesota? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| C. Will the proposed change encourage more uniform enforcement? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| D. Will the proposed change remedy a problem? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| E. Does the proposal delete a current Minnesota Rule, chapter amendment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Would this proposed change be appropriate through the ICC code development process? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Proposed Language

1. The proposed code change is meant to:
 - change language contained the model code book? If so, list section(s). 1809.5.1
 - change language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).
 - delete language contained in the model code book? If so, list section(s).
 - delete language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).
 - add new language that is not found in the model code book or in Minnesota Rule. 1809.5.1 + 1010.1.5

2. Is this proposed code change required by Minnesota Statute? If so, please provide the citation.

No

3. Provide *specific* language you would like to see changed. Indicate proposed new words with underlining and ~~strikethrough~~ words proposed for deletion. Include the entire code (sub) section or rule subpart that contains your proposed changes.

1809.5.1 Frost protection at ~~required exits.~~ exterior landings

Frost protection shall be provided at exterior landings for all ~~required~~ exterior doors used for egress purposes exits with outward-swinging doors. ~~Frost protection shall only be required to the extent necessary to ensure the unobstructed opening of the required exit doors.~~

Add new section

1010.1.5.1 Landings at Exterior Exit Doors

Frost protection in accordance with 1809.5 shall be provided at exterior landings for at all exterior doors used for egress purposes with outward swinging doors.

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

No

Need and Reason

1. Why is the proposed code change needed? Please provide a general explanation as well as a specific explanation for any changes to numerical values (heights, area, etc.)

Section 1809.5.1 is relocated to 1010.5 as it is addressing landings and it is more likely that this requirement will be identified here than in the foundations section.

The word "required" has been removed because all exit doors need to be safe. Section 1010.1 requires that all doors provided for egress purposes in excess of those required for egress are required to meet the requirements of chapter 10. Therefore, frost protection should also be extended to all doors provided for egress purposes.

2. Why is the proposed code change a reasonable solution?
It addresses a life safety issue unique to cold weather climates.

3. What other factors should the TAG consider?

None

Cost/Benefit Analysis

1. Will the proposed code change increase or decrease costs? Please explain and provide estimates if possible.

This is an editorial change and should not impact the cost of construction. Structures are required to have foundations. A stoop or landing is a structure per the IBC definition.

2. If there is an increased cost, will this cost be offset by a safety or other benefit? Please explain. If the benefit is quantifiable (for example energy savings), provide an estimate if possible.

No cost change

3. If there is a cost increase, who will bear the costs? This can include government units, businesses, and individuals.
NA
4. Are there any enforcement or compliance cost increases or decreases with the proposed code change? Please explain.
No
5. Will the cost of complying with the proposed code change in the first year after the rule takes effect exceed \$25,000 for any one small business or small city ([Minn. Stat. § 14.127](#))? A small business is any business that has less than 50 full-time employees. A small city is any statutory or home rule charter city that has less than ten full-time employees. Please explain.
No

Regulatory Analysis

1. What parties or segments of industry are affected by this proposed code change?
Architects, Contractors, Developers, Building Owners, Contractors, Building Officials
2. Can you think of other means or methods to achieve the purpose of the proposed code change? What might someone opposed to this code change suggest instead? Please explain what the alternatives are and why your proposed change is the preferred method or means to achieve the desired result.
No
3. What are the probable costs or consequences of not adopting the code change, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals?
Egress doors could become unusable during cold weather conditions thus trapping people inside a structure.
4. Are you aware of any federal or state regulation or requirement related to this proposed code change? If so, please list the federal or state regulation or requirement and your assessment of any differences between the proposed code change and the federal regulation or requirement.
no

***Note: Incomplete forms may be returned to the submitter with instruction to complete the form. Only completed forms can considered by the TAG.

CODE CHANGE PROPOSAL FORM

(Must be submitted electronically)

Author/requestor: C. Scott Anderson *Date:* 6/13/24 Revised 7/8/24 9/19/24

Email address: c.scott.anderson@minneapolismn.gov *Model Code:* 2024 IBC

Telephone number: 612-246-7303 *Code or Rule Section:* 1809.5 + 1809.5.1 + 1010.1.5

Firm/Association affiliation, if any: City of Minneapolis *Topic of proposal:* 1805.9 + 1809.5.1 + 1010.1.5

Code or rule section to be changed: 1805.9 + 1809.5.1 + 1010.1.5

Intended for Technical Advisory Group ("TAG"):

General Information

Yes No

- | | | |
|----------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| A. Is the proposed change unique to the State of Minnesota? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Is the proposed change required due to climatic conditions of Minnesota? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| C. Will the proposed change encourage more uniform enforcement? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| D. Will the proposed change remedy a problem? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| E. Does the proposal delete a current Minnesota Rule, chapter amendment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Would this proposed change be appropriate through the ICC code development process? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Proposed Language

1. The proposed code change is meant to:
 - change language contained the model code book? If so, list section(s). 1809.5 + 1809.5.1
 - change language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).
 - delete language contained in the model code book? If so, list section(s).
 - delete language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).
 - add new language that is not found in the model code book or in Minnesota Rule.
1809.5 + 1809.5.1 + 1010.1.5

2. Is this proposed code change required by Minnesota Statute? If so, please provide the citation.

No

3. Provide *specific* language you would like to see changed. Indicate proposed new words with underlining and ~~strikethrough~~ words proposed for deletion. Include the entire code (sub) section or rule subpart that contains your proposed changes.

1809.5 Frost protection.

Except where otherwise protected from frost, foundations and other permanent supports of *buildings* and *structures* shall be protected from frost by one or more of the following methods:

1. ~~Extending below the frost line of the locality.~~ Constructed in accordance with 1303.1600.
2. Constructing in accordance with ASCE 32.
3. Erecting on solid rock.

~~**Exception:** Freestanding buildings constructed in accordance with Minnesota Rules, Chapter 1303, shall not be required to be protected.~~

Exception: Free-standing *buildings* meeting all of the following conditions shall not be required to be protected:

1. ~~Assigned to Risk Category I.~~ Classified as group U occupancy
2. Area of ~~600~~ 1,000 square feet (56 m²) or less for *light-frame construction* or 400 square feet (37 m²) or less for other than *light-frame construction*.
3. Eave height of 10 feet (3048 mm) or less.

Shallow foundation shall not bear on frozen soil unless such frozen condition is of a permanent character.

103.1600 subp 2

~~**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 1,000 square feet (92.9 m²).~~

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

No

Need and Reason

1. Why is the proposed code change needed? Please provide a general explanation as well as a specific explanation for any changes to numerical values (heights, area, etc.)

The Mn amendment referencing to chapter 1303 should be deleted.

The model code language provides more clear language and addresses more options. There is a reference in 1300.1600 to soils under slab on grade buildings that I believe is intended to address a size limit for these structures so I have modified the model code language to match up with the current Mn allowance of 1,000 s.f. but only for light frame construction.

2. Why is the proposed code change a reasonable solution?
It addresses a life safety issue unique to cold weather climates.

3. What other factors should the TAG consider?

None

Cost/Benefit Analysis

1. Will the proposed code change increase or decrease costs? Please explain and provide estimates if possible.

This is an editorial change and should not impact the cost of construction. Structures are required to have foundations. A stoop or landing is a structure per the IBC definition.

2. If there is an increased cost, will this cost be offset by a safety or other benefit? Please explain. If the benefit is quantifiable (for example energy savings), provide an estimate if possible.

No cost change

3. If there is a cost increase, who will bear the costs? This can include government units, businesses, and individuals.

NA

4. Are there any enforcement or compliance cost increases or decreases with the proposed code change? Please explain.

No

5. Will the cost of complying with the proposed code change in the first year after the rule takes effect exceed \$25,000 for any one small business or small city ([Minn. Stat. § 14.127](#))? A small business is any business that has less than 50 full-time employees. A small city is any statutory or home rule charter city that has less than ten full-time employees. Please explain.

No

Regulatory Analysis

1. What parties or segments of industry are affected by this proposed code change?

Architects, Contractors, Developers, Building Owners, Contractors, Building Officials

2. Can you think of other means or methods to achieve the purpose of the proposed code change? What might someone opposed to this code change suggest instead? Please explain what the alternatives are and why your proposed change is the preferred method or means to achieve the desired result.

No

3. What are the probable costs or consequences of not adopting the code change, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals?

Egress doors could become unusable during cold weather conditions thus trapping people inside a structure.

4. Are you aware of any federal or state regulation or requirement related to this proposed code change? If so, please list the federal or state regulation or requirement and your assessment of any differences between the proposed code change and the federal regulation or requirement.

no

***Note: Incomplete forms may be returned to the submitter with instruction to complete the form. Only completed forms can considered by the TAG.

CODE CHANGE PROPOSAL FORM

(Must be submitted electronically)

Author/requestor: **C. Scott Anderson**

Date: **9/19/24 revised**

Email address: **c.scott.anderson@minneapolismn.gov**

Model Code: **2024 IRC**

Telephone number: **612-246-7303**

Code or Rule Section: **R318.5.1**

Firm/Association affiliation, if any: **City of Minneapolis**

Topic of proposal: **footing frost protection and Means of egress door**

Code or rule section to be changed: **R318.5.1**

Intended for Technical Advisory Group ("TAG"):

General Information

Yes No

- | | | |
|----------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| A. Is the proposed change unique to the State of Minnesota? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| B. Is the proposed change required due to climatic conditions of Minnesota? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| C. Will the proposed change encourage more uniform enforcement? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| D. Will the proposed change remedy a problem? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| E. Does the proposal delete a current Minnesota Rule, chapter amendment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Would this proposed change be appropriate through the ICC code development process? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Proposed Language

1. The proposed code change is meant to:

- change language contained the model code book? If so, list section(s). **R318.5.1**
- change language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).
- delete language contained in the model code book? If so, list section(s).
- delete language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).
- add new language that is not found in the model code book or in Minnesota Rule.
R318.5.1

2. Is this proposed code change required by Minnesota Statute? If so, please provide the citation.

No

3. Provide *specific* language you would like to see changed. Indicate proposed new words with underlining and ~~strikethrough~~ words proposed for deletion. Include the entire code (sub) section or rule subpart that contains your proposed changes.

Add new section

R318.5.1 Landing, deck, balcony and stair construction at required egress door.

Exterior landings, decks, balconies, stairs and similar facilities shall be supported on footings protected from frost by one or more of the following methods:

1. Constructed in accordance with 1303.1600.
2. Erecting on solid rock.
3. Other approved methods of frost protection

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

No

Need and Reason

1. Why is the proposed code change needed? Please provide a general explanation as well as a specific explanation for any changes to numerical values (heights, area, etc.)

This additional text clarifies the need for frost protection of the landing at the required egress door. Other doors

2. Why is the proposed code change a reasonable solution?

It addresses a life safety issue unique to cold weather climates.

3. What other factors should the TAG consider?

None

Cost/Benefit Analysis

1. Will the proposed code change increase or decrease costs? Please explain and provide estimates if possible.

This is an editorial change and should not impact the cost of construction.

2. If there is an increased cost, will this cost be offset by a safety or other benefit? Please explain. If the benefit is quantifiable (for example energy savings), provide an estimate if possible.

No cost change

3. If there is a cost increase, who will bear the costs? This can include government units, businesses, and individuals.

NA

4. Are there any enforcement or compliance cost increases or decreases with the proposed code change? Please explain.

No

5. Will the cost of complying with the proposed code change in the first year after the rule takes effect exceed \$25,000 for any one small business or small city ([Minn. Stat. § 14.127](#))? A small business is any business that has less than 50 full-time employees. A small city is any statutory or home rule charter city that has less than ten full-time employees. Please explain.

No

Regulatory Analysis

1. What parties or segments of industry are affected by this proposed code change?
Architects, Contractors, Developers, Building Owners, Contractors, Building Officials
2. Can you think of other means or methods to achieve the purpose of the proposed code change? What might someone opposed to this code change suggest instead? Please explain what the alternatives are and why your proposed change is the preferred method or means to achieve the desired result.
No
3. What are the probable costs or consequences of not adopting the code change, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals?
Potential conflicts in code requirements and possible miss application of frost protection requirements.
4. Are you aware of any federal or state regulation or requirement related to this proposed code change? If so, please list the federal or state regulation or requirement and your assessment of any differences between the proposed code change and the federal regulation or requirement.
no

***Note: Incomplete forms may be returned to the submitter with instruction to complete the form. Only completed forms can considered by the TAG.

CODE CHANGE PROPOSAL FORM

(Must be submitted electronically)

Author/requestor: C. Scott Anderson

Date: 7/8/24 Revised 09/19/24

Email address: c.scott.anderson@minneapolismn.gov

Model Code: 2024 IRC

Telephone number: 612-246-7303

Code or Rule Section: R403.1.4.1

Firm/Association affiliation, if any: City of Minneapolis

Topic of proposal: footing frost protection

Code or rule section to be changed: R403.1.4.1

Intended for Technical Advisory Group ("TAG"):

General Information

Yes **No**

- | | | |
|----------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| A. Is the proposed change unique to the State of Minnesota? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| B. Is the proposed change required due to climatic conditions of Minnesota? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| C. Will the proposed change encourage more uniform enforcement? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| D. Will the proposed change remedy a problem? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| E. Does the proposal delete a current Minnesota Rule, chapter amendment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Would this proposed change be appropriate through the ICC code development process? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Proposed Language

1. The proposed code change is meant to:

- change language contained the model code book? If so, list section(s). R403.1.4.1
- change language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).
- delete language contained in the model code book? If so, list section(s).
- delete language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).
- add new language that is not found in the model code book or in Minnesota Rule. R403.1.4.1

2. Is this proposed code change required by Minnesota Statute? If so, please provide the citation.

No

3. Provide *specific* language you would like to see changed. Indicate proposed new words with underlining and ~~strikethrough~~ words proposed for deletion. Include the entire code (sub) section or rule subpart that contains your proposed changes.

R403.1.4.1 Frost protection.

Except where otherwise protected from frost, foundations and other permanent supports of *buildings* and *structures* shall be protected from frost by one or more of the following methods:

1. ~~Extending below the frost line specified in Table R301.2. Constructed in accordance with 1303.1600.~~
2. Constructed in accordance with section R403.3
3. Constructed in accordance with ASCE 32.
4. Erecting on solid rock.
5. ~~Constructing in accordance with Minnesota Rules, chapter 1303.~~

Exceptions: Free-standing Accessory Structures meeting all of the following conditions shall not be required to be protected:

1. ~~Protection of free-standing accessory structures with an area of 600 square feet (56 m²) or less, of light frame construction, with an eave height of 10 feet (3048 mm) or less shall not be required.~~
2. ~~Protection of free-standing accessory structures with an area of 400 square feet (37 m²) or less, of other than light frame construction, with an eave height of 10 feet (3048 mm) or less shall not be required.~~
 1. Classified as an IRC-4 structure
 2. Area of 1,000 square feet (56 m²) or less of light-frame
 3. Eave height of 10 feet (3048 mm) or less.

Shallow foundation shall not bear on frozen soil unless such frozen condition is of a permanent character.

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

No

Need and Reason

1. Why is the proposed code change needed? Please provide a general explanation as well as a specific explanation for any changes to numerical values (heights, area, etc.)

Modification of this section to correlate with similar provisions of section 1305.

The Mn amendment referencing to chapter 1303 should be deleted. There are no freestanding buildings identified in 1303. There is a reference to soils under slab on grade buildings that I believe is the intent of this reference so I have modified the model code language to match up with the current Mn allowance of 1,000 s.f. and deleted the allowance for other than light frame construction.

Deleted the model code exception and re-wrote to address current Mn construction practices and to coordinate with the requirements found in 1305 for similar structures.

2. Why is the proposed code change a reasonable solution?

It addresses a life safety issue unique to cold weather climates.

3. What other factors should the TAG consider?

None

Cost/Benefit Analysis

1. Will the proposed code change increase or decrease costs? Please explain and provide estimates if possible.

This is an editorial change and should not impact the cost of construction. Structures are required to have foundations.

2. If there is an increased cost, will this cost be offset by a safety or other benefit? Please explain. If the benefit is quantifiable (for example energy savings), provide an estimate if possible.

No cost change

3. If there is a cost increase, who will bear the costs? This can include government units, businesses, and individuals.

NA

4. Are there any enforcement or compliance cost increases or decreases with the proposed code change? Please explain.

No

5. Will the cost of complying with the proposed code change in the first year after the rule takes effect exceed \$25,000 for any one small business or small city ([Minn. Stat. § 14.127](#))? A small business is any business that has less than 50 full-time employees. A small city is any statutory or home rule charter city that has less than ten full-time employees. Please explain.

No

Regulatory Analysis

1. What parties or segments of industry are affected by this proposed code change?

Architects, Contractors, Developers, Building Owners, Contractors, Building Officials

2. Can you think of other means or methods to achieve the purpose of the proposed code change? What might someone opposed to this code change suggest instead? Please explain what the alternatives are and why your proposed change is the preferred method or means to achieve the desired result.

No

3. What are the probable costs or consequences of not adopting the code change, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals?

Potential conflicts in code requirements and possible miss application of frost protection requirements.

4. Are you aware of any federal or state regulation or requirement related to this proposed code change? If so, please list the federal or state regulation or requirement and your assessment of any differences between the proposed code change and the federal regulation or requirement.

no

***Note: Incomplete forms may be returned to the submitter with instruction to complete the form. Only completed forms can considered by the TAG.

CODE CHANGE PROPOSAL FORM

(Must be submitted electronically)

Author/requestor: **C. Scott Anderson**

Date: **7/8/24 Revised 9/19/24**

Email address: **c.scott.anderson@minneapolismn.gov**

Model Code: **2024 IRC**

Telephone number: **612-246-7303**

Code or Rule Section: **R507.3.3**

Firm/Association affiliation, if any: **City of Minneapolis**

Topic of proposal: **footing frost protection**

Code or rule section to be changed: **R507.3.3**

Intended for Technical Advisory Group ("TAG"):

General Information

Yes No

- | | | |
|----------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| A. Is the proposed change unique to the State of Minnesota? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| B. Is the proposed change required due to climatic conditions of Minnesota? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| C. Will the proposed change encourage more uniform enforcement? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| D. Will the proposed change remedy a problem? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| E. Does the proposal delete a current Minnesota Rule, chapter amendment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Would this proposed change be appropriate through the ICC code development process? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Proposed Language

1. The proposed code change is meant to:

- change language contained the model code book? If so, list section(s). **R507.3.3**
- change language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).
- delete language contained in the model code book? If so, list section(s).
- delete language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).
- add new language that is not found in the model code book or in Minnesota Rule. **R507.3.3**

2. Is this proposed code change required by Minnesota Statute? If so, please provide the citation.

No

3. Provide *specific* language you would like to see changed. Indicate proposed new words with underlining and ~~strikethrough~~ words proposed for deletion. Include the entire code (sub) section or rule subpart that contains your proposed changes.

R507.3.3 Frost protection.

Where decks are attached to a frost-protected structure, deck footings shall be protected from frost by one or more of the following methods:

1. ~~Extending below the frost line specified in Table R301.2- Constructed in accordance with 1303.1600.~~
2. Erecting on solid rock.
3. Other *approved* methods of frost protection

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

No

Need and Reason

1. Why is the proposed code change needed? Please provide a general explanation as well as a specific explanation for any changes to numerical values (heights, area, etc.)

Modification of this section to correlate with similar provisions of section 1309.
Revised condition one to refer to Mn rule 1303 in lieu of the model code table.

2. Why is the proposed code change a reasonable solution?
It addresses a life safety issue unique to cold weather climates.

3. What other factors should the TAG consider?

None

Cost/Benefit Analysis

1. Will the proposed code change increase or decrease costs? Please explain and provide estimates if possible.

This is an editorial change and should not impact the cost of construction. Structures are required to have foundations.

2. If there is an increased cost, will this cost be offset by a safety or other benefit? Please explain. If the benefit is quantifiable (for example energy savings), provide an estimate if possible.

No cost change

3. If there is a cost increase, who will bear the costs? This can include government units, businesses, and individuals.

NA

4. Are there any enforcement or compliance cost increases or decreases with the proposed code change? Please explain.

No

5. Will the cost of complying with the proposed code change in the first year after the rule takes effect exceed \$25,000 for any one small business or small city ([Minn. Stat. § 14.127](#))? A small business is any business that has less than 50 full-time employees. A small city is any statutory or home rule charter city that has less than ten full-time employees. Please explain.

No

Regulatory Analysis

1. What parties or segments of industry are affected by this proposed code change?
Architects, Contractors, Developers, Building Owners, Contractors, Building Officials
2. Can you think of other means or methods to achieve the purpose of the proposed code change? What might someone opposed to this code change suggest instead? Please explain what the alternatives are and why your proposed change is the preferred method or means to achieve the desired result.
No
3. What are the probable costs or consequences of not adopting the code change, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals?
Potential conflicts in code requirements and possible miss application of frost protection requirements.
4. Are you aware of any federal or state regulation or requirement related to this proposed code change? If so, please list the federal or state regulation or requirement and your assessment of any differences between the proposed code change and the federal regulation or requirement.
no

***Note: Incomplete forms may be returned to the submitter with instruction to complete the form. Only completed forms can considered by the TAG.

CODE CHANGE PROPOSAL FORM

(Must be submitted electronically)

Author/requestor: **Chris Kehl with Structural TAG**

Date: **January 28, 2025**

Email address: **ckehl@braunintertec.com**

Model Code: **2024 IRC**

Telephone number: **612.282.6513**

Code or Rule Section: **Figures R403.5(1); 403.5(2); 403.5(3)**

Firm/Association affiliation, if any: **Braun Intertec Corp.** Topic of proposal: **Crushed Stone Footing Depth**

Code or rule section to be changed: **Figures R403.5(1); 403.5(2); 403.5(3)**

Intended for Technical Advisory Group ("TAG"): **Structural**

General Information

Yes No

- | | | |
|----------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| A. Is the proposed change unique to the State of Minnesota? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| B. Is the proposed change required due to climatic conditions of Minnesota? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| C. Will the proposed change encourage more uniform enforcement? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| D. Will the proposed change remedy a problem? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| E. Does the proposal delete a current Minnesota Rule, chapter amendment? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| F. Would this proposed change be appropriate through the ICC code development process? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Proposed Language

1. The proposed code change is meant to:

change language contained the model code book? If so, list section(s).
Figures R403.5(1); 403.5(2); 403.5(3)

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

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

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

add new language that is not found in the model code book or in Minnesota Rule.

2. Is this proposed code change required by Minnesota Statute? If so, please provide the citation.
No

3. Provide *specific* language you would like to see changed. Indicate proposed new words with underlining and ~~striketrough~~ words proposed for deletion. Include the entire code (sub) section or rule subpart that contains your proposed changes.

Figures R403.5(1); 403.5(2); 403.5(3) are amended as follows:

~~Top of footing min. 4 in. below undisturbed ground surface~~ minimum depth at frostline specified in Table R301.2

~~12 in. min. footing depth per Section R403.2.4~~

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

No

Need and Reason

1. Why is the proposed code change needed? Please provide a general explanation as well as a specific explanation for any changes to numerical values (heights, area, etc.)

The detail as drawn does not address several concerns that could impact structures in northern climates. Among the concerns are:

- The crushed aggregates would fill with water in many parts of the state due to natural or manmade water sources, the most likely source being discharge from downspouts. Due to the limited soil cover, frost heave could occur below the concrete wall which would result in distress or damage to structures.
- It is a known soils will lose strength in the spring while thawing, these weakened soils would have reduced confinement of the crushed stone, resulting in subsidence which would damage the structure.
- The repeated freeze thaw cycles or fluctuations in the water table could cause soils to migrate into the voids of the crushed aggregate. This would result in subsidence of soils adjacent to the wall, adversely impacting drainage patterns and/or slab support.

2. Why is the proposed code change a reasonable solution?

It will mitigate most of the risk with this approach without eliminating this option. Other options to mitigate the above-mentioned risks would include the use of geotextiles and insulation at increased cost compared to the proposed approach, would require site specific design, and be more challenging to construct and inspect.

3. What other factors should the TAG consider?

None

Cost/Benefit Analysis

1. Will the proposed code change increase or decrease costs? Please explain and provide estimates if possible.

This should not result in appreciable cost increase, as this is rarely used solution for structure support.

2. If there is an increased cost, will this cost be offset by a safety or other benefit? Please explain. If the benefit is quantifiable (for example energy savings), provide an estimate if possible.

Not Applicable

3. If there is a cost increase, who will bear the costs? This can include government units, businesses, and individuals.
Not Applicable
4. Are there any enforcement or compliance cost increases or decreases with the proposed code change? Please explain.
None
5. Will the cost of complying with the proposed code change in the first year after the rule takes effect exceed \$25,000 for any one small business or small city ([Minn. Stat. § 14.127](#))? A small business is any business that has less than 50 full-time employees. A small city is any statutory or home rule charter city that has less than ten full-time employees. Please explain.
No

Regulatory Analysis

1. What parties or segments of industry are affected by this proposed code change?
Architects, Contractors, Developers, Building Owners, Contractors, Building Officials
2. Can you think of other means or methods to achieve the purpose of the proposed code change? What might someone opposed to this code change suggest instead? Please explain what the alternatives are and why your proposed change is the preferred method or means to achieve the desired result.
There are options to improve the detail, however these solutions would be site and structure specific. It is likely after the additional evaluation by licensed design professionals and modifications are performed, it would be lower cost solution than what was proposed.
3. What are the probable costs or consequences of not adopting the code change, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals?
There is an increased risk of structure movement including total and differential heave or subsidence. The cost of mitigation movement after construction would be substantial, to the point that mitigation may not be economically viable.
4. Are you aware of any federal or state regulation or requirement related to this proposed code change? If so, please list the federal or state regulation or requirement and your assessment of any differences between the proposed code change and the federal regulation or requirement.
No

***Note: The information you provide in this code change proposal form is considered Public Data and used by the TAG to consider your proposed modification to the code. Any code change proposal form submitted to DLI may be reviewed at public TAG meetings and used by department staff and the Office of Administrative Hearings to justify the need and reasonableness of any proposed rule draft subject to administrative review and is available to the public.

****Note: Incomplete forms will be returned to the submitter with instruction to complete the form. Only completed forms will be accepted and considered by the TAG. The submitter may be asked to provide additional information in support of the proposed code change.