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MINNESOTA DEPARTMENT OF
LABOR & INDUSTRY

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September 19, 2006

Legislative Reference Library
645 State Office Building
100 Constitution Avenue
St. Paul, Minnesota 55155

Re: In The Matter Of The Proposed Rules Of The State Department Of Labor And Industry Relating To Adoption Of The 2006 International Building Code; Governor's Tracking Number AR146

Dear Librarian:

The Minnesota Department of Labor and Industry intends to adopt rules relating to the adoption of the 2006 International Building Code, *Minnesota Rules*, chapter 1305. We plan to publish a Dual Notice in the September 25, 2006, *State Register*.

The Department has prepared a Statement of Need and Reasonableness. As required by Minnesota Statutes, sections 14.131 and 14.23, the Department is sending the Library a copy of the Statement of Need and Reasonableness at the time we are mailing our Notice of Intent to Adopt Rules.

If you have any questions, please contact me at 651-284-5126.

Very truly yours,

Wendy Willson Legge
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Enclosure: Statement of Need and Reasonableness

Minnesota Department of Labor and Industry
Construction Codes and Licensing Division

STATEMENT OF NEED AND REASONABLENESS

Proposed Amendment to Rules Governing the Adoption of the 2006 International Building Code, Minnesota Rules, Chapter 1305.

INTRODUCTION

The commissioner of the Minnesota Department of Labor and Industry proposes to adopt amendments to Chapter 1305 of the Minnesota State Building Code. The rules will adopt by reference with amendments the 2006 edition of the International Building Code (IBC).[1] Chapter 1305 currently adopts the 2000 IBC.

The IBC is promulgated by the International Code Council (ICC). The ICC routinely reviews, modifies, and updates the IBC to provide the most current and complete criteria relating to the design and installation of building systems. Because the 2006 IBC offers the most current set of criteria, the Minnesota Department of Labor and Industry has determined to amend Chapter 1305, in order to incorporate the 2006 IBC.

ALTERNATIVE FORMAT

Upon request, this Statement of Need and Reasonableness can be made available in an alternative format, such as large print, Braille, or cassette tape. To make a request, contact Paul Heimkes at the Minnesota Department of Labor and Industry, 443 Lafayette Road N., St. Paul, MN 55155-4341; phone: (651) 284-5864; fax: (651) 284-5749. TTY users may call the Department of Labor and Industry at (651) 297-4198.

STATUTORY AUTHORITY

Until May 16, 2005, the State Building Code was adopted, administered, and amended by the Department of Administration pursuant to Minnesota Statutes, sections 16B.59 to 16B.76. By Executive Order (Department of Administration Reorganization Order No. 193), Governor Pawlenty transferred the responsibility for the State Building Code to the Department of Labor and Industry, effective May 16, 2005. This reorganization order was issued under Minnesota Statutes, section 16B.37, and is effective until amended or superseded. Because the

1 The 2006 IBC is available for review at the Minnesota Department of Labor and Industry by contacting Paul Heimkes, Construction Codes and Licensing Division, 443 Lafayette Road N., St. Paul, MN 55155-4341; phone: (651) 284-5864; fax: (651) 284-5749. TTY users may call the Department of Labor and Industry at (651) 297-4198.

reorganization order has not been amended or superseded, the Department of Labor and Industry has the same authority to amend the State Building Code that the Department of Administration had before May 16, 2005.

Minnesota Statutes, section 16B.59, provides that "the State Building Code governs the construction, reconstruction, alteration and repair of buildings and other structures to which the code is applicable. The commissioner [of administration] shall administer and amend a state code of building construction which will provide basic and uniform performance standards, establish reasonable safeguards for health safety, welfare, comfort, and security of the residents of this state and provide for the use of modern methods, devices, materials, and techniques which will in part tend to lower construction costs. The construction of buildings should be permitted at the least possible cost consistent with recognized standards of health and safety."

Minnesota Statutes, section 16B.61, subdivision 1 provides that "subject to sections 16B.59 to 16B.75, the commissioner [of administration] shall by rule establish a code of standards for the construction, reconstruction, alteration, and repair of buildings, governing matters of structural materials, design and construction, fire protection, health, sanitation, and safety, including design and construction standards regarding heat loss control, illumination, and climate control. The code must conform insofar as practicable to model building codes generally accepted and in use throughout the United States, including a code for building conservation. In the preparation of the code, consideration must be given to the existing statewide specialty codes presently in use in the state. Model codes with necessary modifications and statewide specialty codes may be adopted by reference. The code must be based on the application of scientific principles, approved tests, and professional judgment. To the extent possible, the code must be adopted in terms of desired results instead of the means of achieving those results, avoiding wherever possible the incorporation of specifications of particular methods or materials. To that end the code must encourage the use of new methods and new materials. Except as otherwise provided in sections 16B.59 to 16B.75, the commissioner [of administration] shall administer and enforce the provisions of those sections."

Minnesota Statutes, section 16B.64, subdivision 6, states that "[t]he commissioner [of administration] shall approve any proposed amendments deemed by the commissioner [of administration] to be reasonable in conformity with the policy and purpose of the code and justified under the particular circumstances involved. Upon adoption, a copy of each amendment must be distributed to the governing bodies of all affected municipalities."

Under these statutes and the reorganization order, the Department of Labor and Industry has the necessary authority to adopt the proposed rules.

All sources of statutory authority were adopted and effective before January 1, 1996, and so Minnesota Statutes, section 14.125, does not apply.

REGULATORY ANALYSIS

Minnesota Statutes, section 14.131, sets out seven factors for a regulatory analysis that must be included in the SONAR. Paragraphs (1) through (7) below quote these factors and then give the agency's response.

"(1) a description of the classes of persons who probably will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule"

Persons who will be affected by these rules include: state historic preservation officers; municipal building inspection department personnel; building contractors; architects; engineers; fire inspection personnel; building owners and managers; users of the facilities; and ultimately, the general public.

Persons who will bear the costs of these rules include: primarily, building owners who must pay for the construction costs, and, where businesses pay the construction costs, the consumers to whom these businesses pass the costs.

Persons who will benefit from these rules include the general public.

"(2) the probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues"

There are no costs to the agency or any other agency with respect to the implementation and enforcement of the proposed rule nor any anticipated effect on state revenues.

"(3) a determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule"

There are no less costly or intrusive methods for achieving the purpose of this rule. The adoption of this code will provide uniform application of construction standards that parallel very closely those found in the IBC. The uniform application of these standards will provide predictable code application for building owners, which will tend to lower costs.

"(4) a description of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the agency and the reasons why they were rejected in favor of the proposed rule"

The IBC-1305 Advisory Committee[2] discussed whether or not a full review of the NFPA 5000 was warranted. However, because few jurisdictions had adopted or were using the NFPA 5000, it was determined that the NFPA 5000 did not meet the following requirement in Minnesota Statutes, section 16B.61: "The code must insofar as practicable to model odes generally accepted and in use throughout the United States."

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2 The Department of Administration formed the IBC-1305 Advisory Committee to consider changes to chapter 1305. Members of the Committee are listed in Exhibit A. Meetings of this committee were held before the responsibility for the State Building Code was transferred to the Department of Labor and Industry.

"(5) the probable costs of complying with the proposed rule, including the portion of the total costs that will be borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals"

The proposed rule does not require any changes at all to existing buildings. The proposed rule only affects new construction or remodeling. It is difficult to quantify actual cost for compliance in connection with construction or remodeling of a building since these costs depend upon the building's design, use, age, condition, and intended future use.

Although it is difficult to quantify costs, the Department anticipates that the global costs associated with this rule will be indistinguishable from the rule it is replacing. While some specific requirements of this rule may be considered more restrictive than current rule, others are clearly less restrictive. In any particular case, the cost savings associated with the less restrictive provisions could outweigh any increased cost based on a more restrictive requirement; however, the actual costs for compliance on any one particular building could vary.

"(6) the probable costs or consequences of not adopting the proposed rule, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals"

Here again, the Department anticipates that the costs of not adopting the proposed rule would be indistinguishable from the costs of adopting the proposed rule. The costs of not adopting the less restrictive portions of the proposed rule would be comparable to the cost savings of not adopting the more restrictive portions of the proposed rule.

"(7) an assessment of any differences between the proposed rule and existing federal regulations and a specific analysis of the need for and reasonableness of each difference"

There are no applicable federal regulations except regulations that apply to nursing homes and other facilities licensed and regulated by either the Minnesota Department of Health (MDH) or the Minnesota Department of Human Services (DHS). Staff of the Department of Labor and Industry have worked closely with MDH and DHS staff to ensure that the proposed rule is consistent with federal and state law governing those facilities.

PERFORMANCE-BASED RULES

Minnesota Statutes, section 16B.61 authorizes the Department to establish, by rule, a code of standards for construction. This statute requires the code to "conform insofar as practicable to model building codes generally accepted and in use throughout the United States." At the same time, this statute mandates, *"to the extent possible,"* that the code be adopted in terms of desired results instead of the means of achieving those results, avoiding wherever possible, the incorporation of particular methods or materials.

The 2006 IBC establishes minimum regulations for building systems using prescriptive and performance based provisions with emphasis on performance. The Chapter 1305 amendments to the IBC are intended to incorporate the same philosophy as required by Minnesota Statutes Section 16B.61.

ADDITIONAL NOTICE

This Additional Notice Plan was reviewed by the Office of Administrative Hearings and approved in a September 14, 2006, letter by Administrative Law Judge Eric L. Lipman.

We will e-mail or send by United States mail the Dual Notice to the following interested parties:

a. All municipal code officials and others involved in code administration. This list has over 800 names and includes: all municipal building officials responsible for administration of the state building code; officials from other cities, towns, and counties who need to be aware of these proposed rules as they apply to public buildings within their jurisdiction; and University of Minnesota and MSP airport building officials;[3]
b. Members of the IBC-1305 Advisory Committee;
c. Members of the Structural Advisory Committee;[4]
d. Members of the Minnesota State Fire Chiefs Association (MSFCA), including members of the MSFCA Code Committee;
e. The Insurance Federation of Minnesota;
f. The Metropolitan Council;
g. Minnesota Historical Society;
h. Minnesota State Fire Marshal;
i. Minnesota Electrical Association;
j. IBEW Local 110 and Local 292;
k. Minnesota Housing Finance Agency;
l. American Society of Civil Engineering;
m. Minnesota Utility Contractors Association;
n. American Council of Engineering Companies of Minnesota;
o. Minnesota Association of Plumbing, Heating and Cooling Contractors;
p. Minnesota Mechanical Contractors Association;
q. Builders Association of Minnesota;
r. Builders Association of the Twin Cities; and
s. League of Minnesota Cities.

We will also publish the proposed rules, Statement of Need and Reasonableness, and Dual Notice on the Department of Labor and Industry's Web site.

Our Notice Plan also includes giving notice required by statute. We will mail the Dual

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3 Each building official is responsible for enforcing compliance with the building code within his or her jurisdiction. See Minn. R. 1300.0110 (2005).

4 The Department of Administration formed the Structural Advisory Committee to consider the structural requirements contained in chapters 1303, 1305, and 1309. Members of the Committee are listed in Exhibit B. Meetings of this committee were held before the responsibility for the State Building Code was transferred to the Department of Labor and Industry.

Notice to everyone who has registered to be on the Department's rulemaking mailing list under Minnesota Statutes, section 14.14, subdivision 1a. Those persons include:

a. Fire Marshals Association of Minnesota
b. Minnesota Health & Housing Alliance
c. Minnesota Multi-Housing Association
d. Building Owners and Managers Association
e. Minneapolis Building Trades Council
f. Association of Minnesota Counties
g. AIA Minnesota
h. Plumbers and Pipefitters Local 11
i. Rochester Building Safety
j. Rochester Housing Board
k. St. Cloud Fire Department
l. Hopkins Fire Department
m. Edina Fire Department
n. Roseville Fire Prevention

We will also give notice to the Legislature per Minnesota Statutes, section 14.116.

CONSULT WITH FINANCE ON LOCAL GOVERNMENT IMPACT

As required by Minnesota Statutes, section 14.131, the Department has consulted with the Commissioner of Finance. We did this by sending to Keith Bogut, Executive Budget Officer at the Department of Finance, copies of the documents sent to the Governor's Office for review and approval by the Governor's Office prior to the Department publishing the Notice of Intent to Adopt. We sent the copies on August 17, 2006. The documents included: the Governor's Office Proposed Rule and SONAR Form; the almost final proposed rules; and the almost final SONAR. Mr. Bogut sent a memorandum dated August 30, 2006, which included the following comments:

> As part of the rulemaking process, DLI has invited comment from representatives of local governments on the proposed changes. Since the rule changes only impact future building projects, no costs will be incurred until new projects are undertaken. Local governments may actually experience lower costs as many of the changes are less restrictive than the existing rules.
>
> In my opinion, the proposed changes will not impose a significant cost on local governments.

COST OF COMPLYING FOR SMALL BUSINESS OR CITY

Agency Determination of Cost

As required by Minnesota Statutes, section 14.127, the Department has considered whether the cost of complying with the proposed rules in the first year after the rules take effect will exceed $25,000 for any small business or small city. The Department has determined that the cost of complying with the proposed rules in the first year after the rules take effect will not exceed $25,000 for any small business or small city because the proposed rules do not require any modification of existing structures. The proposed rules only affect new construction and remodeling. Any small city or small business contemplating new construction or remodeling will decide whether and when the new construction or remodeling will occur. Because no new construction or remodeling is required by the proposed rules, no new construction or remodeling needs to be undertaken during the first year after the rules take effect.

LIST OF WITNESSES

If these rules go to a public hearing, the Department anticipates having the following witnesses testify in support of the need for and reasonableness of the rules:

1. Department of Labor and Industry, Construction Codes and Licensing Division staff as to the reasonableness of the rules.
2. Advisory Committee members representing public interests, building owners and managers, and architects as to the reasonableness of the rules.

RULE-BY-RULE ANALYSIS

1305.0011 ADOPTION OF THE INTERNATIONAL BUILDING CODE BY REFERENCE AND ADMINISTRATIVE AUTHORITY.

Subpart 1, General. This subpart is revised to reflect the 2006 updated version of the IBC that is proposed for adoption.

Subpart 2, Mandatory chapters. This subpart contains changes to reflect new 2006 IBC chapters that are being incorporated into the State Building Code. The subpart is also changed to explain that two of the IBC chapters have amendments located in other Minnesota Rule chapters. These amendments were separated in other chapters to create stand-alone codes. The accessibility code is enforced statewide and also contains amendments to another document to comprise the entire Minnesota accessibility code. The elevator code amends several other documents within the rule chapter to comprise the entire Minnesota elevator code.

Subpart 3, Replacement chapters. This subpart is changed to reflect that IBC chapters 11 and 30 are now being incorporated by reference and not deleted and replaced with other information.

Subpart 5, Flood hazard or floodproofing provisions. This is a proposed new subpart. This subpart is necessary to delete the floodproofing provisions in the IBC and replace them with Minnesota Rules, chapter 1335, which incorporates regulations promulgated by the Office of the Chief Engineers, U.S. Army. Any requirements for these conditions in the 2006 IBC should be replaced with Minnesota Rules, chapter 1335. The purpose of this proposal is to globally replace the provisions rather than amend every IBC section that references flood hazards or flood-proofing conditions.

1305.0021 – REFERENCES TO OTHER INTERNATIONAL CODE COUNCIL CODES

Subpart 1 of 1305.0021 has been modified through this proposal to reference a new subpart – Subpart 12. Instead of eleven subparts in this code section, there are now twelve.

Subpart 12, an entirely new subpart, is being proposed because the International Code Council (ICC) has published a new model code manual, which the 2006 IBC now specifically references. The State of Minnesota has no intention of adopting this model publication (*International Existing Building Code);* therefore, references to this document are deleted in proposed subpart 12 and replaced with a reference to Minnesota Rules, chapter 1311, which is the Minnesota State Building Conservation Code.

This subpart clarifies that where the 2006 IBC references the *International Existing Building Code,* it means Minnesota Rules, Chapter 1311. This change will provide for more clarification and uniformity in the application and use of the new Minnesota State Building Code.

1305.0202 SECTION 202, DEFINITIONS.

Proposed subpart 2 would delete the definition of "townhouse" in section 202. The 2006 IBC definition directly conflicts with Minnesota Rules, Chapter 1309. Because townhouses are dealt with in Chapter 1309, it is not necessary to have any definition of "townhouse" in Chapter 1305.

1305.0308 INSTITUTIONAL GROUP I; AND 1305.0310 RESIDENTIAL GROUP R.

These proposed code changes are intended to ensure that facilities licensed by the Minnesota Department of Health (MDH) or Department of Human Services (DHS) are designed and constructed in accordance with the IBC instead of the IRC. The IRC is intended for the design and construction of one- and two-family dwellings. The IBC classification as an R-3 or R-4 occupancy allows the facilities to be constructed similar to a residence, and is appropriate for the smallest facilities. However since the facilities will be used as care facilities for at risk individuals, neither MDH nor DHS was comfortable with IRC being the primary design/construction standard for these facilities. The Department of Labor and Industry has drafted these proposed code changes in coordination with MDH and DHS, and in compliance with all applicable federal law.

1305.0402 , SECTION 402, COVERED MALL BUILDINGS

Subpart 1. Section 402.7. The proposed changes to this subpart are editorial changes for consistency with the new requirements of the 2006 IBC.

1305.0403, SECTION 403, HIGH RISE BUILDINGS.

Subpart 1, Section 403.3.2. IBC section 403.3.2, which first appeared in the 1997 Uniform Building Code (UBC), reduces the fire-resistance rating for certain shaft enclosures. This reduction has questionable technical merit because:

1. The reduction is only for high-rise buildings where the need for properly installed passive protection systems is crucial.
2. The provision for the reduction is not in the Life Safety Code.
3. Pipe and ductwork can create substantial obstructions in the shaft which reduces the equivalency of the active protection system.
4. A sprinkler poking through the shaft wall is unlikely to encounter enough heat to activate.
5. If a building has a properly designed sprinkler system in service, the shaft rating is a non-issue because sprinklers will control the fire growth. However, if the sprinkler system on the floor is out of service, the sprinkler head in the shaft would probably also be out of service, and then there would only be half of the required fire resistance rating.
6. The sprinkler will not stop smoke spread into the shaft once the shaft is compromised.

At the April 15, 2003, meeting of the IBC-1305 Advisory Committee, the committee recommended deleting IBC section 403.3.2. The Minnesota State Fire Chiefs – Fire Code Advisory Committee has also recommended deleting this section.

By deleting this code section, construction requirements and fire ratings for shafts will default to the standard shaft requirements of the code. Under the standard provisions, the required fire-resistive shaft rating will increase to a minimum fire-resistive rating of 2-hours (rather than 1-hour). This is needed and reasonable to protect the public in the event of fire.

Subpart 2, Section 403.15, Post-fire smoke exhaust system. This subpart consists of the current part 1305.0403, with editorial changes. The editorial changes are needed for consistency with the new 2006 IBC.

1305.0404 SECTION 404, ATRIUMS.

404.4 Smoke control. The amendment of this part is needed and reasonable for consistency with the new 2006 IBC. This amendment was recommended by the IBC-1305 Advisory Committee.

1305.0406, SECTION 406, MOTOR VEHICLE-RELATED OCCUPANCIES.

The proposed amendments to this part are needed and reasonable for consistency with the language in the 2006 IBC.

1305.0407, SECTION 407, GROUP I-2.

407.2.1 Spaces of unlimited area. The proposed amendment would clarify that this code provision only applies to group I-2 occupancies. This modification is necessary because many designers incorrectly attempt to apply this provision to group R occupancies. All other proposed changes in this part are for consistency with the language in the 2006 IBC.

1305.0408 SECTION 408, GROUP I-3.

This proposed amendment is needed and reasonable for consistency with the language of the 2006 IBC.

1305.0414 SECTION 414, HAZARDOUS MATERIALS.

This proposed amendment is needed and reasonable for consistency with the language and renumbering of provisions in the 2006 IBC.

1305.0421 SECTION 421, GROUP E OCCUPANCIES.

The language of this proposed part is identical to the language of existing part 1305.0419. The rule and its subparts need to be renumbered because section 419 in the 2000 IBC was renumbered as section 421 in the 2006 IBC.

1305.0507 SECTION 507, UNLIMITED AREA BUILDINGS.

Subparts 1 through 3: Sections 507.2, 507.3, and 507.4. These amendments are necessary to provide consistent application of the code. Sections 507.2, 507.3, and 507.4 of the 2006 IBC were previously in the Uniform Building Code; however, the 2006 IBC subtly rephrased these sections, which has caused some building officials to refuse to permit a mixed use unlimited area building. According to opinions issued by the ICC, it was not the intent of these sections to prohibit mixed use. These proposed subparts clarify that mixed use of an unlimited area building is permitted.

Subpart 4, Section 507.5. The renumbering in this subpart is needed for consistency with the 2006 IBC.

1305.0508 MIXED USE AND OCCUPANCY.

This is comparable to existing part 1305.0302. The proposed rule moves this provision and modifies the wording slightly for consistency with the 2006 IBC.

1305.0716, SECTION 716, DUCTS AND AIR TRANSFER OPENINGS.

716.5.3 shaft enclosures. This proposed exception would allow laboratory hood exhaust ducts to be installed without fire or smoke dampers consistent with NFPA 45 (standard 45 of the

National Fire Protection Association), "Standard on Fire Protection for Laboratories Using Chemicals." This is the nationally accepted standard for laboratories. This standard specifically prohibits automatic fire dampers and contains additional provisions that provide safe conditions in typical laboratory ventilation systems installed at facilities throughout the State of Minnesota, such as facilities at the University of Minnesota, the Mayo Clinic, and 3M.

The IBC-1305 Advisory Committee reviewed this proposed exception and recommended that it be included in the Minnesota Rules.

FIRE PROTECTION SYSTEMS
Proposed Parts 1305.0901 through 1305.0913

The amendments to parts 1305.0901 through 1305.0913 are generally needed and reasonable to coordinate the International Building Code portion of the Minnesota State Building Code (Minnesota Rules, Chapter 1305) with the Minnesota State Fire Code (Minnesota Rules, Chapter 7510). The Minnesota State Fire Code is administered by the Minnesota Department of Public Safety, State Fire Marshal Division. The Minnesota State Fire Code currently incorporates the 2000 International Fire Code (IFC), with amendments. See Minn. R. 7510.3510. The Department of Labor and Industry and the State Fire Marshal Division are working together to propose amendments of chapter 7510 that would incorporate the 2006 IFC.[5]

Provisions for the installation of fire sprinklers, alarms, standpipes, smoke and heat venting, and some control and post fire smoke exhaust systems are duplicated in chapter 9 of both the 2006 IBC and the 2006 IFC. The IBC-1305 Advisory Committee requested that the State Fire Chiefs' Fire Code Advisory Committee[6] review Chapter 9 of the 2006 IBC and make formal recommendations on amendments to IBC Chapter 9. The proposed amendments to parts 1305.0901 through 1305.0913 reflect the recommendations of the State Fire Chiefs' Fire Code Advisory Committee and are comparable to planned amendments of chapter 7510.

The IBC-1305 Advisory Committee reviewed the State Fire Chiefs' Fire Code Advisory Committee recommendations and voted to support these proposed changes.

1305.0901 SECTION 901, GENERAL.

IBC Section 901.6.2 is being deleted for a number of reasons: 1) the same code section is not duplicated in the 2006 IFC, so there would be conflicting enforcement between building and fire officials; 2) the section conflicts with the Minnesota State Fire Code fire alarm amendments where some "I" and "E" occupancies require monitoring by supervising stations; and, 3) the

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5 The 2006 IFC is available for review at the Minnesota Department of Labor and Industry by contacting Paul Heimkes, Construction Codes and Licensing Division, 443 Lafayette Road N., St. Paul, MN 55155-4341; phone: (651) 284-5864; fax: (651) 284-5749. TTY users may call the Department of Labor and Industry at (651) 297-4198.

6 The State Fire Marshal Division of the Minnesota Department of Public Safety formed the Minnesota State Fire Chiefs' Fire Code Advisory Committee to consider changes to the State Fire Code (Minnesota Rules, Chapter 7510). Members of the Committee are listed in Exhibit C.

provision specifically conflicts with section 907.14.

This provision was discussed and approved at the April 15, 2003, IBC-1305 Advisory Committee meeting. The provision has also been presented to and approved by the Minnesota State Fire Chiefs' Fire Code Advisory Committee.

1305.0903 SECTION 903, AUTOMATIC SPRINKLER SYSTEMS.

Subpart 1a, IBC [F] Section 903.2.7

This proposed subpart would amend section 903.2.7, which requires automatic sprinkler systems throughout all Group R (Residential) fire areas. This proposed subpart would raise the threshold to 9,250 square feet or when the Group R fire area is located more than three stories above ground level. Three exceptions are proposed to be added. The first exception excludes single-family dwellings. The second exception requires sprinkler protection if required by a licensing provision of a state agency. The third exception exempts attached garages from having to be sprinklered if there is a dry sprinkler installed within 5 ft. of the door between the attached garage and the residence.

The provisions of this proposed subpart are part of a three-way agreement between the Minnesota State Fire Chiefs Association, the Construction Codes and Licensing Division (CCLD) of the Department of Labor and Industry, and the Builders Association of Minnesota (BAM). The provisions apply to residences in excess of the square footage listed. In practical application this will require automatic fire sprinkler systems in townhouses and similar occupancies where there are multiple residents within the same building. It does not apply to single-family dwellings.

The overwhelming majority of fire deaths both nationally and in Minnesota occur in residential occupancies. A large percentage of the residential occupancies being constructed in Minnesota are in townhouse or similar multi-tenant configurations within the same building or under the same roof. In these types of buildings a fire in one unit can cause death, injury, fire loss, or major disruption to all of the tenants of the building.

This provision is needed to reduce life loss, fire related injuries, and fire loss, and to assist fire departments in extinguishing fires in these very large buildings. Most fire departments are equipped and staffed to handle typical single-family dwelling type fires. Most fire departments are not equipped to handle fires involving buildings in the tens of thousands of square feet (which can be seen in these larger townhouse complexes).

The cost of providing automatic fire sprinkler protection in new construction is approximately $2-$3 per square foot. The mortgage increase for a $3,000 increase amortized over a 30 year loan at a 7% interest rate is approximately twenty dollars per month. The net cost following insurance rate reductions (average premium reduction for sprinklering is about 10%) and income tax savings (based on 28% federal and 7.05% Minnesota tax rates) is just over $7 per month.

The second paragraph does not recognize fire walls, party walls or exterior walls as constituting separate buildings. An exception is added allowing these types of walls to separate other occupancies that are not part of the residential fire area.

The IBC-1305 Advisory Committee has reviewed the State Fire Chiefs' Fire Code Advisory Committee recommendations to change to this particular code section and has voted to support this amendment.

Subpart 1b, IBC [F] Section 903.2.12.1
This proposed subpart would amend Section 903.2.12.1 of the 2006 IBC. This model section requires sprinkler protection in all ducts conveying hazardous materials when such ducts are over 10 inches in diameter. The proposed subpart would instead require sprinkler protection in ducts constructed of combustible materials or conveying materials having the potential for combustible residue build-up. Also, the proposed subpart changes the size of duct at which the sprinkler requirement would apply, in order to address square or rectangular ducts instead of just circular ducts. Instead of requiring sprinkler protection in ducts over 10 inches in diameter, the proposed subpart would require sprinkler protection in ducts with a cross-sectional area of 75 square inches or more. For circular ducts, 75 square inches is equivalent to a 10 inch diameter circle [area= pi times radius squared = 3.14 times 25 $\approx$ 75 inches].

This subpart is needed to deal with what is viewed as an overly restrictive requirement. Without the subpart, this section of the IBC would require that every duct over 10 inches in diameter that conveys hazardous gases or dusts have sprinkler protection. Not all ducts that convey hazardous materials would be remediated with fire sprinkler protection; for instance, a duct containing a corrosive gas poses no fire risk and the presence of a protection feature that relies on a product of combustion (in this case, heat) is incongruent. The proposed subpart recognizes that ducts made of combustible material or that allow combustible accumulations need this level of protection. Here are some examples of ducts that would need to be sprinklered without this subpart:

- Ducts above lab stations,
- Ducts in wood shops,
- Ducts in semiconductor manufacturing facilities,
- Ducts containing toxic exhausts that are not flammable or combustible.

Subpart 3a, IBC [F] Section 903.3.1.2.1
Proposed subpart 3a would amend IBC section 903.3.1.2.1 to lessen the requirement for providing fire sprinkler protection for apartment decks and balconies. This section of the IBC as written would require all decks or balconies of combustible construction to have sprinkler protection. This type of protection is difficult to install in Minnesota due to cold winter temperatures. If the sprinkler protection is installed improperly there is a risk of freezing and subsequent water damage to the building and its contents. This proposed subpart would increase the size of the building and the size of the decks before sprinkler protection is required. It would require this level of protection when the building does not have sprinkler protection in the attic and it has combustible siding on the exterior of the building.

These requirements are reasonable as they address the larger buildings and larger decks which tend to pose the greatest fire risks.

Subpart 5, IBC [F] Section 903.3.1.5. This subpart deals with special sprinkler design criteria; it requires a higher level of sprinkler protection in certain types of rooms that pose an added risk because of the fuel load. This requirement is similar to that found in existing rule part 7510.3560, subpart 2d. The proposed amendment of this subpart would reduce the list of situations requiring this higher design from six to two, for consistency with the planned amendment of chapter 7510.

Subpart 5a, IBC [F] Section 903.3.1.6
This proposed subpart contains a number of modifications to the sprinkler standards contained in section 903.3.1 of the 2006 IBC. Section 903.3.1.6.1 modifies the hose stream allowances when there is not adequate water supply or when hose streams are provided by other means. Once again this is not a new provision; it can be found in existing rule part 7510.3560, subpart 2b, exception 2.

Section 903.3.1.6.2 contains new requirements dealing with sprinkler protection in elevator shafts, elevator pits, and elevator machine rooms. This section states that sprinkler protection shall not be installed in these locations. This was a change made at the request of an engineering firm and after consultation with the Minnesota State Fire Chiefs' Fire Code Advisory Committee and CCLD. This is being done to remove confusion and inconsistency. It will also reduce construction costs and potentially make elevators more reliable during certain fire conditions.

Section 903.3.1.6.3 omits sprinkler protection on the ceilings of rooms containing swimming pools; once again this is not a new requirement it can be found in existing rule part 7510.3560, subpart 6, item 6.

Section 903.3.1.6.4 modifies the sprinkler installation requirements of NFPA 13. In the first paragraph, NFPA 13 section 8.6.4.1.4.2 is modified to require sprinklers near the peak of a pitched roof as sprinklers near the peak of a pitched roof are more likely to activate since heat rises. In the second paragraph NFPA 13 section 8.6.4.1.4.3 is modified to require sprinklers to be located within 5 feet of eaves in combustible concealed spaces. This requirement is intended to specify a minimum distance so that sprinklers can develop an effective pattern. In both cases this language will appear in the 2007 edition of NFPA 13 but is not contained in the 2000 edition that is adopted as part of this code. These sections are being adopted to promote consistency and to provide better sprinkler protection in areas with sloped roofs or ceilings.

NFPA 13 section 8.14.8.2 is being amended to exclude sprinkler protection in small closets and pantries within dwelling units. The size of such rooms is limited to 12 square feet with any dimension not to exceed 3 ft. This change is needed to promote consistency and uniformity. Many code officials do not require sprinkler protection in these small spaces while others do, since there is no exclusion presently permitted by the sprinkler installation standards. A similar exclusion, however, exists for closets within guestrooms of hotels. This provision is reasonable since these relatively small rooms are not common areas of origin for fire. Since an average apartment unit may contain anywhere from two to five of these types of rooms, this exemption would also reduce the cost of sprinkler installation since it would reduce the number of sprinklers required.

NFPA 13 sections 8.16.2.5.1, 8.16.2.5.1.1, and 8.16.2.5.1.2 deal with the installation of check valves in a fire department connection of a fire sprinkler system. A check valve allows water to flow in one direction but not the other. A check valve is installed in a fire department connection so that water can be pumped in by the fire department but it will not flow out. Before water will flow, the fire department must pump the air out of the pipe length between the check valve and the fire department connection inlet.

Proposed sections 8.16.2.5.1.1, and 8.16.2.5.1.2 are new language. Proposed section 8.16.2.5.1.1 would require that there be a maximum of 25 feet of pipe length between the check valve and the fire department connection inlet. This is to reduce the volume of air that would need to be exhausted out of this section of pipe when the fire department pumps water into the connection inlet. Most fire department connections are located on an exterior wall of a building so the location of the check valve (within 25 feet) in not a problem. However, free-standing fire department connections are located on the lawn or boulevard and typically enter the building through a basement. There is often much more than 25 feet between a free-standing fire department connection and the building, which makes the 25 foot requirement problematic. Therefore, the exception for free-standing fire department connections is needed and reasonable.

Section 8.16.2.5.1.2 requires that the check valve be installed at a location to minimize the potential for freezing. This is needed and reasonable because of the winter weather conditions in Minnesota.

Subpart 6a, IBC [F] Section 903.3.7
This proposed subpart requires that the available water supply exceed the sprinkler system demand by a minimum of 5 psi. This provides a safety margin should modifications be necessary at the time of installation or later in the life of the system. It also provides a safety margin should the water supply degrade over time due to increased system demand, weather conditions, or internal corrosion of the underground pipes. Adding a safety margin at the time of design typically adds little or no cost to the system. If however no safety margin is present at the time of design, future modifications may involve extensive upgrades to the sprinkler system.

Subpart 7, IBC [F] Section 903.4
The proposed amendments to this subpart are needed and reasonable for consistency with the 2006 IBC.

1305.0905, SECTION 905, STANDPIPE SYSTEMS.

Subpart 1, F Section 905.2.
This subpart would modify the pressure requirements for a fire department standpipe. This amendment allows the pressure requirements of NFPA 14 (Standpipe Systems) to be modified in sprinklered buildings. NFPA 14 presently requires 100 psi at the upper-most location in the building for firefighting purposes. This amendment permits less than 100 psi when the building is sprinkler protected as long as the sprinkler design is acceptable. The major proposed change in this subpart is that the proposed subpart would expand the use of this modification from buildings four or less stories in height to all buildings other than high-rise (defined as 75 feet

high; typically 7 or more stories). The other changes to this subpart relate to minimum criteria for design and acceptance of this method (minimum and maximum pressures, gallons per minute per connection, and accessibility to fire hydrants).

Without this amendment, these buildings would typically require the installation of a fixed fire pump inside the building. A fire pump adds at least $60,000 to the installation cost of the fire protection system. When a fire department responds to a building with a standpipe or sprinkler connection, they supplement the pressure by pumping into the fire department connection. Standard fire department protocol is to supply these systems at 150 psi. When pumping at 150 psi, the required check valve will close when the fire apparatus pumper is supplying more pressure than the building's fire pump.

This is a reasonable provision since these are sprinklered buildings and since the standpipes are intended for fire department use. In many ways this provides a better fire protection scenario as it allows the fire department to control the pressure based on need, not based on an automatic setting at the pump. (If there is a fire pump in the building, the fire department cannot limit that pressure.) In addition, fire apparatus undergo rigorous annual testing and have a low history of failure. This, coupled with a multiple apparatus response to these types of incidents, provides a higher degree of reliability than a fixed fire pump inside the building.

Subpart 2, F Section 905.3.2. The section numbering in this subpart needs to be changed because of the renumbering of sections in the 2006 IBC.

Subpart 3, F Section 905.3.4. This subpart needs to be amended because of the renumbering of sections in the 2006 IBC. Section 905.3.4 of the 2006 IBC no longer addresses mall buildings. (Instead, section 905.3.3 addresses mall buildings; revisions to section 905.3.3 are no longer needed because of the new language contained in the 2006 IBC.) Sections 905.3.4 and 905.3.4.1 in the 2006 IBC are comparable to sections 905.3.5 and 905.3.5.1 in the 2000 IBC. Therefore, the amendments to subpart would delete provisions comparable to the provisions deleted in existing subparts 4 and 5.

Subpart 6, Section 905.3.8. The changes proposed in this subpart are needed for consistency with the language and numbering in the 2006 IBC.

Subpart 6a, Section 905.3.9.
This proposed subpart would add a new requirement for fire department standpipes in newly constructed apartment buildings. This was specifically requested by some fire officials based on the large size of some of the modern apartment buildings being constructed. Frequently, many portions of these buildings are well beyond the reach of standard fire department hoselines. Typical pre-connected fire department hoselines are 200 feet in length. In a large apartment building that is set back from the main parking lot, the fire department hoseline may only reach a short distance inside the building; it clearly would not be able to reach remote apartments. This paragraph adds a requirement for a standpipe within stairwells of larger apartment buildings (three or more stories in height and 200 feet or more from the point of fire department vehicle access).

This amendment is needed because the size of these apartment buildings is growing and many fire departments are not capable of reaching all of the apartments with conventional fire department pre-connected hoselines. This potentially adds some cost for additional piping within the building but the cost is an incremental increase because much of the piping is already present to provide sprinkler system mains. While these buildings are often sprinklered, fire department hoselines are needed to assist in final fire extinguishment and for fire department overhaul and "mop-up" operations following a fire.

1305.0907 SECTION 907, FIRE ALARM AND DETECTION SYSTEMS.

Subpart 1, [F] Section 907.1.3.
This proposed subpart deals with the protection of fire alarm control panels. The existing fire alarm installation standard (NFPA #72) requires that a smoke detector be located at each fire alarm control panel unless that space is continuously occupied. This proposed subpart adds an exception for sprinklered buildings. This is consistent with a change being made to future editions of NFPA #72.

Subpart 1a, [F] Section 907.2. This subpart is the charging paragraph for when fire alarm systems are required in various types of occupancies. It contains three proposed revisions. First, the language in the second sentence was changed from "area separation walls or fire walls" to "fire barrier walls or fire walls." The term "area separation wall" is not used in the International Codes; the code uses "fire walls" or "fire barrier walls" to define separate occupancies.

The second proposed revision to this section is the addition of a new sentence dealing with mixed occupancy or multi-tenant buildings. This sentence clarifies that when a fire alarm system is required by the following sections, the fire alarm system need only be installed in the portion of the building that requires it based on the occupancy type, assuming that the occupancies are fire separated. Without this amendment, the code could be interpreted to mean that a large shopping center or office building would be required to have an alarm system throughout simply because one area housed an occupancy requiring a fire alarm system (such as a day care center).

The third change is to the exception to Section 907.2 and actually contains three smaller changes. The first change specifies the type of sprinkler protection that can be installed to be able to omit fire alarm and detection equipment. This is done by referencing Sections 903.3.1.1 and 903.3.1.2. The second difference is a change from "heat detectors" to "fire detectors"; heat detectors are one type of fire detector. Since these amendments often do not specify the type of detection (except as mentioned later in this section), the designer or installer can use any of the types of detection (heat, smoke, flame, etc.). This allows any of these types of detectors to be omitted, not just heat detectors.

The third change is the addition of a 2nd sentence stating that when these sections specifically require smoke detectors, that type of detection should be installed and the installation of sprinklers should not allow the omission of smoke detectors. Smoke detectors are required in these sections in areas and occupancies that pose a high life safety risk. This is often because the occupants of that building are asleep, incapacitated, or their egress is impeded in some manner.

As such the earlier warning provided by smoke detectors is critical to waking these occupants or to alert the appropriate staff to aid in facilitating or initiating egress.

Subpart 10, [F] Section 907.2.3. This amendment regarding Group E occupancies was modified by deleting language about sprinkler systems and fire detection systems being connected to the building fire alarm system. This is antiquated code language that is not consistent with current construction practices. The current language requires that every detector in a building must be connected to the fire alarm system and set off the alarm system, even in situations where that detector is intended to control equipment (such as a smoke detector in an air handling system or for elevator recall). These devices were never intended as life safety devices or to cause evacuation of occupants; they are there to control the equipment. The deletion of this language is consistent with the addition of proposed subpart 31, amending IBC section 907.10 on fire safety functions.

Subpart 12, [F] Section 907.2.3.2.
The proposed amendment to this subpart adds an exception to Section 907.2.3.2. This exception would allow sprinklered schools to be exempt from the requirements of intervening room smoke detection. Sprinkler protection will keep fire conditions to pre-flashover conditions helping to ensure that occupants have an opportunity for egress. Smoke detectors, while certainly beneficial for life safety, are a frequent cause of false fire alarms, which are particularly disruptive in a school environment. By adding this exception, an adequate level of life safety is maintained while reducing burdensome false alarms in schools. In addition, the types of rooms used as intervening rooms are not always conducive to smoke detector installation. For example, an individual may have to exit from one shop through another or one laboratory through another; neither environment is an area where smoke detection is desirable. Another example would be a case of smaller locker rooms, practice gyms, or classrooms where individuals must exit through a larger gymnasium.

Subpart 22, [F] Section 907.2.6.
The proposed amendments to this subpart are numbering changes that are needed for consistency with the 2006 IBC.

Subpart 26, [F] Section 907.2.9.
This subpart is proposed for amendment to correct an identified flaw and to clarify the application of these provisions. The first change is to item 1 of Section 907.2.9; language has been added to clarify that fire alarm systems are required in apartment buildings that are three or more stories in height (two or more stories above the lowest level of exit discharge). The current rule states that the apartments must be three or more stories above the level of exit discharge. Assuming the level of exit discharge to be the first story (which is the most common scenario), the current rule could be interpreted as not requiring a fire alarm system unless there were apartments three stories about the level containing the exit discharge. This was not the intent of the previous language; it was always intended to apply to three story apartment buildings. This change corrects that potential misinterpretation.

The second change to subpart 26 corrects an error in item 4 of section 907.2.9. The current rule requires fire alarm systems in Group R-2 occupancies with 20 persons because this was a

requirement in the Uniform Fire Code for what was then called "congregate residences". Congregate residences are facilities such as dormitories, fraternities, sororities, and similar facilities where there are often three or more persons sleeping in a single room. However, when the current rule was promulgated, the "20 or more" language was included without limiting its application to "congregate-type" residences. Since 20 or more people calculated at 200 sq. ft. per person (the occupant load factor assigned by the IFC) means a size of 4,000 square feet, a fire alarm system is required under the current rule when the building exceeded 4,000 sq. ft. As a general rule, each apartment uses about 1,000 sq. ft of space (counting common egress areas (corridors, stairs, and lobbies) and service areas (laundries, storage, and boiler rooms). Without this change a fire alarm system would be required in all apartment buildings having about five or more apartments (rather than the 17 apartments required in item 3).

Proposed section 907.2.9.3 would clarify that smoke detectors inside dwelling units should not activate the building's fire alarm system. The exception allows connection for annunciation purposes (which would sound an alarm at a staff location but without activating the fire alarm evacuation signal). This is necessary at some facilities (such as assisted living for the elderly) where staff want to be aware of possible fire conditions in a tenant's apartment. However, it is not desirable to activate the entire fire alarm evacuation signal every time a smoke detector activates inside an apartment.

Subpart 26a, [F] Section 907.2.10.1.4.
This proposed subpart would require areas used for sleeping in fire stations and emergency medical and ambulance crew quarters to be equipped with smoke detectors. This is needed as these areas are often defined as Group B occupancies, and smoke alarms are only required in Groups I (Institutional) and R (Residential) occupancies. It is critical to protect emergency response personnel who may be sleeping while on duty.

Subpart 27, [F] Section 907.2.10.2. This amendment is not a substantive change from current subpart 27. In the 2000 IBC, section 907.2.10.2 had two exceptions, and the current subpart 27 added a third. In the 2006 IBC, section 907.2.10.2 has only one exception, and that exception therefore is not numbered. The proposed amendment adds the same exception that is added in the current rule, but the entire section 907.2.10.2 is included in the proposed rule for formatting reasons (i.e. both exceptions need to be numbered).

Subpart 27a, [F] Section 907.2.10.5.
This proposed subpart is needed because of changes to the state electrical code. For the past few years, the electrical code has required arc-fault circuit interrupters for bedrooms. The following provisions are from the 2002 National Electrical Code, which is incorporated by reference in Minnesota Rule 1315.0200, subp. 1:

> 210.12 Arc-Fault Circuit-Interrupter Protection.
> (A) Definition. An arc-fault circuit interrupter is a device intended to provide protection from the effects of arc faults by recognizing characteristics unique to arcing and by functioning to de-energize the circuit when an arc fault is detected.

(B) Dwelling Unit Bedrooms. All branch circuits that supply 125-volt, single-phase, 15- and 20-ampere outlets installed in dwelling unit bedrooms shall be protected by an arc-fault circuit interrupter listed to provide protection of the entire branch circuit.

In lay terms, an arc fault is a "short circuit." This condition occurs when the two conductors of a wire come in contact with each other often resulting in an arc or spark. The arc or spark can be of sufficient heat energy to ignite materials such as paper, carpeting, draperies, etc. For the most part, this requirement is only for new construction but it could occur where extensive electrical renovation takes place in a bedroom. Should an arc-fault circuit interrupter be installed on an electrical branch circuit that also powers the smoke detectors, those detectors would be out of service should there be a "trip" of the arc-fault device. This would remove smoke detectors during a period of time when they would be critical (i.e. an electrical fault is occurring). The occupants would have no knowledge that the circuit was out of service unless they tried to operate an electrical device on that circuit. Smoke detectors with batteries would continue to function and alert occupants.

Subpart 30, [F] Section 907.9.2.
This proposed subpart is needed for consistency between the 2006 IBC and NFPA 72 – National Fire Alarm Code. Although most of the language is the same as in the 2006 IBC, the proposed subpart would make two changes to the sound pressure levels (i.e. volume of the fire alarm system). The first change would be raise the sound pressure from 70 dBA in sleeping rooms to 75 dBA. The second change would be to reduce the maximum sound level permitted from 120 dBA to 110 dBA. The first change for sleeping rooms is based on recent research showing that 70 dBA is not sufficient to wake up a large percentage of the sleeping population. The maximum sound pressure level is being reduced to match OSHA hearing protection guidelines and proposed changes to the 2007 edition of NFPA 72. According to the National Institute of Occupational Safety and Health (NIOSH), exposure time to 109 dBA should not exceed 2 minutes, and hearing loss occurs almost immediately above 115 dBA.

Subpart 31, [F] Section 907.10.
This proposed subpart is needed to clarify the intent of fire alarm detection equipment. The first sentence states that fire alarm system detectors required by sections 907.2 (for new buildings) must activate the fire alarm system as prescribed. The second sentence states that when detection is installed for reasons other than required by section 907.2, it shall perform the intended function. If a fire alarm system is otherwise installed in the building, the detection shall sound a "supervisory" signal at the fire alarm control panel. Supervisory signals do not set off the fire alarm bells or horns; they are intended to notify appropriate staff of a "non-normal" condition. If there is no fire alarm system or control panel, the detection must activate a visual and audible alarm at an approved location.

Basically this section is stating that detection required or installed that is not required to be part of the fire alarm system in Sections 907.2 should not set off the fire alarm audible and visual appliances (bells, horns, strobe lights, etc.).

Section 907.10.1 addresses air handling and air distribution systems, also called heating, ventilation, and air conditioning (HVAC) systems. Smoke detectors are required by the state

mechanical code for larger air handling systems (over 2,000 cfm of air movement)[7]. Section 907.10.1 requires that smoke detectors in these air handlers, when activated, shut down the equipment. The second sentence clarifies that air handling equipment that is part of a smoke control system should switch to the smoke control functions upon activation of the detector.

Section 907.10.1.1 specifically states that these smoke detectors are not intended to nor should they activate the fire alarm evacuation signal. This is consistent with the language in the state mechanical code.[8] Air handling equipment smoke detectors are a common cause of false fire alarms. This false alarm issue, coupled with the fact that these detectors are intended to control equipment and not to act as a life safety early warning device, and consistency with the state mechanical code are the reasons for this change.

Section 907.10.2 contains similar requirements for detectors installed to control, capture, or recall elevators. These detectors are for the elevator system and should not sound the fire alarm system. Conversely, other detectors on the fire alarm system should not initiate elevator control, capture, or recall.

The issue of elevator operation in emergency fire conditions is complex. Smoke detectors are installed in elevator lobbies (usually in the corridor near the elevator car). Should that detector activate, the elevator will not stop at that floor and, therefore, not expose elevator passengers to fire conditions. Detectors can also be installed in elevator machine or mechanical rooms; these detectors are intended to capture the elevator and place it out of service since there may be conditions injurious to the elevator control system.

Section 907.10.3 addresses smoke detectors used to hold open fire doors during non-emergency conditions. When the detector activates, it allows the door to close. Sometimes these are "local" systems; the smoke detector powers a magnetic door hold-open device. In other cases, these door hold-opens are connected to the fire alarm system. This section states that these detectors are not required to be part of the fire alarm system, but that they may be used to also fulfill the smoke detector requirements of subparts 19 to 31 (section 907.2 for new buildings) or subparts 37 to 41 (section 907.3 for existing buildings). It also does not require the audible or visual alarm required by 907.10 for other types of detectors as it would be apparent since the normally-open door would now be closed.

Some people feel that any detectors in a building should be part of the fire alarm system. This is not the intent of these other types of fire safety functions (HVAC, elevator, door hold-opens, etc.). These amendments clarify the intent and reduce installation costs because a separate fire alarm system would not be required.

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7 Section 606.2 of the 2000 International Mechanical Code, incorporated by reference in Minnesota Rule 1346.0050.

8 Section 606.4 of the 2000 International Mechanical Code, incorporated by reference in Minnesota Rule 1346.0050.

Subpart 32, [F] Section 907.11.

This proposed subpart is a companion to proposed subpart 21. Section 907.11 is proposed for deletion because the function of duct detectors outlined in Section 907.11 is contained in the amendment to Section 907.10.

Subpart 32, [F] Section 907.14.
This proposed subpart would delete the requirement that all fire alarm systems be monitored. This adds additional expense to the property owner ($60-100 per month) and is not needed for many fire alarm systems. The requirements for monitoring are included in 2006 IBC sections 903.4 (sprinkler system monitoring), and 907.2.6 (monitoring for Group I occupancies).

1305.0909 SECTION 909, SMOKE CONTROL SYSTEMS

Subpart 1, F Section 909.4.7. The purpose of this amendment regarding door-opening force is to clarify the requirement. During special inspections, this is usually one of the requirements over-looked by designers; a violation of this requirement often causes great consternation, since these systems are tested just before approving the certificate of occupancy. The general design provision applies to all methods employed. This reinforces the intent of the code and provides a reminder to the designer. An exit door is of no use if the door cannot be opened, regardless of where it is in the building or the smoke control method employed.

Subpart 2, F Section 909.21. This proposed subpart assists the reader by cross-referencing the appropriate requirement (section 913 of the 2006 IBC).

1305.0910 SECTION 910, SMOKE AND HEAT VENTS.

Subpart 5, F Section 910.
This proposed subpart would amend the existing rule on the design of mechanical smoke exhaust systems. The proposal would vastly simplify the rule by eliminating the need for a fairly complex fire engineering analysis, and instead requiring three air changes per hour. This would also greatly reduce the amount of text in the rule and the complexity of the requirements. Most mechanical contractors are accustomed to dealing with movement of air (air changes per hour). The State Fire Marshal Division modeled several fire scenarios using computer simulation software programs. These models showed that 3 air changes per hour were roughly equivalent to the volumetric calculations required under the current rule.

1305.0912, SECTION 912, FIRE DEPARTMENT CONNECTIONS.

This is proposed new language that specifies the minimum and maximum height of fire department connections for fire sprinkler and standpipe systems. It requires connection heights between 18 and 48 inches. This is similar to the recommended heights found in the installation standards. The addition of this language provides the fire or building official with a defined height, not a recommendation or suggested height. This change is needed in Minnesota because these connections could otherwise be located below the depth of snow cover, which could delay fire department access to these critical connections.

1305.0913 SECTION 913, POST FIRE SMOKE EXHAUST SYSTEM.

The proposed renumbering in this part is needed for consistency with the 2006 IBC. A new sentence is proposed in section 913.4 to prohibit smoke exhaust through any exit enclosure. An "exit enclosure," as defined in section 1002.1 of the 2006 IBC, "provides for a protected path of egress travel in a vertical or horizontal direction to the exit discharge or the public way." It is reasonable that smoke should not be exhausted through such an enclosure, which is designed to allow safe egress for individuals.

1305.1008, SECTION 1008, DOORS, GATES AND TURNSTILES.

This amendment is not expected to contribute to or cause additional costs to construction. In fact, it will provide more consistency and uniformity between other state agencies and the federal mandates they are required to enforce, which should result in an overall cost reduction for designers and building owners.

Subpart 4, Section 1008.1.3.6, Special egress control devices. This subpart is almost identical to existing rule 1305.1003, subpart 4. The provision needs to be moved for consistency with the organization of the 2006 IBC. There are no substantive changes to the requirements.

Subpart 5, Section 1008.1.4, Floor elevation. This proposed rule amendment modifies the 2006 IBC requirement regarding the difference in floor elevation between a dwelling unit and the adjacent outdoor patio, deck or balcony. The 2006 IBC would allow up to a 4-inch difference in elevation. The proposed rule specifies a maximum 2-inch difference in elevation. The Accessibility Advisory Committee recommended a similar amendment to the Minnesota Accessibility Code (chapter 1341). The current accessibility code only allows the standard ¾-inch or ½-inch threshold. *See* Minn. R. 1341.0442, subp. 8 (2005). The current rule generated some comments concerning water penetration from exterior decks. The Accessibility Advisory Committee concluded that a 2-inch difference in elevation will be sufficient to control water penetration into the dwelling unit, which is the purpose of allowing the elevation change. There are also two grammatical changes in the sentence structure of this rule that were made in the 2006 IBC.

Subpart 6, Section 1008.1.8.3, Locks and latches. This proposed subpart consolidates in one section a list of all the permissible locking arrangements, both in the 2006 IBC and through state amendments. This makes it easier for the users of the code (building officials, fire code officials, architects, etc.) to locate all permissible locking arrangements. This also is necessary for coordination with a planned amendment to the State Fire Code.

Subpart 7, Section 1008.1.8.6, Delayed egress locks.
This proposed subpart is almost identical to existing part 1305.1003, subpart 5. This provision needs to be relocated for consistency with the 2006 IBC. The only change from the current rule is the addition of the bracketed notation "[30]" in item 5. This addition is needed and reasonable to recognize that, under the exception to item 4, a delay of not more than 30 seconds could be approved.

Subpart 8, Section 1008.1.10, Special locking arrangements. This proposed subpart is needed and reasonable to make chapter 1305 consistent with Departmental policy. The language reflects a policy implemented by the Building Codes and Standards Division, specific to Group E school occupancies, to respond to their need for "time out" rooms. These rooms are intended for students who may pose a threat to themselves, other students or faculty. Since the inception of this Division policy, however, it has become apparent that there are other occupancies where "seclusion rooms" are needed. These are specialized locking arrangements that cannot be addressed with delayed egress devices, such as halfway houses, juvenile homes, and mental facilities. The amendment is non-occupancy specific for this reason. As with other locking arrangements permitted by the code, this amendment permits needed security while providing a reasonable life safety expectation. This subpart is also necessary to coordinate with a planned amendment to the State Fire Code.

1305.1009 SECTION 1009, STAIRWAYS AND HANDRAILS

The current language in this part relates to emergency escape and rescue. Because of the reorganization of the 2006 IBC, these provisions have been moved to proposed part 1305.1026. The proposed new part 1305.1009 relates to the 2006 IBC provision in Section 1009 on stairways and handrails.

The proposed amendment is needed and reasonable because it clarifies Section 1009.9 of the 2006 IBC and directs the reader to Minnesota Rule 1305.1209 for proper design and access requirements regarding rooftop mechanical equipment. The 2006 IBC implies in this section, and elsewhere, that access to unoccupied roofs may be by means of an alternating tread device. Building designers have tried to use this device in lieu of the required ships ladder for access to mechanical equipment on the roof. This proposed part would provide more uniformity and consistency in the use of alternating tread devices in these situations.

This amendment was originally proposed by the Minnesota Association of Plumbing and Mechanical Officials, who support this proposed part.

1305.1013, SECTION 1013, GUARDS.

This proposed part adds references to the Minnesota Bleacher Safety Act. This is needed and reasonable to make designers and contractors aware of this statute. The IBC-1305 Advisory Committee recommended these amendments.

1305.1014 SECTION 1014, EXIT ACCESS.

The primary purpose of this proposed part is to simplify the scoping and technical requirements for aisle and aisle accessways for all occupancies except Group A. Without this subpart, the applicability of these technical requirements would be unclear . If section 1014.4 of the 2006 IBC is enforced restrictively, then additional square footage would be required in all occupancies without any appreciable life safety benefit. This would increase the cost of construction and rent to tenants. On the other hand, if section 1014.4 of the 2006 IBC is not enforced, then there would be no life safety benefit. This proposed part finds common ground between restrictive

enforcement and no enforcement of section 1014.4 of the 2006 IBC, and provides for an enforceable code provision.

This amendment was developed along with and approved by the State Fire Chiefs' Fire Code Advisory Committee.

1305.1015 SECTION 1015, EXIT AND EXIT ACCESS DOORWAYS.

The language in this proposed part is comparable to current part 1305.1004, subpart 1. It is reasonable and necessary to move this language to proposed part 1305.1015 for consistency with the 2006 IBC. The revised section 1015.1 in proposed part 1305.1015 differs from section 1015.1 of the 2006 IBC only in the addition of item 4. This item is comparable to item 3 in existing part 1305.1004, subpart 1.

1305.1019 SECTION 1019, NUMBER OF EXITS AND CONTINUITY.

Subpart 1, Section 1019.1, Minimum number of exits. The primary purpose of this proposed subpart is to clarify when multiple means of egress are required from a floor of a building. One of the largest complaints that the Department of Administration's Building Codes and Standards Division (BCSD) received after the adoption of the 2000 IBC is that the code was unclear as to this requirement. The complaint came from both building officials and architects. We had hoped that the 2006 IBC would address the problem, but it did not.

Subpart 2, Section 1019.1.3, Press Box Roof Access. This proposed subpart is similar to current part 1305.1003, subpart 13. It needs to be moved to part 1305.1019 for consistency with the 2005 IBC. This provision has also been re-formatted so that the language is consistent with other (similar) special exiting provisions mandated elsewhere in the 2006 IBC. In addition, the reformatted language clarifies the criteria for using a ships ladder and roof hatch to get on and off the roof of the press box.

Subpart 3, Section 1019.2, and Subpart 4, Table 1019.2. The primary purpose of this change is to clarify when only one means of egress is required from a floor or a building. One of the largest complaints that the BCSD received after the adoption of the 2000 IBC is that this code requirement is unclear. The complaint came from both building officials and architects. The agency thought the 2006 IBC would address the problem, but it did not.

1305.1025 SECTION 1025, ASSEMBLY.

Subpart 1. IBC Section 1025.1.1.

a. ICC 300[9] Section 404.5. This proposed item is comparable to existing part 1305.1008, subpart 1. In the 2006 IBC, all rules pertaining to bleachers, folding and telescopic

9 The ICC 300 is one of the many standards to which the IBC refers and which the IBC lists in chapter 35. As specified in chapter 35 of the IBC, ICC 300 is the ICC Standard on Bleachers, Folding and Telescopic Seating and Grandstands. The ICC 300 is available for review at the Minnesota Department of Labor and Industry by contacting

seating, and grandstands are covered in the ICC 300. It is therefore reasonable and necessary to move the language to proposed part 1305.1025. This proposed item is intended to reduce the calculated width mandated originally by the IBC for these types of seating facilities. Language in the proposed item is similar to language found in an NFPA Standard regulating similar facilities. There is no real history to support the excessive aisle widths mandated in the ICC 300. Additionally, there are more costs associated with the un-amended aisle widths in the ICC 300. The increased costs are not justified when compared to other national model codes that regulate similar conditions and facilities.

b. ICC 300 Section 405.1. This proposed item is necessary to account for the typical three or five row bleacher that is used to view baseball, soccer, and other outdoor events. These bleachers, without aisles, have been in use for over 30 years and have a proven record of safety, despite the lack of an aisle. The cost associated with providing an aisle would limit manufacturers and would create an undue hardship for school districts, parks, recreation departments, non-profit little league associations, etc., with little or no benefit. The proposed exceptions are consistent with similar exceptions under the Minnesota Bleacher Safety Act, Minnesota Statutes, section 16B.616, regarding omission of guards and guard spacing.

c. ICC 300 Section 405.6. This proposed item is comparable to existing part 1305.1008, subpart 2, exception 5. The 2006 IBC incorporates the ICC 300 standard as the document to be used for bleachers, folding and telescopic seating, and grandstands. This proposed item will properly incorporate this exception into the IBC amendments.

d. ICC 300 Section 408.1. This proposed item is comparable to existing part 1305.1008, subpart 3. This provision needs to be moved and reworded for consistency with the 2006 IBC.

f. ICC 300 Section 408.3. This proposed item is necessary for the coordination of the State Building Code with the Minnesota Bleacher Safety Act, Minn. Stat. § 16B.616. The Minnesota Bleacher Safety Act was a response by the Minnesota Legislature to several serious injuries resulting from accidents that occurred on bleacher-type seating a few years ago. The Act is intended to reduce the potential risk of injury to children that occupy bleacher facilities. This is accomplished through the installation of a guard that is designed to discourage and prevent children from climbing up or over the guard. Although this issue has been discussed at a national level, the model building codes have not yet addressed it.

g. ICC 300 Chapter 5. Like proposed item (f) above, this proposed item is needed for coordination of the State Building Code with the Minnesota Bleacher Safety Act, Minn. Stat. § 16B.616.

1305.1026 SECTION 1026, EMERGENCY ESCAPE AND RESCUE

1026.1 General. This proposed part is comparable to existing part 1305.1009. It is necessary to

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relocate this provision for consistency with the 2006 IBC. Also, all of the language that has been added in proposed part 1305.1026 is language from section 1026.1 of the 2006 IBC. The only difference between section 1026.1 of the 2006 IBC and proposed part 1305.1026 is that the proposed part does not include the following exception found in the 2006 IBC: "Basements with a ceiling height of less than 80 inches (2032 mm) shall not be required to have emergency escape and rescue windows." This exception is not part of current Minnesota law and would not adequately protect Minnesota citizens. The IBC-1305 Advisory Committee reviewed proposed part 1305.1026 and recommended it.

1305.1101 CHAPTER 11, ACCESSIBILITY.

This section of the code is being modified to provide proper code coordination between Minnesota's Accessibility Code (chapter 1341) and the Minnesota State Building Code, which includes chapter 1305.

Contemporaneously with this rulemaking, the Department is proposing amendments to chapter 1341. These proposed amendments include incorporation by reference of Chapter 11 of the 2006 IBC. All proposed amendments to Chapter 11 of the 2006 IBC will be contained in Chapter 1341.

Proposed part 1305.1101 refers the reader to Chapter 1341 because the Minnesota Accessibility Code is mandated for application on "statewide" basis. The State Building Code, however, is not applicable statewide. The State Building Code is mandated in the seven county metropolitan area only. It would also apply in other municipalities/jurisdictions that have specifically adopted the State Building Code by referendum (pursuant to Minn. Stat. § 16B.59).

Both the IBC-1305 Advisory Committee and the Accessibility Advisory Committee have recommended this proposed rule change. (For more information on the Accessibility Advisory Committee, see the Statement of Need and Reasonableness prepared by the Department of Labor and Industry in connection with proposed amendments of Minnesota Rules, Chapter 1341.)

1305.1203 SECTION 1203, VENTILATION.

The IBC-1305 Advisory Committee reviewed the existing language on equipment and systems and recommended its repeal. The existing language was initially added to provide clarification for buildings that do not need to be provided with heat. Committee members, however, felt that the 2006 IBC language is adequate and that the existing rule language is not necessary. The Department agrees with this recommendation.

The proposed language is comparable to existing part 1305.1202. The language has been moved and slightly modified for consistency with the 2006 IBC.

1305.1209 SECTION 1209, ACCESS TO UNOCCUPIED SPACES.

The proposed rule would move the current language in part 1305.1209 to proposed part 1305.1210 for consistency with the 2006 IBC.

1209.3 Mechanical equipment and appliance access. This proposed language is needed and reasonable so that rooftop mechanical equipment access provisions, in accordance with the Minnesota Mechanical Code (Minnesota Rule 1346.0306), can be more easily identified and used in conjunction with the 2006 IBC. Building designers, in some instances, do not have direct access to the Minnesota Mechanical Code. These designers have been unaware of rooftop mechanical equipment access requirements until a mechanical inspector arrives on the site. At this point in the construction, compliance with rooftop access requirements becomes nearly impossible because of building design constraints. The purpose of this proposed rule is to make building designers more aware of the provision during the initial design phase.

The proposed language duplicates Minnesota Rule 1346.0306 in the Minnesota Mechanical Code. This duplication is necessary for the user to properly apply the correct code requirements. This amendment will ensure more uniform and consistent application of the rooftop mechanical equipment access provisions.

The Minnesota Association of Plumbing and Mechanical Officials suggested and supports this rule amendment.

1305.1210 SECTION 1210, SURROUNDING MATERIALS.

1210.1 Floors. This proposed rule is comparable to existing part 1305.1209. This provision needs to be relocated for consistency with the 2006 IBC. Also, the proposed rule changes the wall base material height designation from five inches to six inches. This is needed and reasonable because the national model code has changed from five to six inches, which is a standardized wall base material height. This change will permit installation of more standardized construction materials.

1305.1503 SECTION 1503, WEATHER PROTECTION.

Section 1503.4, Roof drainage. The proposed amendments in this subpart are needed and reasonable for consistency with the 2006 IBC and with Minnesota Rules, Chapter 4715 (the Minnesota Plumbing Code). The proposed change to item 5 (regarding sizing of secondary drains) relates to the Minnesota Plumbing Code.

When the current rule was first adopted, proponents were not aware that the Minnesota Plumbing Code already contained provisions for the sizing of secondary roof drains. Existing rule 1305.1503, subpart 1, conflicts with the existing plumbing code. The agency immediately issued a code interpretation/clarification letter directing code officials to ignore the words "is sized by two" in the first sentence of item 5. The proposed rule change will correct this conflict and allow the rule to conform to current practice.

The IBC-1305 Advisory Committee has recommended this proposed change.

1305.1505 IBC TABLE 1505.1 - MINIMUM ROOF COVERING CLASSIFICATION FOR TYPES OF CONSTRUCTION.

IBC Table 1505.1 - Minimum Roof Covering Classification for Types of Construction

The *Urban Wildland Interface Code* has not been adopted in Minnesota, so the exception referencing such a document was removed in the 2003 Minnesota State Building Code, which amends the 2000 International Building Code. In doing so, however, the remaining footnotes were mistakenly re-alphabetized from "b" and "c" to "a" and "b." This caused confusion with the actual code book lettering that was not deleted from the table and was being used. Through this proposed amendment, the footnotes are re-lettered back to their original un-amended state, so the table will work as originally intended in the publication. Footnote "a" is still deleted as it exists in the current rule. This is an editorial change so that the table works as intended.

1305.1509 SECTION 1509, ROOFTOP STRUCTURES.

The language proposed for deletion is no longer needed because the 2006 IBC incorporates similar language.

The proposed new language is also needed and reasonable. Aside from enclosing mechanical equipment, most penthouses tend to have minor/accessory uses within the structure. Uses normally seen include areas for regular office or podium desks for maintenance personnel use to document mechanical equipment servicing, file or storage cabinets areas that are maintained for storing records or equipment information, and areas used for the storage of mechanical equipment supplies, such as air filters or extra parts. The 2006 IBC, however, states that penthouses cannot be used for purposes other than "shelter of mechanical equipment or shelter of vertical shaft openings in the roof." The intent of this proposed amendment is to legitimize conditions that have normally been accepted by most building and fire code officials. The amendment would also ensure that if those uses occur, they would only be allowed if protected with a fire sprinkler system in the penthouse.

The IBC-1305 Advisory Committee recommended the proposed amendment of this part.

1305.1704 SECTION 1704, SPECIAL INSPECTIONS.

Subpart 2, Table 1704.4; and Subpart 4, Table 1704.5.1. These amendments do not represent any substantive change from the current rule. These amendments are needed so that the current exceptions in rule are maintained, consistent with the revised format of Tables 1704.4 and 1704.5.1 in the 2006 IBC.

1305.1805 SECTION 1805, FOOTINGS AND FOUNDATIONS.

Subpart 4. This proposed subpart is necessary for coordination between the Minnesota Rules and the 2006 IBC. Minnesota Rule 1303.1600 currently regulates minimum building footing frost depth protection. Language in the 2006 IBC is in direct conflict with this rule. This proposed subpart would modify the 2006 IBC to cross-reference the Minnesota rule provisions for building footing frost depth requirements.

The IBC-1305 Advisory Committee recommended this proposed subpart.

1305.1807 SECTION 1807, DAMPPROOFING AND WATERPROOFING.

This proposed part is the same as current part 1305.1806. It is reasonable and necessary to change the numbering for consistency with the 2006 IBC.

1305.1907 SECTION 1907, DETAILS OF REINFORCEMENT.

The Structural Advisory Committee recommended this amendment in order to change the size of the concrete cover from one and one half to two inches (and the corresponding change to the metric equivalent). The current rule only requires a 1 ½" minimum top cover for concrete reinforcing in corrosive environments. The current rule reflects the recommendations of the American Concrete Institute (ACI) at the time the rule was adopted. Current ACI recommendations, however, include 2" of top cover for corrosive environments. The majority of knowledgeable engineers will likely follow the ACI recommendation, even if this is not specifically required by law. Therefore, it is reasonable to increase the minimum cover by ½" in the Minnesota Building Code to promote uniformity of application within the industry.

1305.2308 SECTION 2308, GENERAL DESIGN REQUIREMENTS.

Subpart 1, IBC Figure 2308.9.3 and Subpart 2, IBC Table 2308.9.3(1). This proposed amendment modifies the specifications in the table that accompanies Figure 2308.9.3, and in Table 2308.9.3(1). These changes are necessary to clarify the applicability of bracing information given in Figure 2308.9.3 and Table 2308.9.3(1). This amendment clarifies that the bracing information given in Figure 2308.9.3 and Table 2308.9.3(1) applies to the 90-mile-per-hour wind load requirements for Minnesota. This amendment has been reviewed and recommended by the Structural Advisory Committee.

1305.2603 SECTION 2603, FOAM PLASTIC INSULATION.

The primary purpose of this proposed part is to coordinate Minnesota Rules, Chapter 1305 (2006 International Building Code amendments) with Minnesota Rules, Chapter 1309 (2006 International Residential Code amendments). Similar amendments are being proposed for both construction codes.

This change will reduce the costs of construction by removing some of the requirements for a thermal barrier. Specifically, the proposed part would decrease the maximum thickness of the foam plastic, and eliminate the density requirements for foam plastic. The primary reason for the change is that the actual thickness and density of foam plastic insulation has no bearing on flame contribution because of the very low flame spread rating. The testing company involved with the original code proposal (in the IBC at the national level) provided statistical information supporting this position. The original IBC language is also very limiting by referring to a minimum thickness and density of the spray foam. Very few spray foam products meet the thickness and density criteria in the 2006 IBC. This proposed part will allow other brands of

spray foam plastic to meet the code requirements.

1305.2902, SECTION 2902, MINIMUM PLUMBING FACILITIES.

Subpart 1. No change is proposed in this subpart.

Subpart 1a, 2902.1.1 Unisex toilet and bath fixtures. This proposed subpart is necessary for coordination between state rule chapters. The *International Plumbing Code* (IPC) has not been adopted in Minnesota. Section 2902.1.1 of the 2006 IBC, however, refers the user to section 404 of the IPC for requirements. Section 404 of the IPC states that unisex restrooms should be handicap accessible, but it does not identify a required number or type of plumbing fixtures within a unisex restroom. This proposed subpart removes the reference to IPC section 404 and provides a reference to Minnesota Rules, chapter 1341, in its place. Chapter 1341 is the Minnesota Accessibility Code. The proposed subpart permits accessible restroom plumbing fixtures in unisex restrooms to be counted in the total for minimum overall number of plumbing fixtures required. The proposed subpart preserves the intent of the original 2006 IBC prerequisite and coordinates state rule chapters correctly. The IBC-1305 Advisory Committee reviewed this proposal and recommended this proposed subpart.

Subp. 2. Table 2902.1.

Deleted language: The purpose of this proposal is to delete several footnotes from table 2902.1 because the footnotes have been changed and renumbered in the 2006 IBC.

Added language: This proposal incorporates new 2006 IBC Table 2902.1 footnotes. Footnotes "a" through "d" are identical to the 2006 IBC footnotes. The proposed subpart adds to IBC Table 2902 one footnote from the current state rule (new footnote "e") and four new footnotes that do not appear in the current state rule (new footnotes f, g, h, and i). The proposed footnotes are intended to clarify the applicability of the code and provide better guidance on how to determine the required number of plumbing fixtures in a building or structure.

- The new footnote "e" is identical to current footnote "g" in 1305.2902, subpart 2. This footnote permits the use of restrooms in an existing building in close proximity to stadiums or bleacher-like structures rather than constructing new permanent facilities with the bleacher/stadium structure. It also permits the recognition and use of portable/temporary "privies" when these structures are in seasonal use.
- Footnote "f" is a new footnote that is being added to allow smaller buildings and/or tenant spaces to be constructed without a drinking fountain. Currently, the code requires a drinking fountain in all spaces/uses -- without exception.
- Footnote "g" has been added to recognize restaurants that serve water to their patrons. Pursuant to this footnote, drinking fountains would not be required in those restaurants. The current building code does not recognize this condition and would require drinking fountains in every building or restaurant.
- Footnote "h" has been added to offset the number of required drinking fountains in group conditions where the building owner has provided other available drinking conditions. The current building code does not recognize other on-site drinking facilities or conditions.

- Footnote "i" has been added to the table to clarify that no more than 67% of the required water closets can be traded off for urinals in men's restrooms. This is a requirement from the IPC. The table currently references the IPC for this conversion, but the State of Minnesota does not adopt the IPC. This footnote inserts language from the IPC into this rule.

Each of the proposed new footnotes provides a "reduction" from what the code otherwise requires. Each of the proposed footnotes provides guidance or clarification where there originally was none, or where the current code language is very vague. Each of the proposed footnotes also recognizes or permits options that otherwise would be considered very restrictive requirements.

Each of the proposed footnotes was individually evaluated and recommended for adoption by the IBC-1305 Advisory Committee.

Subp. 3. Section 2902.2. It is necessary to amend the wording of exception 4 for consistency with exception 3 of the 2006 IBC. Exception 3 of the 2006 IBC now addresses mercantile occupancies with a specific exception for this use group. Because of this national change, the current Minnesota rule must be modified to remove mercantile uses (Group M occupancies) from the exception.

The IBC-1305 Advisory Committee reviewed and recommended this amendment.

Subp. 4. Section 2902.6.4 Controlled access required. This numbering change is necessary for consistency with the 2006 IBC.

1305.3030 CHAPTER 30, ELEVATORS AND CONVEYING SYSTEMS.

This section of the code is being modified to provide proper code coordination between Minnesota Rules, chapter 1307, the Minnesota Elevator Code, and Minnesota Rules, chapter 1305. The proposed amendment refers the reader to Minnesota Rules, Chapter 1307 for all requirements of the Minnesota Elevator Code.

The IBC-1305 Advisory Committee recommended this proposed amendment.

1305.3302 SECTION 3302, CONSTRUCTION SAFEGUARDS.

This amendment is not a substantive change. It reflects a change in the numbering of sections in the 2006 IBC.

1305.3400 CHAPTER 34, EXISTING STRUCTURES.

This section of the code is being modified to provide proper code coordination between Minnesota Rules, chapter 1311 (the Minnesota Building Conservation Code) and Minnesota Rules, chapter 1305. The proposed amendment refers the reader to Minnesota Rules, Chapter 1311 for all requirements of the Minnesota Building Conservation Code.

The IBC-1305 Advisory Committee recommended this proposed amendment.

1305.3500 CHAPTER 35, REFERENCED STANDARDS.

The current rule was needed in order to provide an updated listing of standards. Because the listing in the 2006 IBC has now been updated, the listing in the current rule is no longer needed. However, it is necessary to list the reference to NFPA 45 because this NFPA standard is not referenced in the 2006 IBC but is referenced in proposed part 1305.0716.

The IBC-1305 Advisory Committee reviewed and recommended this amendment.

REPEALER

1305.0302 CLASSIFICATIONS.

This section is proposed for repeal because section 302.3.2 of the 2000 IBC was moved to section 508.3.3.4 of the 2006 IBC.

1305.0402 , SECTION 402, COVERED MALL BUILDINGS

Subpart 2. Section F 402.8.1. The 2006 IBC has now incorporated similar language into the national model code document. Therefore, there is no need for this subpart.

1305.0419, SECTION 419, GROUP E OCCUPANCIES.

For consistency with the 2006 IBC, this section is being repealed, and a comparable provision is proposed as part 1305.0421.

1305.0704, SECTION 704, EXTERIOR WALLS.

The new 2006 IBC has been changed to better clarify this condition. There is now no need for this state amendment.

1305.0707 SECTION 707, SHAFT ENCLOSURES.

The 2006 IBC incorporates similar requirements. Therefore, there is no longer any need for this part.

1305.0714 SECTION 714, OPENING PROTECTIVES.

The 2006 IBC incorporates similar requirements within the national model code itself. Therefore, there is no need for this part.

1305.0903 SECTION 903, AUTOMATIC SPRINKLER SYSTEMS.

Subpart 1: This subpart is proposed for repeal because comparable language appears in the second paragraph of proposed part 1305.0903, subpart 1a.

Subpart 2: This subpart is proposed for repeal because comparable requirements appear in the second paragraph, exception number 2, of proposed part 1305.0903, subpart 1a.

Subpart 3: This subpart is proposed for repeal because comparable language appears in proposed part 1305.0903, subpart 5a (section 903.3.1.6.1).

Subpart 6: This subpart is proposed for repeal because comparable language appears in proposed part 1305.0903, subpart 5a (sections 903.3.1.6.2 and 903.3.1.6.3).

1305.0905 [F] SECTION 905, STANDPIPE SYSTEMS

Subparts 4 and 5. Because of the renumbering of the 2006 IBC, these provisions have been incorporated into proposed subpart 3.

1305.0907 SECTION 907, FIRE ALARM AND DETECTION SYSTEMS.

Subparts 20 and 21. These subparts are being repealed and the corresponding language inserted in subpart 22, to make the rule easier to understand.

Subpart 29. This subpart deletes an exception. Because the exception no longer appears in the 2006 IBC, this subpart is proposed for repeal.

1305.1003, SECTION 1003, GENERAL MEANS OF EGRESS.

Subpart 1, Section 1003.2.12. This subpart is proposed to be moved to part 1305.1013, subpart 1, for consistency with the 2006 IBC.

Subpart 2, Section 1003.2.12.1 Height;
Subpart 6, Section 1003.3.3.3, Stair treads and risers;
Subpart 7, Section 1003.3.3.3.2, Profile;
Subpart 9, Section 1003.3.3.7, Circular Stairs;
Subpart 10, Section 1003.3.3.8 Winders;
Subpart 11, Section 1003.3.3.11, Handrails;
Subpart 12, Section 1003.3.3.11.5, Handrail extensions.

All of these subparts are proposed for repeal and are not proposed to be adopted as part of another rule. Because the rationale for repealing all of these subparts is the same, all of these subparts will be addressed together in this SONAR.

Before describing the historical background for the existing subparts, this section will list the requirements under each current subpart and the requirements that would apply under the 2006

IBC if the current subpart is repealed.

- Subpart 2, Section 1003.2.12.1 Height: This subpart allows the height of guards (guardrails) in R-2, R-3 and U occupancies to be installed at a maximum height of 36-inches. The 2006 IBC includes a provision regarding the height of guardrails in section 1013.2. This provision requires a 42-inch high guard in all occupancies, including dwellings.
- Subpart 6, Section 1003.3.3.3, Stair treads and risers: This subpart allows stairs in R-2, R-3 and U occupancies to be installed with 8" rise and 9" tread. The 2006 IBC includes a provision regarding the height of guardrails in section 1009.3. This provision requires a 7.75-inch maximum tread height and a 10-inch minimum tread depth in dwellings.
- Subpart 7, Section 1003.3.3.3.2, Profile: This subpart removed all requirements regulating residential stair tread nosing profiles, so that residential designers and builders have been free to build stair tread nosing any way they wish. The 2006 IBC includes a provision regarding stair tread nosing profiles in section 1009.3.3. This provision regulates the radius of the curvature and beveling of stair tread nosing.
- Subpart 9, Section 1003.3.3.7, Circular Stairs; and Subpart 10, Section 1003.3.3.8 Winders: Subpart 9 allowed circular stairs in certain dwellings to have a minimum tread depth of 10 inches, as measured 12 inches from the narrower end of the tread. Subpart 10 allowed winders in dwelling units with a minimum tread depth of 6 inches and a minimum tread depth of 9 inches when measured 12 inches from the narrow edge. The 2006 IBC includes a provision regarding curved stairs (which includes both circular stairs and winders) in section 1009.7. This provision cross-references the requirements of section 1009.3, which regulates tread depth and requires a minimum 10-inch winder tread depth at the walk line in certain dwellings.
- Subpart 11, Section 1003.3.3.11, Handrails: This subpart removed all requirements for residential stair handrails when the stair had four risers or less, so that residential designers and builders have been free to build stairs with four or fewer risers without handrails. The 2006 IBC includes a provision regarding the handrails in section 1009.10. This provision requires all stairs having more than 1 riser to have a handrail on one or both sides, depending on the use.
- Subpart 12, Section 1003.3.3.11.5, Handrail extensions: This subpart removed all requirements for residential stair handrail extensions, so that residential designers and builders have been free to build stairs without handrail extensions. The 2006 IBC includes a provision regarding the handrail extensions in section 1012.5. This provision requires handrail extensions on stair handrails not installed "within" a dwelling unit.

Background. All of these subparts were initiated by and supported through an agreement between the Minnesota Building Codes and Standards Division (BCSD) of the Minnesota Department of Administration, and the Builders Association of Minnesota (BAM). The history of the agreement stems from longstanding code provisions found in the state's previous building code (the UBC), which contained provisions comparable to the subparts proposed for repeal. The State of Minnesota had adopted and used the UBC during the 30-years before the adoption of the 2000 IBC. During that time, the standards described in the subparts proposed for repeal became accepted by residential designers and builders as the "norm."

Issues regarding these requirements surfaced with the adoption of the 2000 IBC. Without amendment, the 2000 IBC would have imposed requirements comparable to the requirements in the 2006 IBC. During the rulemaking process for adoption of the 2000 IBC, BAM argued that these changes would be too significant and too costly, and that they were not adequately prepared for such these change. BAM made it clear that they were in favor of adopting the 2000 IBC, but that they did not support the IBC's provisions regarding the subparts proposed for repeal. Again, during the rulemaking process, agency staff received requests and recommendations for changes to these requirements.

Because the IBC is a national model code and because it was the intent of surrounding states to adopt the same code, the agency determined that, for the sake of consistency and uniformity, it would work with surrounding states to adopt similar standards. After discussing the issues with surrounding states (Wisconsin, Iowa, North Dakota and South Dakota), it was apparent that the same design concerns raised by BAM in Minnesota were being discussed in those states. The surrounding states and Minnesota determined it would be best for each state to have the same provisions with respect to these issues. BAM agreed with this concept. The IBC's adoption was critical to each state though, so the primary concern tended to be garnishing support for the adoption of the IBC. To that end, and in an effort to provide consistency, each state's code agency formulated an agreement with the residential builders association in their state. The agreement in each state essentially amended the IBC back to the provisions previously found in the UBC with the understanding that each amendment would be repealed within one code cycle – to revert to the original language found in the IBC. All parties agreed in principal, which is where we are today.

The one code cycle agreement terminates under the proposed adoption of the 2006 IBC (Minnesota Rules, Chapter 1305). As a result, the Department proposes to repeal these subparts and enforce 2006 IBC parameters. In preparation for these changes, Department staff have promoted these changes at most - if not all - of its contractor training seminars, annual schools, conferences, etc., throughout the state while receiving little objection to the change. Residential builders, presumably, have also had over two years to revise building plans and prepare for this change.

Statutory Authority. By repealing these subparts, the State of Minnesota will be adopting the original language of the IBC. This brings the building code closer to: (1) the requirement in Minnesota Statutes § 16B.59 that the state building code provide for uniform performance standards; and (2) the requirement in Minnesota Statutes § 16B.61, Subdivision 1, that the state building code "conform insofar as practicable to model building codes generally accepted and in use throughout the United States."

Building Code Advisory Committee Recommendation. The IBC-1305 Advisory Committee recommended the repeal of these subparts.

Subpart 3, Section 1003.2.13, Accessibility. This subpart is no longer needed because the 2006 IBC provides detailed information on accessible means of access in section 1007.

Subpart 4, Section 1003.3.1.3.6, Special egress control devices. This subpart is proposed to be moved to part 1305.1008, subpart 4, for consistency with the 2006 IBC.

Subpart 5, Section 1003.3.1.8.2, Delayed egress locks. This subpart is proposed to be moved to part 1305.1008, subpart 7, for consistency with the 2006 IBC.

Subpart 8, Section 1003.3.3.5.2, Outdoor conditions. This subpart is no longer needed because the 2006 IBC contains a comparable provision in section 1009.5.2.

Subpart 13, Section 1003.3.3.12.2, Press box roof access. This subpart is proposed to be moved to part 1305.1019, subpart 2, with revisions, for consistency with the 2006 IBC.

Subpart 14, Section 1003.3.4.6.2, Outdoor conditions. This subpart is no longer needed because the 2006 IBC contains a comparable provision in section 1010.7.2.

1305.1004, SECTION 1004, EXIT ACCESS.

Subpart 1, Section 1004.2.1, Exit or exit access doorways required. For consistency with the 2006 IBC, this section is proposed for repeal and a comparable provision is proposed as part 1305.1015. The IBC-1305 Advisory Committee has recommended repeal of this subpart.

Subpart 2, Section 1004.2.3.3, Group E. This subpart is unnecessary because comparable language appears in current part 1305.0907, subpart 12, which is proposed for amendment.

Subpart 3, Section 1004.3.1.1, Public areas Group B and M. This subpart is no longer needed because Chapter 10 in the 2006 IBC has been reformatted. The provisions regarding aisle width are contained in section 1014.4 of the 2006 IBC, which is proposed for amendment. (See proposed part 1305.1014.)

The IBC-1305 Advisory Committee has recommended repeal of this subpart.

1305.1008, SECTION 1008, DOORS, GATES AND TURNSTILES.

Subparts 1, 2 and 3: These subparts are proposed for repeal because they concern bleachers. In the 2006 IBC, provisions regarding bleachers have been moved to IBC section 1025, which adopts ICC 300. The Minnesota provisions specific to bleachers have therefore been moved to proposed part 1305.1025.

1305.1202, VENTILATION.

For consistency with the 2006 IBC, this section is proposed for repeal and a comparable provision is proposed as part 1305.1203.

1305.1204 LIGHTING.

This part was originally adopted because of a concern that the ICC provision would not be enforceable in Minnesota. Because the Department has determined that the un-amended 2006 ICC provision would be enforceable and that the situation addressed by the current rule is not unique to Minnesota, it is reasonable to repeal the existing part.

1305.1207 SECTION 1207, INTERIOR SPACE DIMENSIONS.

This section is no longer needed because a comparable provision is in section 1208.2 of the 2006 IBC.

1305.1405 SECTION 1405, INSTALLATION OF WALL COVERINGS.

Subpart 2, 1405.5.1. This subpart is no longer needed because there is no section 1405.5.1 in the 2006 IBC.

The IBC-1305 Advisory Committee reviewed this provision and recommended repeal of this subpart.

1305.1507 SECTION 1507, REQUIREMENTS FOR ROOF COVERINGS.

Subparts 1, 2, 3, and 4: This subparts are proposed for repeal because this portion of the IBC was changed at Minnesota's request, and the 2006 IBC includes provisions comparable to the these subparts.

1305.1604 SECTION 1604, GENERAL DESIGN REQUIREMENTS.

This amendment repeals 1305.1604 General Design Requirements, Subp.1 and Subp. 2. This is being done to be consistent with national standards.

This amendment will increase the structural design loads for buildings and other structures that represent a substantial hazard to human life in the event of a failure. It will also increase the structural design loads for facilities that are essential in the event of an emergency such as hospitals, fire, rescue and police stations. This will provide approximately a one percent annual probability of the design loads being exceeded, or about 100-year mean recurrence interval.

The design loads for most buildings and other structures will not change. They will remain at a two percent annual probability of the design loads being exceeded, or about 50-year mean recurrence interval.

This amendment will decrease the structural design loads for buildings and other structures that represent a low hazard to human life in the event of a failure. Examples may be salt storage buildings, certain temporary facilities, and minor storage facilities. This will provide approximately a four percent annual probability of the design loads being exceeded, or about 25-

year mean recurrence interval.

This proposal has been reviewed and recommended by the Structural Advisory Committee.

Agency staff expects no cost changes associated with this change for most structures. There will be a slight increase in cost to construct essential facilities and facilities that pose a substantial risk to human life in the event of a failure. There will be a slight decrease in the cost to construct facilities the pose a low risk to human life. Since the number of low risk facilities is expected to outnumber the high risk and emergency response facilities, there should be a slight net reduction in construction costs state-wide.

1305.1607 SECTION 1607. LIVE LOADS.

Subpart 1: The 2006 IBC incorporates similar requirements. Therefore, there is no longer any need for this subpart.

1305.1608 SECTION 1608, SNOW LOADS.

Subpart 3: The 2006 IBC incorporates similar requirements. Therefore, there is no longer any need for this subpart.

1305.1704 SECTION 1704, SPECIAL INSPECTIONS.

Subpart 1, Section 1704.4. A change made at the national level to the 2006 IBC, Section 1704.4, Concrete construction, Exception 4, made this subpart unnecessary.

Subpart 3, Section 1704.5. A change made to Table 1805(1) in the 2006 IBC made this subpart unnecessary.

1305.1805 SECTION 1805, FOOTINGS AND FOUNDATIONS.

Subpart 1, Section 1805.5; Subpart 2, Table 1805.5(1); and Subpart 3, Section 1805.5.1.2. Changes made at the national level to the 2006 IBC and to Table 1805.5(1) made these subparts unnecessary.

1305.1806 SECTION 1806, DAMPPROOFING AND WATERPROOFING.

For consistency with the 2006 IBC, this section is proposed for repeal and a comparable provision is proposed as part 1305.1807.

1305.2304 SECTION 2304, GENERAL CONSTRUCTION REQUIREMENTS.

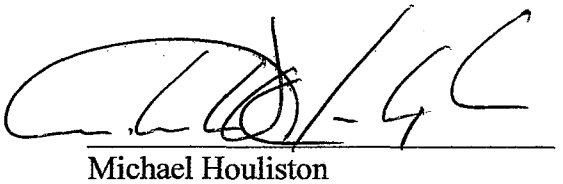
Section 2304.12. This section is proposed for repeal because a change made at the national level to the 2006 IBC and to the American Forest & Paper Association's National Design Specification (NDS) for Wood Construction with 2005 Supplement made the rule unnecessary.

The NDS now includes provisions for checking the effects of long-term loading of wood members.

CONCLUSION

Based on the foregoing, the proposed rules are both needed and reasonable.

September 18, 2006



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