Minnesota Department of Labor and Industry

STATEMENT OF NEED AND REASONABLENESS

Proposed Amendment to Rules Governing the Adoption of the 2012 International Fire Code, Minnesota Rules, Chapter 7511; Revisor's ID Number R-04148

INTRODUCTION

The Commissioner of the Minnesota Department of Labor and Industry proposes to adopt amendments to Chapter 7511, the Minnesota State Fire Code. The Minnesota State Fire Code is administered by the Department of Public Safety through the State Fire Marshal Division. Effective May 16, 2005, the authority for promulgating the fire code was transferred to the Department of Labor and Industry, in consultation with the State Fire Marshal.

The Minnesota State Fire Code was originally adopted October 3, 1975. It was last amended effective July 10, 2007. It is the duty of the Commissioner of Labor and Industry, consistent with the recommendations of State Fire Marshal, to adopt the code and make amendments consistent with nationally recognized good practice establishing minimum safeguards of life and property together with regulating the use and maintenance of buildings, structures and premises.

The current state fire code, Minnesota Rules, chapter 7511, incorporates by reference the 2006 edition of the International Fire Code with certain amendments. The proposed rules amend the existing rules to incorporate and make amendments to the 2012 International Fire Code ("IFC")[1] as promulgated by the International Code Council ("ICC"), Washington D.C. The IFC is one of two model fire prevention codes that presently exist in the United States. It is widely considered to be a companion to the International Building Code ("IBC"). In a separate rulemaking proceeding, the Department of Labor and Industry adopted Minnesota Rules, chapter 1305, which incorporates the 2012 IBC, with amendments.[2] The ICC provides a total package of codes (*e.g.*, Building, Fire, Residential, Mechanical, etc.) that are intended to give jurisdictions adopting these codes a complete, comprehensive, and compatible set of codes.

The decision to adopt the IFC was primarily based on a recommendation to the State Fire Marshal from the Minnesota State Fire Chiefs Association ("MSFCA") Code Committee. The committee is comprised of members of the MSFCA, as well as other state and local fire and building officials.[3] The committee conducted an evaluation, taking several months to complete, that compared the current state fire code with the 2012 editions of the IFC and the National Fire Protection Association's Uniform Fire Code ("NFPA 1"), as promulgated by the National Fire Protection Association of Quincy, Massachusetts. While both the IFC and NFPA 1 were found to

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[1] The 2012 IFC is available for review at the Minnesota Department of Public Safety by contacting Mr. Jon Nisja, Fire Marshal Division, 445 Minnesota Street, Suite 145, St. Paul, MN 55101-5145, (651) 201-7204, Fax: (651) 215-0525, email: jon.nisja@state.mn.us.

[2] Chapter 1305 was adopted on March 25, 2015, published in the State Register on May 26, 2015, and became effective statewide on June 2, 2015.

[3] Members of the committee are listed in Exhibit A, attached.

have their strengths and weaknesses, the MSFCA Code Committee recommended adoption of the 2012 IFC for this rulemaking cycle.

The state fire code needs to be updated because of changes made to the model national codes that are incorporated into Minnesota's code. These model codes have been researched and drafted by national bodies of experts in the fire protection field. They are updated and amended at 3-year intervals, based on recommendations received from knowledgeable fire and building officials, architects, engineers, and representatives from the various industries to which the codes apply. The intent is to produce up-to-date codes that will not only achieve a reasonable degree of safety to life and property, but will also allow for the use of modern methods, devices, materials, and techniques which will tend to lower construction and maintenance costs.

The proposed rules establish minimum uniform requirements for Minnesota by incorporating the entire 2012 model IFC and making modifications to it in order to be consistent with other Minnesota laws and rules, as well as to address fire safety concerns that are specific to the state of Minnesota. Therefore, a number of the amendments contained in these rules are made so as to conform to the recent amendments to the State Building Code, which incorporates the 2012 IBC, Minnesota Rules, and Chapter 1305. Indeed, the Department of Labor and Industry has coordinated the provisions of the Minnesota State Fire Code with fire protection and means of egress requirements located in Chapters 9 and 10 of the 2012 IBC and Minnesota Rules, parts 1305.0901-1305.1029, to prevent conflicts and promote uniformity between the codes.

Other proposed amendments to the state fire code are necessary to correlate the fire code with Minnesota Rules, Chapters 1311 (Conservation Code for Existing Buildings) and 1309 (Residential Building Code), which are both part of the Minnesota State Building Code. *See* Minnesota Rules, part 1300.0050.

Additionally, some of the amendments are being proposed at the request of the MSFCA Code Committee to reduce the complexity of the fire code adoption process at the local level. Others amendments are being proposed to help local units of government reduce the complexity and make enforcement easier. In addition, some of the proposed amendments are intended to assist local communities address unique fire safety concerns. This approach is consistent with Minnesota Statutes, section 299F.011, subdivision 4, which allows local units of government to adopt fire safety regulations that are in addition to or more restrictive than the Minnesota State Fire Code, if those regulations are uniform for each type of building covered and do not exceed the applicable requirements of the Minnesota State Building Code.

Finally, a few other amendments are intended to clarify language used in the 2012 IFC. For example, there are places in the IFC that require some design or process to be "approved" by the local or state fire inspector, but provide no specific guidelines to gain that approval. Therefore, language has been amended in several sections of the proposed rules to spell out what those requirements are for approval, rather than leaving them to the discretion of each local municipality or fire code official. This is intended to assist design professionals, promote uniformity, and provide guidance to fire code officials in the execution of their duties and responsibilities under the State Fire Code.

ALTERNATIVE FORMAT

Upon request, this information can be made available in an alternative format, such as large print, braille, or audio. To make a request, please contact Colleen Clayton at the Minnesota Department of Labor and Industry, 443 Lafayette Road N, St. Paul, Minnesota 55155, telephone 651-284-5867, or facsimile 651-284-5749.

STATUTORY AUTHORITY

The State Fire Code was originally adopted, administered, and amended by the Minnesota Department of Public Safety pursuant to Minnesota Statutes, section 299F.011, subdivision 1, which provided that "[t]he commissioner of public safety through the division of fire marshal may promulgate a uniform fire code and make amendments thereto in accordance with the administrative procedure act in chapter 14." Responsibility for adoption of the state fire code was subsequently transferred to the Minnesota Department of Labor and Industry in Minnesota Statutes, section 326B.02, subdivision 6. *See* 2007 Minnesota Laws, chapter 140, article 2, sections 1 and 3 (May 25, 2007). However, the transfer of rulemaking authority to the Commissioner of the Department of Labor and Industry did not change the responsibility for the administration and enforcement of the state fire code, which still rests with the State Fire Marshal Division of the Department of Public Safety.

The Department's statutory authority to adopt these proposed rules is stated in the following Minnesota Statutes:

> **326B.02, Subdivision 5. General rulemaking authority.** The commissioner may, under the rulemaking provisions of chapter 14 and as otherwise provided by this chapter, adopt, amend, suspend, and repeal rules relating to the commissioner's responsibilities under this chapter, except for rules for which the rulemaking authority is expressly transferred to the Plumbing Board, the Board of Electricity, or the Board of High Pressure Piping Systems.
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> **326B.02, Subdivision 6. State Fire Code rulemaking authority.** The commissioner of labor and industry, consistent with the recommendations of the state fire marshal, shall adopt a State Fire Code and make amendments thereto in accordance with the Administrative Procedure Act in chapter 14. The code and its amendments shall conform insofar as practicable to model fire codes generally accepted and in use throughout the United States, with consideration given to existing statewide specialty codes presently in use in the state of Minnesota. Statewide specialty codes and model codes with necessary modifications may be adopted by reference in accordance with section 14.07, subdivision 4.

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

REGULATORY ANALYSIS

Minnesota Statutes, section 14.131, sets out eight factors for a regulatory analysis that must be included in this SONAR. Paragraphs (1) through (8) 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"

The classes of persons who will likely be affected by the proposed rules include code officials, fire and building inspection personnel, fire protection contractors, building contractors, architects, engineers, building owners and managers, homeowners, and the general public.

The classes of persons who will likely bear the costs of the proposed rules include property owners and managers. Due to the broad impact of the state fire code, it is impossible to identify all classes of persons who may be impacted from a cost standpoint. A sincere attempt was made during the development of these rules to minimize the fiscal impact wherever possible, while still maintaining a reasonable level of safety to life and property. Where specific classes of persons are expected to be impacted by a certain section, that class of persons is specifically identified in the rule-by-rule analysis, which follows.

The classes of persons who will benefit from the proposed rules must be considered from a global perspective, because the proposed rules are intended to establish minimum uniform fire and life safety standards that apply throughout the state of Minnesota. The taxpayers and residents of a community benefit through the reduction of fire loss and its associated impact (*e.g.*, reduced loss of tax base and general community decay). The fire service benefits by not only being able to control its fire safety concerns through fire prevention, but also by having provisions available that assist with firefighting operations and firefighter safety (*e.g.,* fire department access and water supply, sprinklers and standpipes, controls on hazardous materials). The insurance industry and their insured benefit from these proposed rules through reduced fire losses and lower insurance premiums. The fire protection industry has also been identified as benefiting from these rules because this industry installs fire sprinklers and fire alarm systems, presumably for profit.

Design professionals, such as architects and engineers, also benefit from the proposed rules by having a uniform set of minimum design standards that apply throughout the state. A uniform set of design standards across the state provides for consistency and uniformity between local jurisdictions and helps reduce confusion as to design requirements. In addition, there is some benefit to the construction industry because this industry makes the physical repairs required by this code.

Finally, the general public benefits from the proposed rules by experiencing an enhanced level of fire and life safety in the various buildings and premises they frequent, live, stay and work in. Where a specific class of persons is expected to benefit by a certain section, that class of persons is specifically identified in the rule-by-rule analysis which follows.

The Department of Public Safety's Fire Marshal Division and the Department of Labor and Industry's Construction Codes and Licensing Division have been working with various organizations and associations on the development of these proposed rules, including the following:

- Minnesota State Fire Chiefs Association ("MSFCA")
- Fire Marshals Association of Minnesota ("FMAM")
- Minnesota Building Officials
- Minnesota Chapter of the Society of Fire Protection Engineers ("SFPE")

"(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"

The probable costs to the agency to implement and enforce the proposed rule include costs to purchase new code books and to train staff and the state fire service. The costs to the agency for code books are estimated at $10,000. There will be training costs estimated to be $7,250.00. There will also be staff time needed to update and amend code references in various policies, inspection reports, and inspection software programs.

The probable costs to other agencies to implement and enforce the proposed rule include minimal costs for the purchase of new code books and state amendments and any necessary training time pertaining to the code updates.

There is no 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 the proposed rule. The adoption of the 2012 IFC with amendments will provide uniform and predictable application and enforcement of the standards, which will tend to lower costs by reducing the need for review by local and state boards and other entities responsible for code interpretation and review. Moreover, most of the specific proposed amendments to the model code are intended to lessen fiscal impact or be less intrusive and the specific need and reason for each amendment is outlined in the rule-by-rule analysis which follows.

"(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 MSFCA committee conducted an evaluation comparing the current state fire code with the 2012 editions of the IFC and the NFPA Uniform Fire Code ("NFPA 1") as promulgated by the National Fire Protection Association of Quincy, Massachusetts. While both the IFC and NFPA 1 were found to have their strengths and weaknesses, the MSFCA Code Committee recommended adoption of the IFC for this rulemaking cycle. It was determined that adopting the IFC would require fewer amendments to correlate with the State Building Code and would

therefore reduce both costs and the likelihood of inadvertent conflict with the other chapters of the State Building Code.

"(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 State Fire Marshal acknowledges that there are costs associated with compliance with the State Fire Code. It is difficult, if not impossible, to assign a cost/benefit to preventing an incident from occurring or, if one does occur, keeping the amount of damage and potential for death or serious injury to a minimum. While there are costs of complying with the proposed rules, these costs are expected to be fairly limited. As stated previously, many of the proposed rules are intended to lessen the fiscal impact of the code, while still maintaining an acceptable minimum level of fire and life safety.

The State Fire Marshal has some experience with compliance costs because of a close working relationship with the Minnesota Department of Education ("MDE") relative to public school property. The State Fire Marshal reviews MDE's Health and Safety Funding requests. Annually, MDE approves approximately $12.6 million of Health and Safety Funding in response to fire code orders, preventative maintenance, and inspections of fire protection systems and equipment. There are approximately 165,869,765 square feet of public school property in Minnesota. This equates to about $0.08 (8¢) per square foot. This amount can be used as a benchmark, although this amount should be assumed to be at the higher end of compliance costs since the fire code requirements for schools tend to be more restrictive than other occupancies.

Another compliance cost estimate relates to installation of an automatic fire extinguishing system in a commercial building, which is among the most expensive remedies recognized by the State Fire Code. The State Fire Marshal reviews about 500 sprinkler system installation plans per year and collects permit fees for these installation costs. The cost of installing a fire extinguishing system in an existing commercial building is between $2.00 and $4.00 per square foot; there are a number of variables based on the type of occupancy, type of interior layout, and the type of construction. Automatic fire extinguishing systems have an effective life of 30 years, so the cost per square foot over 30 years would be $0.13 (based on $4.00 per square foot over 30 years). It should be noted, however, that there are often insurance premium reductions associated with sprinkler installation. These cost estimates deal with installation costs, not with net costs following insurance premium reductions.

The Department also acknowledges that there may be some costs to local jurisdictions that choose to enforce the State Fire Code. However, the Department believes these costs to be minimal. The cost of the amended fire code book is estimated to be $75.00; however, an electronic version of the fire code will be available online for no additional cost. Additionally, the Minnesota State Fire Marshal Division provides training free of charge across the state to local government officials. Therefore, local jurisdictions that send their inspectors to the provided training will only need to pay for travel, meal expenses, and code books should they desire to maintain a hardcopy of that publication.

"(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"

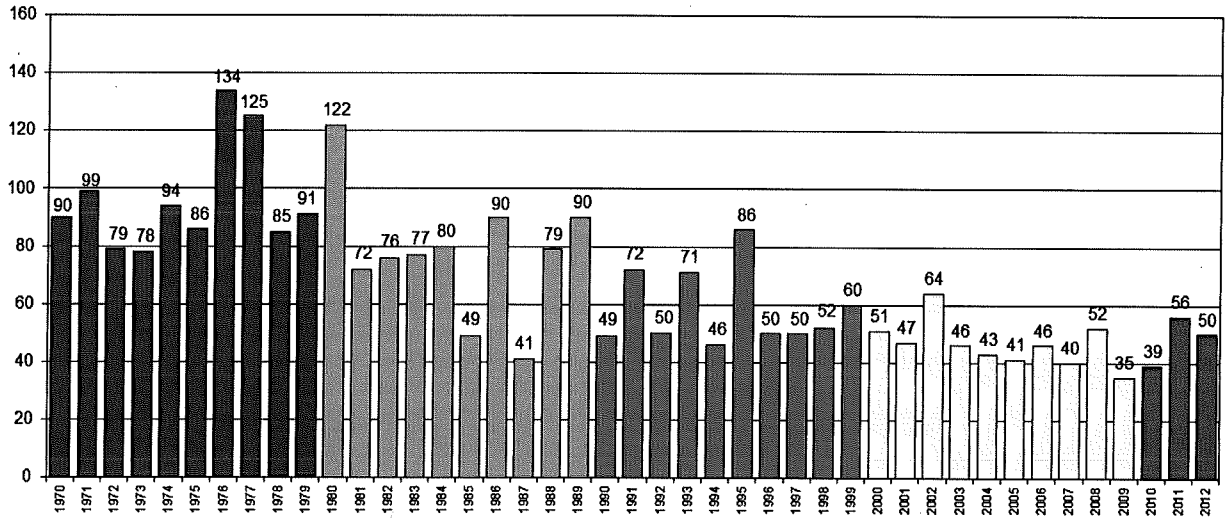
If the proposed rules are not adopted, the Department will have to fall back on its current rules, which contain outdated information and older processes and equipment. Further, the existing rule adopts the 2006 edition of the IFC and the proposed rules adopt the 2012 edition of the IFC. There is a high likelihood that the code publisher will not continue to publish a code book that old, which will make it difficult to obtain older editions. Therefore, the Department anticipates that the probable costs of not adopting the proposed rule could include an increase in costs to obtain outdated equipment, materials, and code books. Moreover, failure to adopt the proposed rule would cause confusion over the application and enforcement of an older code when a newer code section is available. Confusion would also occur since, without amendments, the older code would conflict with the recently adopted 2012 IBC in Chapter 1305. The family of ICC codes is designed to work together as they reference each other within the body of each individual model code provision. The Department has recently adopted several of the 2012 ICC codes at the same time. Therefore, if this proposed rule were not adopted, it could create confusion in other rule chapters that adopt and incorporate the 2012 ICC model codes when they reference the IFC.

Three main goals of the State Fire Code and fire prevention in general are life safety, property protection, and protection of the property's mission (*i.e.*, maintaining the continuity of operations). According to national statistics, most businesses that experience a serious fire do not rebuild on the same site. In addition, Minnesota state law allows such properties to assess taxes at a lower rate, similar to undeveloped land. Based on these considerations, fire prevention also helps prevent the erosion of the local tax base and keeps employers operating within a community or within the state.

Indeed, fire prevention efforts must be seen as a long-term investment and measured over time. Measurements of effectiveness occur over time; comparisons can be made to other health and safety campaigns that have taken decades to become effective. Examples of long-term safety programs include promoting seat belt use, smoking cessation, and discouraging drunk driving. Few people would argue that these efforts are not working, but it is commonly acknowledged that these efforts did not happen quickly.

As stated earlier, the first State Fire Code was adopted in 1975 and state and local enforcement commenced a few years later. The following table shows a steady decline in fire deaths since the late 1970's. Although adoption and enforcement of the State Fire Code is not the sole reason for this reduction in fire deaths, it certainly is considered a factor.

MINNESOTA FIRE DEATHS
1970 - 2012



The issue of fiscal impact to the property owner versus the taxpayer or community at large is another consideration that needs to be addressed when discussing the fiscal impact of the State Fire Code. While the Code does impose requirements that may be costly to the individual property owner, it does so not only to protect that individual and others occupying the property, but also to ultimately reduce the burden of fire protection on the community as a whole. The question becomes: Is it in the best interests of the community to, for example, require that a property owner provide automatic fire sprinkler protection for a newly constructed building instead of having the taxpayers of the community pay for public enhancements to the city's infrastructure (*e.g.*, more fire hydrants and larger water mains) and response capabilities (*e.g.*, more fire stations, apparatus and firefighters)?

According to the Minnesota Taxpayers Association, the portion of property and income taxes paid for fire protection in Minnesota is significantly less than other states. This can be explained by a heavy reliance on fire prevention rather than fire response services. Minnesotans spend about $73.40 per year per resident for fire protection (44th of 50 states in spending for fire protection).[4] The average among the 50 states is $131.31 per year, per resident. In other words, Minnesota residents spend about 79% less on fire protection than the rest of the U.S. population.

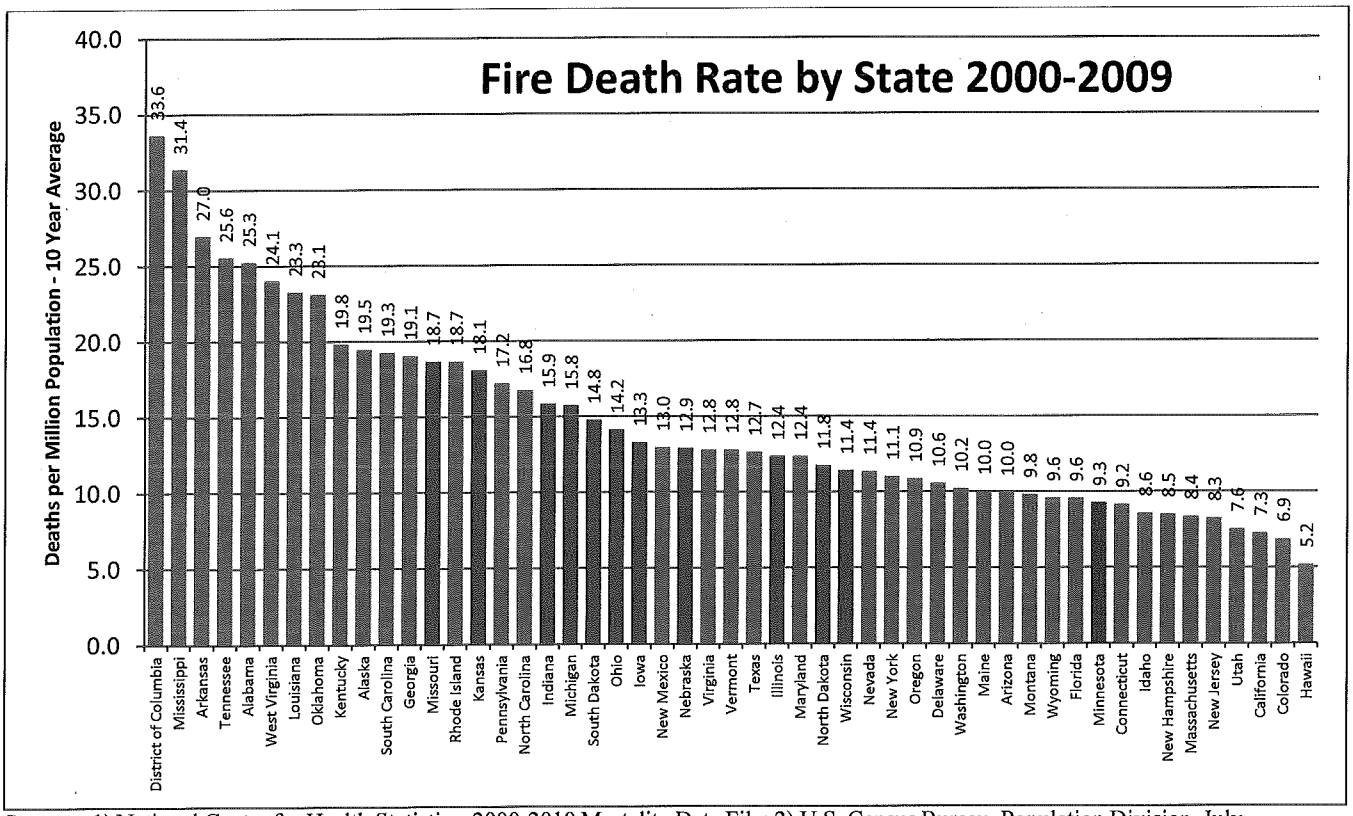
Without an emphasis on fire prevention and fire code enforcement, the cost of municipal fire protection would almost double. While having a low cost for fire protection, Minnesota also has a relatively low fire death rate compared to similar states and that fire death rate has been steadily declining since Minnesota has adopted statewide building and fire codes.

[4] How Does Minnesota Compare? State by State Rankings of Revenues and Spending. Minnesota Taxpayers Association. November, 2011. Available on-line at: http://www.fiscalexcellence.org/our-studies/hdmcfy09final.pdf

In addition, the fire incident and fire injury rates in Minnesota were compared to national statistics.[5,6] As the following table shows, these rates are all much lower in Minnesota than in the United States as a whole, and in the Midwest region in particular:

Measurement:	United States:	Midwest Region:	Minnesota:
Fires per 1,000 population (2011)	4.5	5.0	2.8
Fire injuries per million population (2011)	56.2	64.5	18.9

The following graph shows the fire death rate (fire deaths per 1 million people) for the 50 U.S. states and the District of Columbia. Minnesota, shown with red graph bar in the graphic below, ranks 42nd out of 51 states for fire death rate and has the lowest fire death rate among the Midwestern states. [7]



Sources: 1) National Center for Health Statistics, 2000-2010 Mortality Data File; 2) U.S. Census Bureau, Population Division, July 1, 2000-2010 population estimates.

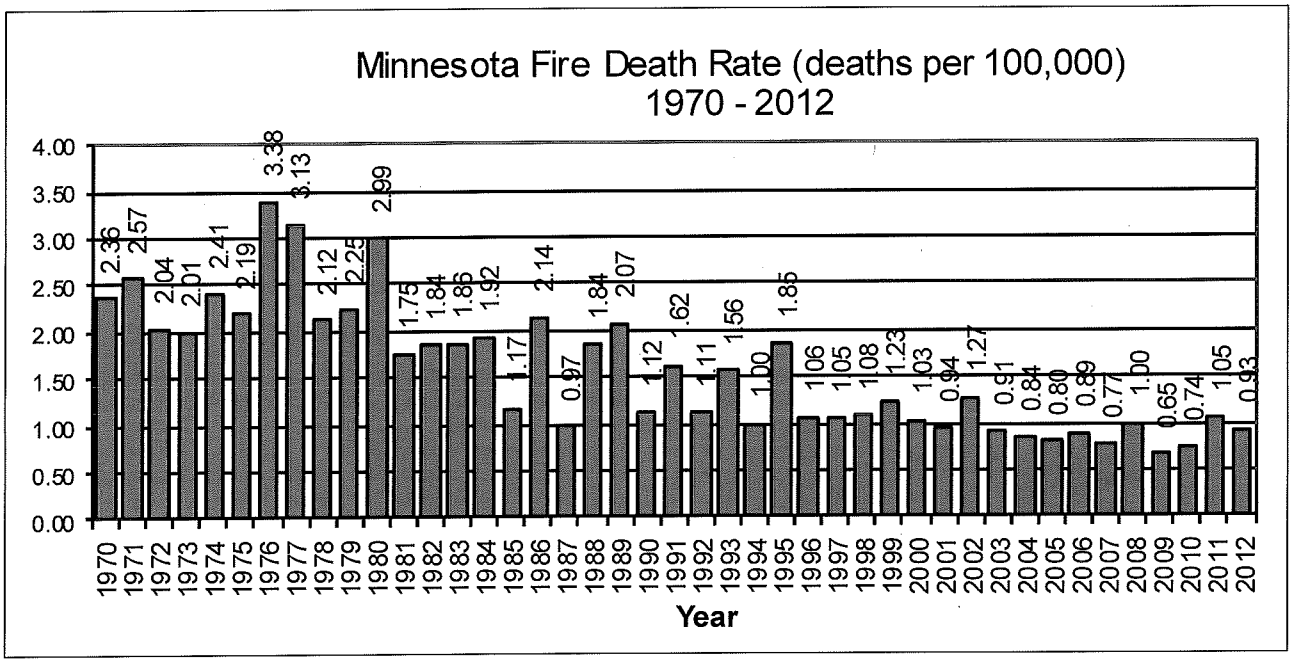
[5] Fire Loss in the United States During 2011 – National Fire Protection Association, Quincy, MA, 2012. This publication is available for review at the Minnesota Department of Public Safety, including alternative formats, by contacting Mr. Jon Nisja, Fire Marshal Division, 445 Minnesota Street, Suite 145, St. Paul, MN 55101-5145, (651) 201-7204, Facsimile: (651) 215-0525, Email: jon.nisja@state.mn.us.

[6] Fire in Minnesota – 2011 Annual Report, Minnesota Department of Public Safety. Available on-line at: https://dps.mn.gov/divisions/sfm/mfirs/Documents/Fire%20in%20Minnesota/Fire_In_Minnesota_2011.pdf

[7] Midwestern states as defined by the United States Census Bureau.

Furthermore, the fire death rate in Minnesota has dropped approximately 61% in the last 40 years. This roughly coincides to the period of time when Minnesota has had a State Fire Code.[8] Clearly, there are other factors that contribute to these favorable statistics and the adoption of a statewide fire code is not the only reason for reductions in the number of fire incidents, fire injuries, and fire deaths. Many fire service people believe, however, that it is not coincidental that we have these low fire rates; they credit the State Fire Code as a major contributing factor in reducing these losses.

The fire death rate from 1970 to 2012 is shown on the following graph. This represents the number of fire deaths per 100,000 persons in Minnesota.



"(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 existing federal regulations that specifically address fire safety and fire prevention efforts within buildings that are privately owned. However, there are U.S. Department of Health and Human Services regulations, found at 42 CFR § 483.70(a), applicable to healthcare facilities that receive federal Medicare and Medicaid funding. These federal regulations do not replace, but are instead applied over and above minimum requirements found in the state building and fire codes. In addition, the U.S. Department of Housing and Urban Development adopt federal rules, found at 24 CFR § 3280, that preempt state laws and codes in the construction of manufactured homes and buildings. Also, while federal Medicare/Medicaid regulations require compliance with the 2000 edition of NFPA 101, the proposed rules do incorporate the 2000 edition of that standard for existing healthcare facilities. Finally, while there has been some change in philosophy in recent years, the federal government has historically exempted federally owned

[8] The first state fire code became effective on October 3, 1975.

buildings and facilities from state building and fire codes. With these exceptions, the federal government has historically regarded fire protection, including fire code enforcement efforts, as the role of state and local units of government.

"(8) An assessment of the cumulative effect of the rule with other federal and state regulations related to the specific purpose of the rule. . . . '[C]umulative effect' means the impact that results from incremental impact of the proposed rule in addition to other rules, regardless of what state or federal agency has adopted the other rules. Cumulative effects can result from individually minor but collectively significant rules adopted over a period of time."

The Minnesota State Fire Code is a single set of fire prevention and safety regulations that apply throughout the state of Minnesota. There are no other fire codes that can be used or enforced in this state. However, local municipalities can adopt ordinances that are "equal to, in addition to, or more stringent than the requirements of the State Fire Code" as long as they are not more restrictive than the applicable requirements of the State Building Code. *See* Minnesota Statutes, section 299F.011, subpart 4 (2014). When the State Fire Marshal Division develops the individual rules that make up the State Fire Code it works with other state agencies to identify other regulations that may also have an effect on certain buildings to ensure that the requirements that are parallel or that cover the same building type are not cumulative.

For example, portions of Minnesota Rules, chapter 7511, Adoption of the International Fire Code, regulate fire safety at adult and child day care centers in Minnesota. The State Fire Marshal Division utilizes technical expertise from other state agencies' personnel to ensure that the rule would coordinate with any other state regulations that may be affected by the rule.

Moreover, the adoption cycle for the Minnesota State Fire Code generally occurs every three years, so it is current and reflects the most recent changes that occur federally and with other state agencies. By basing rules on the model codes developed by the ICC, the cumulative effect is thereby reduced or eliminated. Department staff also monitors any regulatory changes that occur federally and on a state level. The Department also has staff that monitors code changes being proposed to the model building codes at the national level to ensure that the Minnesota State Fire Code will not conflict with other building code regulations.

PERFORMANCE-BASED RULES

The 2012 IFC and the proposed amendments are based on the application of scientific principles, approved tests and professional judgment, and to the extent possible, are written in terms of required results rather than required specific methods or materials. The fire code uses performance standards wherever possible. Indeed, a specific amendment allowing the use of performance-based designs and setting forth specific goals, objectives, and acceptance criteria appears in existing Minnesota Rules, part 7511.0104.

ADDITIONAL NOTICE

Our Notice Plan includes giving notice required by statute. We will mail or email the Dual Notice, which will contain an easily readable and understandable description of the nature and

effect of the proposed rule, to everyone who has registered to be on the Department's rulemaking mailing list under Minnesota Statutes, section 14.14, subdivision 1a. We will also give notice to the Legislature as required by Minnesota Statutes, section 14.116. Our Notice Plan did not include notifying the Commissioner of Agriculture because the rules do not affect farming operations pursuant to Minnesota Statutes, section 14.111.

Our Notice Plan also includes giving additional notice to associations and trade groups not required by statute. This Additional Notice Plan was reviewed by the Office of Administrative Hearings and approved in an Order dated December 15, 2015, by Administrative Law Judge Eric L. Lipman. We will mail the Dual Notice to several interested industry groups and associations. Those groups and associations include:

- Minnesota Building Officials: All municipal building code officials and others involved in building code administration.
- American Society for Civil Engineering
- American Council of Engineering Companies of Minnesota
- Association of Minnesota Counties
- Associated General Contractors of Minnesota
- Builders Association of Minnesota
- Builders Association of the Twin Cities
- Insurance Federation of Minnesota
- Minnesota Association of Plumbing, Heating and Cooling Contractors
- Minnesota Mechanical Contractors Association
- Minnesota Historical Society
- Minnesota Electrical Association
- Minnesota Housing Finance Agency
- League of Minnesota Cities
- Metropolitan Council
- Minnesota Building Owners and Managers Association
- Associated Builders and Contractors, Minnesota Chapter
- Minnesota Association of School Maintenance Supervisors
- Minnesota Association of Townships
- Minnesota Department of Corrections
- Minnesota Utility Contractors Association
- Minnesota Licensed Family Child Care Association
- Minnesota Pipe Trades Association
- Minnesota Petroleum Marketers Association
- Minnesota Propane Gas Association
- Minnesota Retailers Association
- Minnesota State Fire Chiefs Association
- Minnesota Manufactured Home Association

CONSULTATION WITH MMB ON LOCAL GOVERNMENT IMPACT

As required by Minnesota Statutes, section 14.131, the Department consulted with the Commissioner of Minnesota Management and Budget ("MMB") concerning the fiscal impact and benefits the proposed rules may have on units of local government. This was done on December 03, 2015, by providing MMB with copies of the Governor's Office Proposed Rule and SONAR Form, the proposed rules, and the near-final SONAR. On December 07, 2015, the Department received a memorandum dated the same day from MMB Executive Budget Officer Marianne Conboy which provided general comments recognizing some potential fiscal impact on local government units, but concluded that:

> [b]based on the current information provided to me, the proposed rule amendments will not impose a significant cost on local governments.

DETERMINATION ABOUT RULES REQUIRING LOCAL IMPLEMENTATION

As required by Minnesota Statutes, section 14.128, subdivision 1, the Department has considered whether these proposed rules will require a local government to adopt or amend any ordinance or other regulation in order to comply with these rules. Pursuant to Minnesota Statutes, section 14.128, the Department has determined that local government entities will not be required to adopt or amend an ordinance or other regulation to comply with these proposed rules. The State Fire Code is the standard that applies statewide. Minnesota Statutes, section 299F.011, subdivision 4, mandates compliance with the State Fire Code whether or not a local government adopts or amends an ordinance. As a result, an ordinance or other regulation is not required for compliance. If a city wishes that its ordinances accurately reflect legal requirements in a situation in which the State Fire Code has superseded the ordinances, then the city may want to amend or update its ordinances.

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. The Department has made this determination based on two considerations: (1) the State Fire Marshal's policy of providing between three and five years for compliance with the most costly fire code requirements; and (2) the discussion regarding probable costs of complying with the proposed rule located in question number 5 of the Regulatory Analysis section in this SONAR.

The State Fire Marshal has adopted a uniform policy for granting extensions of time for compliance with corrective orders. A copy of the policy is attached as Exhibit B and can also be found at: https://dps.mn.gov/divisions/sfm/document-library/Documents/Inspection%20Policies-General/INS02(2007)-Timeforcorrectionoforders.pdf. The policy was adopted because of the "reasonable

time" requirement in Minnesota Statutes, section 299F.011, subdivision 6: "No person shall be convicted for violating the State Fire Code unless the person shall have been given notice of the violation in writing and reasonable time to comply." The policy provides for time extensions of three or more years and reads as follows:

> 6. Time extensions up to 3 years from the date of the orders can be given by the Deputy inspecting the property. Compliance times beyond 3 years must be reviewed and approved by the supervisor. Requests for time extensions exceeding 5 years must be referred to the Fire Marshal Code Advisory Panel ("FMCAP").

In determining the length of the extension given, the State Fire Marshal considers the cost and scope of work. Because of this policy, it is extremely unlikely that any significant compliance costs to a small business or city would need to be born within the first year after the rules take effect.

Finally, based on an analysis of the probable costs of compliance with the rules, the Department has determined that the cost of compliance will not exceed $25,000 for any small business or city, without even considering whether compliance is required within one year. As described in question number 5 of the Regulatory Analysis section of this SONAR, the estimated compliance cost for school buildings is $0.08 per square foot. Using this estimate, a building would need to be 312,500 square feet in size before the $25,000 trigger is met. This would be an unusually large building, which could legally accommodate at least 625 individuals at one time.[9] The Department is not aware of any such building owned in Minnesota by a business with less than 50 full-time employees or by a statutory or home rule charter city with less than ten full-time employees.

For all the reasons stated above, the Department does not believe that 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.

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 proposed rules:

1. Bruce West, State Fire Marshal, Minnesota Department of Public Safety;
2. Division Staff from the Minnesota State Fire Marshal Division; and
3. Division staff from the Department of Labor and Industry's Construction Codes and Licensing Division.

RULE-BY-RULE ANALYSIS

[9] This has been calculated using the largest load factor (500 sq. ft. per person) in the existing fire code, which is the load factor for warehouses. *See* 2006 International Fire Code, table 1004.1.1, as incorporated by reference in Minnesota Rules, part 7511.0090 (2007). In a warehouse, all or almost all of the individuals present are likely to be employees. The permitted occupancy would be even higher in other types of buildings that have lower load factors.

Substantial reformatting occurred between the 2006 and 2012 editions of the International Fire Code. For example, the 2006 edition of the IFC contains 45 chapters; the 2012 edition has 67 chapters. Many of the rule changes in this adoption process are based on format changes within the document and do not change or effect the underlying technical requirements. Similarly, many of the changes merely involve language being moved from one chapter or section to another to facilitate formatting changes and to enhance readability. Finally, the common abbreviation for the 2012 International Fire Code ("IFC") has been repeatedly substituted for the full name of the code throughout the proposed rule to save space and enhance readability. Where the only changes to a proposed rule part are renumbering, reformatting, or abbreviation of the code's name, then this SONAR will indicate that there is no substantive change of requirements from the existing rule part.

7511.0090 RULES AND STANDARDS INCORPORATED BY REFERENCE.

Subpart 1. International Fire Code. This subpart is modified by deleting the reference to "2006" and replacing it with a reference to "2012." This change is necessary to incorporate the 2012 edition of the IFC in place of the 2006 edition. This edition of the IFC coordinates with other International Code Council codes being adopting into the Minnesota State Building Code.

Subpart 2. This subpart is proposed to be deleted. It is a reference to the NFPA standard 58. This language has been moved to Minnesota Rules, part 7511.6101, and is no longer necessary here.

7511.0102 SECTION 102, APPLICABILITY.

Subpart 1. IFC Section 102.1, Construction and design provisions. In subpart 1, the phrase "equal to or" is being added to the subpart in section 102.1.1 for clarity. This subpart provides the scope of the code for existing buildings. The existing language provides guidance about how to handle protection features that offer less than the protection in the code and features that exceed the protection in the code for new buildings. However, the code did not provide guidance for protection features that complied with the requirements for new buildings. This modification is needed and reasonable because it addresses this circumstance and provides clarity concerning the code's application to existing buildings.

Subpart 2. There are no changes to this subpart.

Subpart. 3. IFC Section 102.7.3, References to other ICC codes. This subpart is modified by renumbering the section reference from "102.6" and "102.6.1" to "102.7.3" to coordinate with numbering changes made to the 2012 IFC. This subpart is also modified by deleting the reference to chapter "45" and replacing it with a reference to chapter "80" to coordinate with numbering changes made to the chapters in the 2012 IFC.

This subpart is further changed by deleting item number 6 in the list of references. Item number 6 refers to the International Property Maintenance Code, which is not adopted in the State of Minnesota. The remaining items are renumbered because of this deleted item in the list.

This subpart is further modified in item 7 by changing the reference from the "Minnesota Building Conservation Code" to the "Minnesota Conservation Code for Existing Buildings" to coordinate with the new title from Minnesota Rules, chapter 1311.

Subpart 4. IFC Section 102.13, Standards for existing Group I occupancies. This subpart is changed by deleting references to section "102.10" and its subsections and replacing it with references to "102.13" and its corresponding subsections. This modification is necessary to coordinate this subpart with numbering changes made to the 2012 IFC.

7511.0104 SECTION 104, GENERAL AUTHORITY AND RESPONSIBILITIES.

This rule part is changed by deleting the references to "104.9.1" and the subsequent subsections and replacing the references with "104.9.3" and its subsequent subsections. This modification is necessary to coordinate this rule part with numbering changes made to the 2012 IFC.

7511.0105 SECTION 105, PERMITS.

IFC Section 105.7.13, Solar photovoltaic power systems. This new rule part deletes section 105.7.13, Solar photovoltaic power systems, from the fire code's permitting section because it has been recently adopted in Minnesota's International Building Code (Minnesota Rules, part 1305.3113) to fall under the authority of the Commissioner of Labor and Industry and the Board of Electricity, instead of the State Fire Marshal's Office.

7511.0106 SECTION 106, INSPECTIONS.

This rule part is repealed. The language is now contained in the 2012 International Fire Code so the amendment is no longer necessary.

7511.0109 SECTION 109, VIOLATIONS.

This rule part is changed by deleting the references to section "109.3" and replacing them with references to section "109.4." These changes are necessary to coordinate with numbering changes made to the 2012 IFC.

7511.0202 SECTION 202, GENERAL DEFINITIONS.

This rule part is modified by adding a section heading that was inadvertently not included during the previous rulemaking. This heading, although technically not part of the rule, will add clarity to the rule part. This rule part is further changed by adding several definitions to the part, deleting several others, and modifying some existing definitions.

One of the format changes in the 2012 IFC was to move all definitions to a single chapter (Chapter 2). The definitions for **"aisle"** and "corridor" were moved from Chapter 10 (Means of Egress) to Chapter 2 (Definitions) and the definition of "Intermediate Bulk Container" was moved from Chapter 34 (Flammable and Combustible Liquids) to Chapter 2 (Definitions). There were no changes to the definitions, they are merely being relocated.

Aerial luminaires. This is a new definition that is being added to section 202 of the 2012 IFC because the term is now used in Minnesota Rules, part 7511.0308, of the State Fire Code. This definition and the new restriction found in the fire code are meant to comply with Minnesota Statutes, section 624.20, subdivision 1a (2014) (definition of "fireworks" to include any "type of balloons which require fire underneath to propel them").

Ambulatory care facility. This is a new definition in the 2012 IFC, which addresses medical facilities that provide care on a less than 24-hour basis where the care recipient may be rendered incapable of self-preservation without assistance from care providers. Normally, the inability to exit a building without assistance would place this use in the Group I-2 occupancy classification, but since one criterion for the Group I-2 occupancy is that the care is on a 24-hour basis, they are instead defined as an 'outpatient clinic" and classified as a Group B occupancy.

The modified definition, along with the revision of the "outpatient clinic" definition, is an attempt to mandate additional safeguards under the "ambulatory care facility" use not required under "outpatient clinic" use to address the concerns of care recipients being rendered incapable of self-preservation. The additional safeguards include fire sprinkler systems, smoke detection, and a smoke barrier that can be utilized as an area of refuge in the event the occupants cannot exit the building.

The modification to the new definition is also necessary to clarify the scoping of the definition for kidney dialysis centers to coordinate with the Minnesota Department of Health rules as they relate to Federal Medicare/Medicaid reimbursement provisions. Without the modification, Minnesota building and fire officials would not know how to properly classify kidney dialysis facilities ("ambulatory care facility" or "outpatient clinic"), which would lead to a lack of consistency in code interpretation and enforcement among code officials. The omission of a kidney dialysis center located on the level of exit discharge from the classification as an ambulatory care facility is also necessary and reasonable as the time necessary for these dialysis patients to egress when located on the ground floor is minimized since there would be no stairs to traverse and assistance from a care provider is therefore minimal.

Aisle. A definition for "aisle" is currently located in section 1002.1 of the 2006 IFC. All definitions have been relocated to Chapter 2 in the 2012 IFC. The definition for "aisle" in this rule is also modified to match the definition for "aisle" in Minnesota Rules, Chapter 1305, Adoption of the International Building Code. This change is necessary to coordinate the definitions and prevent conflicts between these two codes.

Approved. This definition is modified to coordinate the definition of "approved" with the same term contained in other chapters of the Minnesota State Fire Code. The modified definition also provides the fire code official with methods to ensure that similar situations are uniformly addressed when the fire code official must determine whether or not sound fire prevention methods are being applied to the Minnesota State Fire Code. The methods listed in this definition establish whether or not proposed fire prevention practices comply with the Minnesota State Fire Code while maintaining the intent and purpose of the code. This definition is meant to coordinate with the same definition for "approved" found in the Minnesota State Building Code (*see e.g.*, Minnesota Rules, part 1300.0070, subpart 4a; Minnesota Rules, part 1305.0202, subpart 1). It is

reasonable to provide the same definition for this term that is frequently used throughout other Minnesota State Building Code documents to ensure uniformity and help prevent conflicts from one rule to another.

Authority having jurisdiction. This is an existing Minnesota Rules definition that is revised by deleting the phrase "a particular" jurisdiction and replacing it with "within their appointed" jurisdiction. This change is necessary to clarify that the jurisdiction appoints the code official.

Care facility. A new definition is added for "Care Facility" to the 2012 IFC and a table is added entitled "Care Facility Classifications." This new table provides classifications for the various types of licensed, registered, and unlicensed care facilities for application and use of the Minnesota State Fire Code. Many of the care facilities identified in this table are licensed by the Minnesota Department of Health ("MDH"), the Minnesota Department of Human Services ("DHS"), or both. Code officials have struggled in the past with correctly classifying these facilities because the national model codes are not consistent with MDH or DHS licensing provisions. Proper occupancy classifications are based on the number of care recipients permitted by the classification, the capabilities of those care recipients to respond during emergencies (ambulatory vs. non-ambulatory), and permitted uses within a dwelling unit. As licensed care facilities, each may or may not be subject to additional requirements as determined by the appropriate licensing agency, which can be overlooked if code officials improperly classify the use of the building. Without clear guidance, code officials may place these facilities in a more restrictive occupancy classification than is intended by statute or rule. This improper classification can result in inconsistent code application and increased construction costs. After numerous conflicts developed between the model code and Minnesota state agencies' licensing of these facilities, a group, which included representatives from the Department's Construction Codes and Licensing Division ("CCLD"), MDH, DHS, and the State Fire Marshal's Office ("SFM") developed a publication entitled "*Quick Reference Guide to Care Facilities in Minnesota.*" Since the guide's classification of these facilities can deviate from the 2012 IFC, it is therefore reasonable and necessary to incorporate the occupancy classification portion of this guide into the proposed rule. The proposed table also provides code officials with valuable and necessary guidance about which licensed facilities should be treated similar to a "dwelling unit" for the purposes of fire suppression. This proposed table is identical to one recently adopted in the State Building Code for compatibility and consistency (*see* Minnesota Rules, part 1305.0302, Care Facility Classifications).

Corridor. This is an existing definition that has been moved from section 1002.1 of the 2012 IFC, without change, and included here so that all definitions are located in one chapter of the fire code.

Fire chief. The existing term "fire chief" is amended by removing a reference to the State Fire Marshal. Where the term "fire chief" is used in the fire code, it is intended to apply to local emergency response issues, not inspection issues. This change is necessary to provide clarity and to ensure that the person responsible for local emergency fire response must make decisions regarding emergency response.

Fire code official. The term "fire code official" is modified from the 2012 IFC to define who has the authority to enforce the Minnesota State Fire Code. It includes the "fire chief," fire department representatives authorized by the fire chief, the state fire marshal, authorized representatives of the state fire marshal, and other authorities specifically designated by municipal ordinance or regulation. The modified definition also requires that the appointing authority ensure competency of persons conducting inspections.

Fire department. The term "fire department" was added to the definition section for clarity and uniformity. The definition is identical to the definition for "fire department" already defined and provided for in Minnesota Statutes, section 299F.092, subdivision 6 (2014).

Guest room. The existing term "guest room" is amended to include a group of rooms, as commonly seen in "suite" concepts. The definition also replaces the term "sleeping" with "lodging by guests" to better describe the temporary nature of the use of these rooms. The sentence pertaining to dormitory space is deleted because dormitories can be used as either a temporary or long-term use.

Intermediate bulk container. This is an existing definition that has been moved from section 3402.1 of the 2012 IFC, without change, and included here so that all definitions are located in one chapter of the fire code.

Jurisdiction. The term "jurisdiction" is deleted because the definition is now included in the 2012 IFC and there is no longer a need for this definition to be duplicated in this rule.

Jurisdictional area. The term "jurisdictional area" is deleted because the definition is now included in the 2012 IFC and there is no longer a need for this definition to be duplicated in this rule.

Occupancy classification. This is an existing definition that is being modified by adding or deleting several sub-definitions contained within this definition. The entire definition, including the sub-definitions, is modified to coordinate with the same definitions that have been recently adopted in Minnesota Rules, Chapter 1305, Adoption of the International Building Code. The modifications are needed and reasonable to ensure the same definitions are coordinated between codes which will eliminate confusion and misapplication:

The definition for **"Educational, Group E"** occupancies is deleted because the definition is now included in the 2012 IFC and there is no longer a need for this definition to be duplicated in this rule.

The definition for **"Child day care"** occupancies is deleted because the definition is now included in the 2012 IFC and there is no longer a need for this definition to be duplicated in this rule.

The definition for **"Adult day care"** occupancies is deleted because the definition is now included in the 2012 IFC and there is no longer a need for this definition to be duplicated in this rule.

The definition for **"Institutional, Group I"** is changed to include grammatical changes and modifications to reflect changes in housing for elderly and those needing some services to remain in independent living status. "Group I-1" occupancies are those residing in a supervised environment for more than 16 persons who are receiving custodial care. The definition includes examples of occupancies intended to fall under that definition.

The definition for **"Group I-2"** occupancies is changed to include grammatical changes and modifications to reflect changes in medical facility occupancies. "Group I-2" occupancies are medical facilities for more than 5 people who are not capable of escaping on their own. The definition includes examples, such as detox facilities, hospitals, and nursing homes.

The definition for **"Group I-3"** occupancies is not being changed or otherwise modified.

The definition for **"Group I-4, Day care facilities"** is changed to include grammatical changes and deletion of existing rule language to reflect changes in day care facilities. "Group I-4, Day care facilities" are occupancies consisting of custodial care for more than five persons on a part-time basis (less than 24 hours a day) in a location that is not their home, such as an adult or child day care center. The last four paragraphs under this definition in the 2012 IFC are retained as modified to identify related occupancy classifications (5 or fewer, care in a dwelling unit, children older than 2½ years of age, etc.).

The definition for **"Group R, Residential"** is changed to coordinate with the same definitions that have been recently adopted in Minnesota Rules, chapter 1305, Adoption of the International Building Code. The modifications are needed and reasonable to ensure the same definitions are coordinated between codes which will eliminate potential confusion and conflicts between them.

Group R- 1 is changed by moving the "Bed and Breakfast Facilities" definition to the beginning of the list of occupancies and adding congregate living to the list of occupancies. This exact language is found in recently adopted Minnesota Rules, part 1305.310, section 310.3, and is modified here to provide consistency and coordination between Chapter 1305 and this Code.

Group R-2 is changed by adding some clarification and reorganization to the list of occupancies alphabetically. This exact language is found in recently adopted Minnesota Rules, part 1305.310, section 310.4, and is modified here to provide consistency and coordination between Chapter 1305 and this Code.

Group R-3 is changed by adding some additional examples to the list of occupancies in this sub-group to coordinate with recently adopted Minnesota Rules, part 1305.0310, section 310.5, and is modified here to provide consistency and coordination between Chapter 1305 and this Code.

Group R-4 is changed by adding some clarification to the definition and adding a list of occupancies as examples similar to the format of the other Group R sub-groups. This exact

language is found in recently adopted Minnesota Rules, part 1305.310, section 310.6, and is modified here to provide consistency and coordination between Chapter 1305 and this Code.

Outpatient clinic. The definition for "Outpatient clinic" is being modified to coordinate with the definition of "Ambulatory Care Facility," specifically indicating that kidney dialysis centers are "outpatient clinics." This is necessary to avoid confusion and promote consistency between definitions.

Small hose connection. A definition for "small hose connection" is being added because of proposed changes to Minnesota Rules, part 7511.0905, subpart 4 (Standpipe Systems). The existing rule requires Class III wet standpipes and hose connections in Group R-2 occupancies usually used for primary firefighting operations. The proposed change requires the use of "small hose connections" in Group R-2 occupancies used to finish extinguishment in buildings where the fire sprinkler system has controlled the fire. This new terminology is reasonable and needed for firefighters to differentiate between a small hose connection and a Class III standpipe hose connection. This change will provide needed clarity for both designers and code officials.

7511.0304 SECTION 304, COMBUSTIBLE WASTE MATERIAL.

Subpart 1. IFC Section 304.3.2, Capacity exceeding 5.33 cubic feet. The first part of this rule part is unchanged except for the addition of "subpart 1" and the title of the section. This addition is necessary to provide the section title and to accommodate the addition of new language to the part that is proposed to be "subpart 2."

Subpart 2. IFC Section 304.3.4, Capacity of 1 cubic yard or more. This new subpart deletes section 304.3.4 from the 2012 IFC. Section 304.3.4 addresses dumpsters over 1 cubic yard in size and does not allow these dumpsters in buildings unless they meet certain peak heat release rates or are stored in specific types of detached outdoor structures. This requirement was added in the 2009 edition of the IFC, which Minnesota did not adopt. However, Minnesota does not regulate these containers until they reach a minimum of 1.5 cubic yards so it is deleted to prevent confusion.

The State Fire Marshal Division collects fire incident reports from 98% of the fire departments in the state. The Division has no data or fire history in Minnesota that would lead it to believe that this increased regulation of smaller containers would have any positive impact on fire safety. Moreover, this additional regulation would require thousands of businesses, school districts and local governments to purchase new, complying waste containers. Many of the existing dumpsters in buildings are made out of recycled plastic materials and likely would not comply with these maximum heat release rates. Performing fire testing to determine the peak heat release of these containers is cost prohibitive. Accordingly, the requirement is proposed to be deleted.

7511.0307 SECTION 307, OPEN BURNING AND RECREATIONAL FIRES.

Subpart 1. IFC Sections 307.1 through 307.2.1 and 307.4 through 307.4.1. This rule subpart is modified by adding "Subpart 1" to the language in the rule part to accommodate the addition of new language to the part that is proposed to be "Subpart 2."

Subpart 2. IFC Section 307.3, Extinguishment authority. This new subpart modifies 2012 IFC Section 307.3 by adding the words "recreational fire" to the list of open fire types that a fire code official may order extinguished if the fire becomes a hazard. This is a needed and reasonable modification because it is a well-accepted industry practice. This modification is also necessary to provide clarity to the fire code official which types of fires the code official can order to be extinguished when they pose a problem or potential problem to public safety.

Subpart 3. IFC Section 307.4.3. This subpart is being added to modify 2012 IFC Section 307.4.3 by deleing the exception contained in that section. 2012 IFC Section 307.4.3 regulates portable outdoor fireplaces. Portable outdoor fireplaces (also known as "patio fireplaces") are designed to burn solid fuel and are available at many retailers ranging from local grocery and hardware stores to big box retailers. Their widespread availability and use has created considerable confusion for citizens and fire officials as to if or how they are to be regulated by the Code. The exception for one- and two-family dwellings is being deleted because these devices are used extensively in these dwelling structures in Minnesota. Deleting this exception will give much needed guidance to local fire code officials and provide a reasonable level of safety both by requiring a minimum distance between combustibles and this heat producing device and by requiring the device be used consistent with the manufactures' specifications and instructions.

7511.0308 SECTION 308, OPEN FLAMES.

This rule part is changed by adding "subpart 1" and the section to the title and deleting the reference to "sections 308.3.1 through 308.3.1.1" and replacing it with the reference "308.1.4." "Subpart 1" is added to the rule part to accommodate the addition of new language to the part that is proposed to be "Subpart 2." This modification is necessary to coordinate with numbering changes made to the 2012 IFC and to accommodate the new subpart.

The new Subpart 2 modifies section 308.1 by adding a new section that prohibits the use of aerial luminaries (also called "Sky Lanterns" and similar names). These are devices made out of combustible materials in a balloon configuration that have a candle or other combustible heat source for aerial lift. Once the candle or other heat source is lit, the aerial luminary is set aloft by the heat from the candle or other source, similar to a miniature hot-air balloon. These travel untethered several hundred feet in the air (possibly more depending on conditions) and several thousands of feet horizontally. If the device lands on a building or in a wooded area, a catastrophic fire could occur. These types of devices are currently illegal in this state under Minnesota Statutes, section 624.20, subdivision 1 (a). Therefore, it is necessary and reasonable to modify section 308.1 of the 2012 IFC to prohibit the use of aerial luminaries in Minnesota.

7511.0315 SECTION 315, GENERAL STORAGE.

Subpart 1. IFC Section 315.3.1, Ceiling clearance. This subpart is changed by deleting the references to section "315.2.1" and replacing them with references to section "315.3.1." These changes are necessary to coordinate with numbering changes made to the 2012 IFC.

This subpart addresses the distance storage must be kept below a ceiling and from sprinkler heads. The prosed new language contains regulations that have been in the IFC for many years. In the 2007 fire code adoption, this language was inadvertently deleted. During review of this rule part, the Department discovered this error and is correcting it in this adoption.

If the space is not equipped with sprinklers, the clearance between the stored materials and the ceiling must be 2 feet to allow manual hose streams to effectively reach the top of a burning pile and to project over and beyond adjacent piles to reach burning materials. Where sprinklers are installed, the 18-inch clearance permits timely activation of the sprinklers and allows unobstructed water distribution over the storage pile. Materials stored too close to sprinklers can prevent not only the heat of a fire from reaching the sprinkler fusible link, but also inhibit water from reaching the seat of a fire once the sprinklers are activated. Therefore, it is needed and reasonable to require minimum clearance distances between stored materials and sprinkler heads in buildings.

Certain newer types of automatic sprinklers, because of their design or operating characteristics, may require greater clearance distances than the 18-inch minimum prescribed in this subpart. NFPA 13 and the sprinkler manufacturer's data sheets should be consulted for specific information on the characteristics of the many different types of sprinklers that may be installed in a given building. This rule part clarifies that the more restrictive requirements shall apply.

Subpart 2. IFC Section 315.3.3, Equipment rooms. This subpart is changed by deleting the references to section "315.2.3" and replacing them with references to section "315.3.3." These changes are necessary to coordinate with numbering changes made to the 2012 IFC.

This subpart also deletes the current rule language regarding storage in boiler rooms and mechanical rooms in sections 315.2.3.1.1, 315.2.3.1.2 and 315.2.3.2. The 2012 IFC prohibits all combustible storage in these types of rooms. However, this subpart is also being modified to allow combustible storage in boiler rooms and mechanical rooms when certain protection features are in place. Many code officials and building owners believe that strict compliance with the IFC or current rule, as written, are unreasonable. The IFC forbids any type of combustible storage in these types of rooms; the previous rule amendment allowed combustible storage but required sprinkler protection. This means that there could be no combustibles of any type, including wood, paper, or plastics stored in these types of rooms. This section of the IFC, as written, arguably causes a hardship for property owners. It is very common to find combustible materials or storage in boiler rooms, furnace rooms, and mechanical rooms. The protection features included in the proposed language (*i.e.*, distance separation) minimizes the ignition potential and provides a reasonable alternative to eliminating all combustible storage. It is also reasonable for materials needed for the construction, maintenance, or operation of equipment to be excluded from these requirements because these items are typically needed and located in equipment rooms, not mechanical rooms.

Subsections 315.3.3.2, 315.3.3.3, and 315.3.3.4 are renumbered from 315.2.3.3, 315.2.3.4, and 315.2.3.5, respectively, to coordinate with numbering changes made to the 2012 IFC. Subsection 315.3.3.2, Electrical equipment rooms, is also modified by adding the phrase "Vaults and" to the title of the section to clarify that electrical vaults are treated the same as electrical equipment rooms. The section is further changed by replacing current language with new language that is consistent with the Minnesota State Electrical Code and that clarifies that the prohibition of storage is for rooms that only contain the main electrical distribution equipment. Main electrical distribution equipment includes primary electrical distribution and transformers where heat is produced and radiated from electrical equipment. When this type of equipment malfunctions or fails it tends to generate heat at higher temperatures capable of igniting any surrounding combustibles. Therefore, it is reasonable to prohibit storage of combustibles in rooms that contain main electrical distribution equipment.

There has been confusion among code officials and property owners as to whether this prohibition of storage also applies to rooms or areas merely containing circuit breaker panels. However, this was never the intent of this code provision because circuit breaker panels do not pose the same hazard as major electrical components. Therefore, this change is also needed to clarify that the prohibition of storage in these rooms is limited to the larger heat producing electrical equipment described above.

7511.0316 SECTION 316, CLEARANCE OF VEGETATION FROM STRUCTURES. [Renumbered to 7511.0319]

This rule part is renumbered from Minnesota Rules, part 7511.0316, to Minnesota Rules, part 7511.0319, to coordinate with formatting and numbering changes made to the 2012 IFC.

7511.0318 SECTION 318, LAUNDRY CARTS.

This new rule part deletes IFC section 318, Laundry carts, in its entirety. This section is included in the 2012 IFC to provide specific testing standards for certain laundry carts used within Group B, F-1, I and R-1 occupancies. This requirement specifically targets hotels, larger restaurants, and schools that have gyms and pools. Currently, none of the laundry carts used in Minnesota within these occupancies would meet the new requirements. This IFC section would require all these occupancies to purchase new carts that comply with the requirement. The section is deleted in its entirety because there is no fire data to suggest this is or has been a fire safety issue in Minnesota and the requirement would be overly burdensome for owners of the affected occupancies.

7511.0319 SECTION 319, CLEARANCE OF VEGETATION FROM STRUCTURES (renumbered from Minnesota Rules, part 7511.0316).

This rule part is being relocated from Minnesota Rules, part 7511.0316, because of formatting and numbering changes made to the 2012 IFC. The language remains unchanged.

7511.0401 SECTION 401, GENERAL.

This new rule part deletes 2012 IFC section 401.7, Unplanned evacuation. Section 401.7 addresses emergency evacuation fire drills and, contrary to established practice in Minnesota, does not allow for an "unplanned evacuation" (i.e., a false fire alarm) to be considered as one of the required fire drills for reporting requirements. It has been a long standing policy of the State Fire Marshal's Office to allow a false alarm to be counted as one of the required fire drills if proper documentation of the false alarm and the building occupants' response is kept. In fact, it is often the case that building owners and occupants learn more during an unplanned event than during a pre-planned, regular fire drill. Accordingly, the State Fire Marshal allows properly documented false alarms to be counted towards required fire drills. If the 2012 IFC prohibition was to remain, it would reverse a long standing practice that has worked well in Minnesota for both fire fighters and building owners. Additionally, if this IFC prohibition were adopted, it would add an unnecessary and unreasonable regulatory burden on the owners and managers of these facilities. Therefore, section 401.7 is proposed to be deleted.

7511.0503 SECTION 503, FIRE APPARATUS ACCESS ROADS.

Subpart 1. IFC Section 503.1.1, Buildings and facilities. This new subpart modifies the IFC requirements for fire department apparatus access roads by increasing the distances from access roads to fire sprinkler-protected buildings. The 2012 IFC requires that fire apparatus must be able to get to within 150 feet of all portions of a building, but contains some exceptions for sprinkler protection, single-family dwellings, and unique topography issues. This section applies to new buildings, additions to existing buildings, and buildings moved from one location to another.

Section 503.1.1 is amended by adding an exception that would remove the requirement for fire apparatus access roads when there are 2 or fewer Group R-3 (single family home) or Group U (utility) occupancies on a single road. This language is being relocated from section 501.1.1 which "allowed" the fire code official to waive the fire access road requirements, but provided no specific guidance as to when this allowance was appropriate. Indeed, there has been past confusion in this state about the application of these requirements to private driveways on large lots leading to single family residences, especially in greater Minnesota. The Department believes that this exception is needed and reasonable because for R-3 occupancies in Minnesota, the fire access road has long been considered the public street and not the private driveway. Moreover, an approved fire access road installed to the specifications found in the IFC can be burdensome and costly to some homeowners. The benefit to only 1 or 2 of these types of occupancies on a single roadway may not justify the cost. This would not be true for a private roadway leading to a housing development containing many R-3 occupancies where the benefit of a fire access road could be shared over several single family homes.

Section 503.1.1 and items 1 and 4 in the new section 503.1.1.1, Increases allowed, contain the same requirements as the 2012 IFC. However, item 2 is new and item 3 is similar to the IFC language, but is modified to remove the fire official's discretion in determining the proper increase in distance from the access road to the structure. Item 2 is added to allow the 150-foot distance to be increased to 600 feet for sprinkler-protected Group R occupancies. Item 3 is modified to allow an increase from 150 feet to 300 feet where topography or site limitations are an issue and an alternative means of fire protection is provided, such as additional standpipes, yard or wall

hydrants, remote fire department connections or fire suppression systems, depending on the hazard. These increases are needed and reasonable because the required installation of fire sprinklers or alternative means of fire protection eliminates the need for extensive firefighting operations to be within 150 feet of the fire-involved structure.

Subpart 2. IFC Section 503.2.1, Dimensions. This new subpart adds an exception that reduces the 20-foot minimum roadway width for fire apparatus in Group R occupancies to 16 feet when the building is sprinkler-protected. This modified reduction in minimum roadway width is reasonable because when the Group R building is protected throughout by an approved fire sprinkler system, the need for rapid access of large firefighting apparatus such as aerial devices is reduced. The fire suppression process will already have begun due to activation of the fire sprinkler system. In addition, while a least one attack fire hose will most likely be deployed from an attack fire pumper truck, the need for multiple hose lines and large diameter water supply hose lines is also diminished.

Subpart 3. IFC Section 503.2.5, Dead ends. This new subpart adds an exception to 2012 IFC Section 503.2.5 concerning fire apparatus' turn-around requirements. Section 503.2.5 requires an area for turning a fire truck around when a "dead-end" apparatus road is more than 150 feet long. The requirement attempts to reduce the amount of backing up a fire truck might need to do if the driver passes the access point or needs to reposition the fire truck for fire suppression activities. The exception allows an increase in the 150-foot dead-end distance up to 300 feet if the building is protected by an approved fire sprinkler system. This exception is reasonable because fire sprinklers will initiate the fire suppression process, which allows more time for set-up of fire suppression activities or any need to reposition a fire truck. This modification is reasonable and necessary to acknowledge the existence and effectiveness of automatic fire sprinklers in suppression activities, as explained above in subpart 2.

7511.0506 SECTION 506, KEY BOXES.

The fire code has long contained a requirement for key boxes that allow fire department personnel to access special metal boxes containing keys to the property. Older code editions required key boxes if access to the building was "unduly difficult." Newer editions of the code, including the 2012 IFC, require key boxes if access is "restricted because of secured openings."

A literal application of this new language means that any building that has locked exterior doors must provide a fire department key box. However, fire department personnel are trained and equipped to perform "forcible entry" on buildings, if necessary. It is not reasonable to require every building to have a key box simply because the building has locked doors when fire departments have the ability and means to access buildings. There are also concerns that over-zealous or uninformed enforcement officials may require key boxes on every building, which is not the intent of the fire code. The proposed modification to 2012 IFC Section 506 returns the language similar to that used in earlier code editions to require access to be "unduly difficult because of secured openings or where immediate access is necessary for life-saving or firefighting purposes." The amendment is reasonable and necessary to provide more objective clarity to the fire official on when key boxes can be required and to provide assurance to property owners that not every building will be required to maintain a key box.

The proposed modification to 2012 IFC Section 506 also adds an exception to the key box requirement for one- and two-family dwellings in Minnesota. These types of residential structures are typically privately owned family homes and it is reasonable to exempt these dwellings from the code's key box requirements due to the higher expectation of privacy and security associated with residential home ownership.

7511.0507 SECTION 507, FIRE PROTECTION WATER SUPPLIES (Renumbered from 7511.0508).

Subpart 1. IFC Section 507.3, Fire flow. Subpart 1 amends 2012 IFC Section 507.3, Fire flow, which requires that fire flow requirements be determined by an approved method. The term "fire flow" describes the anticipated amount of water that would be needed to control and extinguish a fire. The required fire flow varies greatly depending on the type of occupancy and the hazards associated with the building. Currently, there are approximately seven methods used to calculate fire flows for firefighting. Many of these fire flow calculation methods are intended for areas that have a municipal water supply. However, large portions of Minnesota are unincorporated and have no municipal water utilities. Therefore, this new subpart provides a table that prescribes the minimum water flow requirements in gallons per minute (gpm) and the duration (in minutes) for different hazard classifications. This table codifies a 15-year-old policy of the State Fire Marshal's Office when dealing with minimum water supplies.

In the past, this water supply requirement has been left up to the local code official, fire marshal, or inspector. The code provided no guidance, which made it difficult for building designers and caused differing requirements for similar buildings in different jurisdictions. In the interest of uniformity, this subpart clarifies for both code officials and building designers what the minimum fire flow requirements are for each circumstance.

Examples of water sources that can provide the required fire flow include: municipal water supply connected to hydrants, private water supply connected to hydrants, private water supply in reservoirs and/or tanks, water supplies from natural sources (ponds, lakes, rivers) or water transfer operations (water tenders) provided by fire departments, and similar circumstances.

Subpart 2. IFC Section 507.5.1, Where required. This subpart does not change the requirements for a maximum distance to a fire hydrant of 300 feet. However, the section is renumbered from 508.5.1 to 507.5.1 and adds a new exception. The new exception allows hydrants to be located up to 600 feet from a sprinkler-protected house; previously, the maximum distance was 400 feet.

This exception is reasonable because fire sprinklers in residential occupancies will initiate the fire suppression process that allows more time for set-up of fire suppression activities, including the deployment of a water supply hose from the fire hydrant, so the maximum distance to a fire hydrant can be increased. This modification is reasonable and necessary to acknowledge the existence and effectiveness of automatic fire sprinklers in home fire suppression activities.

7511.0508, SCTION 508, FIRE PROTECTION WATER SUPPLIES.

This rule part has been renumbered and relocated to 7511.0507, as subpart 2 to coordinate with numbering changes made to the 2012 IFC.

7511.0510 SECTION 510, EMERGENCY RESPONDER RADIO COVERAGE.

2012 IFC Section 510 is deleted from the fire code and relocated in an optional appendix. This will allow those local jurisdictions who are experiencing issues with radio coverage to address the issues without requiring the application of the rule part on a statewide basis.

A local jurisdiction who believes this is a problem can utilize the optional appendix as a guide for a local ordinance, in accordance with Minnesota Statutes, section 299F.011, subdivision 4. By utilizing a local ordinance, the regulation may be modified to be more or less restrictive based on the local community needs.

7511.0601 SECTION 601, GENERAL.

This new rule part amends 2012 IFC Section 601.2, Permits, by deleting the requirement for a permit for photovoltaic power systems (solar panels). As discussed previously, these requirements are moving to the state building code. The 2012 IFC would require a permit, so this section is deleted to prevent conflict and confusion between codes.

7511.0603 SECTION 603, FUEL-FIRED APPLIANCES.

Subpart 1, IFC Section 603.5, Heating appliances. Subpart 1 modifies the language in IFC section 603.5.2 by deleting the language "the International Building Code, the International Mechanical Code, the International Fuel Gas Code, and the ICC Electrical Code" and replaces it with "and the Minnesota State Building Code." This modification provides clarity and avoids possible conflicts with other rules. As an example, the State of Minnesota adopts the National Electric Code, not the ICC Electrical Code. In addition, the exception in section 603.5 has added a word "fire" before the term "code official" to clarify that it is the fire code official that must approve this exception, not the building code official.

Finally, subsection 603.5.3.1 is amended by adding the phrase "or fuel-oil" to the title and to the body of the text. Adding fuel oil heaters to this requirement and requiring a minimum distance of 18 inches between these heating appliances is necessary and reasonable because there are no present requirements to address the minimum separation distances for fuel-oil heaters. The code currently addresses minimum distances from gas heaters and solid-fuel heaters, but not for fuel-oil heaters, which are fairly common in rural areas of the state, which do not have utility-supplied natural gas. Fuel-oil heaters are similar to gas-fueled heaters in terms of the amount of heat given off. Therefore, the 18-inch minimum separation distance for fuel-oil heaters is reasonable because they are similar in nature to gas-fueled heaters and the same requirements should apply to both.

Subpart 2. IFC Section 603.8, Incinerators. This subpart remains unchanged.

7511.0604 SECTION 604, EMERGENCY AND STANDBY POWER SYSTEMS.

Subpart 1. IFC Section 604.2.1, Group A occupancies. This rule subpart is amended by adding a subpart number and the section reference to the title because new amendments are being added to the rule part, so it is necessary to divide the rule part into subparts. The language remains unchanged.

Subpart 2. IFC Section 604.2.18.3, Two or more elevators. This new subpart modifies 2012 IFC Section 604.2.18.3 by deleting the requirement for two or more elevators to transfer to standby power in sequence when the standby power source is not of sufficient capacity to operate all elevators at the same time. This language is replaced with a requirement for elevators to operate according to ASME A17.1 2004/CSA B44-2010 2.27.2 when standby power is not of sufficient capacity to operate all elevators at the same time. This modification is reasonable and necessary to avoid any confusion or conflicts between this code and other chapters of the State Building Code.

Subpart 3. IFC Section 604.5.2, Power test. This new subpart modifies the power test duration from 90 minutes to 30 minutes. This change is reasonable and necessary as it will provide uniformity and consistency between new and existing occupancies because the durational requirement for existing buildings is 30 minutes. This power test is for battery powered emergency lighting. The purpose of emergency lighting is to provide a safe illuminated path for occupants to exit a building in an emergency when the normal power has failed. Additionally, from a practical application, 90 minutes of testing is excessive while 30 minutes of testing is sufficient for occupant egress from the majority of buildings during emergency conditions.

7511.0605 SECTION 605, ELECTRICAL EQUIPMENT, WIRING AND HAZARDS.

Subpart 1. IFC Section 605.10.4. This rule subpart contains the same language as the existing rule part that deletes section 605.10.4, but adds a subpart number to the rule part and adds the section reference to the title so as to accommodate new subpart 2 of the rule.

Subpart 2. IFC Section 605.11. This new subpart deletes the requirements found in section 605.11 for Solar Photovoltaic Power Systems and requires these systems to be installed and maintained according to the Minnesota State Building Code. As previously discussed in section 7511.0105 of this SONAR, these requirements have been moved to Chapter 1305 of the Minnesota State Building Code, instead of the Fire Code.

The ever-increasing demand for alternative power sources brings with it new hazards to confront emergency responders. Among the most popular of these alternative energy sources are solar photovoltaic ("PV") power systems. The greatest danger facing emergency responders operating in proximity to solar energy collection systems is the lack of knowledge needed to operate safely around these systems. Some of the potential hazards associated with PV systems are tripping and falling hazards for fire fighters operating on the roof, the potential for earlier roof collapse due to the added dead load of these systems, and electric shock. The Minnesota Fire Service has expressed concerns about these issues. After numerous discussions between representatives from the State Fire Marshal's office, the Department of Labor and Industry, and the fire service, a compromise was reached to place these requirements in the Minnesota State Building Code and reference them in the State Fire Code. This is emerging technology that seems

to be increasing in its use. The modification is therefore reasonable and necessary to assure that these systems are installed properly and in accordance with the Minnesota State Building Code.

7511.0610 SECTION 610, MEZZANINES.

This rule part is repealed because the language is being relocated to Minnesota Rules, part 7511.0611 Section 611, Pedestrian Walkways, Pedestrian Tunnels, and Mezzanines.

7511.0611 SECTION 611, PEDESTRIAN WALKWAYS, PEDESTRIAN TUNNELS, AND MEZZANINES.

This language addresses the installation and maintenance of pedestrian walkways, pedestrian tunnels, and mezzanines. The language pertaining to mezzanines was relocated from Minnesota Rules, part 7511.0610, which requires code users to comply with the Minnesota State Building Code. Specifically, the requirements for mezzanines are relocated to a newly created "subsection 611.2." However, other than section renumbering and titling changes, the requirements for pedestrian walkways, pedestrian tunnels, and mezzanines remain unchanged.

7511.0704 SECTION 704, FLOOR OPENINGS AND SHAFTS.

This rule part is repealed and being relocated to Minnesota Rules, part 7511.1103, subpart 4, to coordinate with numbering changes made to the 2012 IFC.

7511.0705 SECTION 705, SEPARATION OF OCCUPANCIES AND HAZARDOUS AREAS.

This rule part is repealed and being relocated to Minnesota Rules, part 7511.1106, to coordinate with numbering changes made to the 2012 IFC.

7511.0806 SECTION 806, DECORATIVE VEGETATION IN NEW AND EXISTING BUILDINGS.

This new rule part provides requirements for natural trees and similar vegetation used for decorations inside buildings. The requirements in this section of the 2012 IFC are being deleted and replaced with new language. This change is necessary because the requirements in the IFC and in the current amendment to this same section in the 2006 IFC are overly restrictive for certain occupancies, particularly assembly buildings (such as churches and other places of worship), business, educational, and retail/mercantile occupancies. In these occupancies, the IFC allows only natural trees and only then if the building is protected by automatic fire sprinklers. The Department believes that a more reasonable approach to this issue is to regulate ignition sources, limit the location and the separation of multiple trees, and to provide guidance as to the physical support and water maintenance of the vegetation. These regulations provide a reasonable degree of safety for the property and occupants, yet are not as restrictive as the 2012 IFC and existing rule.

The most common application of this section is for seasonal holiday trees and vegetation. However, these new amendments apply only to natural, resin-bearing trees. Fire-retardant or treated artificial trees or vegetation do not fall within the scope of this rule part.

The language shown in sections 806.1.2 and 806.1.3 of the proposed rule part is the same as the language located in 2012 IFC Sections 806.1.2 and 806.1.3. However, section 806.1.4 in the rule part contains all new language addressing requirements for other types of decorative, natural vegetation (wreaths, hay bales, corn stalks, etc.) that are used inside buildings. Similar to natural or resin-bearing trees, these vegetative materials can introduce high fire fuel loads into a building. Therefore, it is reasonable to regulate the use of indoor decorative natural vegetation as well.

As modified, new section 806.1.4.1 permits Minnesota code officials to allow limited quantities of decorative, natural vegetation inside a building if adequate safeguards are provided based on the quantity and nature of the combustible vegetation. Examples of possible mitigation strategies that fire code officials could use include the total quantity of materials, the distance separation between the materials and similar materials, the application of fire retardant treatments, the presence of fire sprinkler protection, the presence of stand-by fire personnel, the material's location in regards to critical egress components, the type and number of potential occupants, and similar circumstances.

Section 806.1.4.2 prohibits these types of decorative materials in Group I (Institutional) occupancies, such as hospitals, nursing homes, jails, and prisons. These types of occupancies generally house persons who have a very difficult time exiting an area during a fire or their movements are restricted for security reasons. For this reason, the level of necessary fire safety regulations is high and further restrictions on this type of material is reasonable and necessary to assure it is not involved in a fire.

Section 806.1.4.3 allows the display of these decorative materials for retail sales purposes. This allowance is needed and reasonable because these materials are typically packaged for resale purposes at the point of sale and is considered safer than it would be unpackaged and displayed at the final use location.

Finally, section 806.1.4.4 in this rule part reasonably prohibits these decorative materials from blocking paths of egress or obstructing access to fire protection equipment, such as fire extinguishers or manual fire alarm pull stations. These materials are also not allowed to accumulate inside a building because dried vegetation represents a high fire fuel load that, once ignited, could impede the ability of occupants to escape or the ability of fire personnel to effectively access portions of the building.

7511.0807 SECTION 807, DECORATIVE MATERIALS OTHER THAN DECORATIVE VEGETATION IN NEW AND EXISTING BUILDINGS.

Subparts 1, 2, 3, and 4 contain no changes.

Subpart 3a. IFC Section 807.4.3.2, Artwork. This new subpart adds an exception allowing artwork and teaching materials to be increased from 20% of the wall area to 50% in schools if the building is sprinkler-protected throughout. The increase in percentage of allowable artwork is deemed safe and reasonable because of the presence of an automatic fire sprinkler system.

Subpart 5. IFC Section 807.4.4.2, Artwork. This new subpart is added and is similar to the exception in Subpart 3a, but addresses day care facilities rather than schools. The increase in percentage of allowable artwork is deemed safe and reasonable because of the presence of an automatic fire sprinkler system.

Subpart 6. IFC Section 807.5, Combustible decorations in I-2 occupancies. This new subpart prohibits all combustible decorations in I-2 occupancies unless certain criteria are met. This language is taken directly from the NFPA 101 Life Safety Code and coordinates with the requirements related to Federal Medicare/Medicaid reimbursement provisions. This modification is reasonable and necessary to clarify the application of these requirements.

7511.0901 SECTION 901, GENERAL.

Subpart 1. IFC Section 901.6.1, Standards. A sentence is added to the end of the exception in this subpart that states "[a]s part of the inspection and testing, all weekly, monthly, quarterly, semiannual, and annual inspections, tests, and maintenance requirements in the listed standards shall be conducted and shall note any problems observed." This new sentence is reasonable and necessary to clarify that *all* these inspections are to be completed when the inspection and testing is done on an annual basis. This was always the intent of the Code, but it has been a point of confusion for building owners and fire officials in the past. This modification clarifies the intended requirements and will eliminate past confusion about what is required under this section.

Subpart 2. IFC Section 901.11, Fire sprinklers and fire detectors – ceilings. This current subpart is revised by amending the section numbers to coordinate with numbering changes made to the 2012 IFC. The language in the body of the subpart remains unchanged.

7511.0903 SECTION 903, AUTOMATIC SPRINKLER SYSTEMS.

Subpart 1. IFC Section 903.2.8, Group R. All three of the 2012 model ICC codes governing the construction of buildings (International Residential Code, International Building Code, and the International Fire Code) require automatic fire sprinkler protection in all new residential occupancies, including one and two-family residential dwellings. Minnesota adopted the 2012 International Residential Code, with amendments, on April 23, 2014 (Chapter 1309), and the 2012 International Building Code, with amendments, on March 25, 2015 (Chapter 1305). Chapter 1309 was effective statewide on January 24, 2015; Chapter 1305 was effective on June 02, 2015. Both of those newly adopted chapters require installation of automatic sprinkler systems in all new residential occupancies, but an exception for newly built one-family dwellings less than 4500 square feet in building area was provided for in Minnesota Rules, part 1309.0313. The validity of that rule part was successfully challenged in *Builders Association of the Twin Cities v. Minnesota Department of Labor and Industry*, __N.W.2d__ (Minn. Ct. App. Oct. 13, 2015) ("*BATC* decision"), a pre-enforcement declaratory judgment action which invalidated any requirement under part 1309.0313 that required installation of automatic fire sprinkler systems in either newly built one- or two-family dwellings under that Code. To give effect to that recent appellate decision and promote consistency between codes, any requirement to install automatic

fire sprinkler systems in newly built one- or two-family residential dwellings (Group R-3 occupancies) has been removed from these proposed rules. Additionally, the proposed rule merely directs the user to comply with the requirements for sprinkler installation found in the appropriate chapter of the State Building or Fire Code, depending on occupancy classification. As explained above, a number of the amendments contained in these proposed rules are made so as to conform to the recent amendments made to the State Building Code, thereby reducing any conflict between codes and promoting uniformity in the application and enforcement of the same.[10] Accordingly, the instant modification of the 2012 IFC sprinkler provisions is being done to coordinate proposed State Fire Code sprinkler requirements with those recently adopted in State Building Code chapters and to comply with the *BATC* decision. Finally, the proposed rule contains a numbering change from section 903.2.7 to 903.2.8 due to reformatting of the 2012 IFC. For those reasons, Minnesota Rules, part 7511.0903, as proposed, is needed and reasonable.

IFC Section 903.2.8.1, Group R-3 or Group R-4 congregate residences. This section allows the installation of a lower cost sprinkler system in licensed Group R-3 and R-4 congregate residence occupancies with up to 16 residents and is adopted from the 2012 IFC without change. Group R-3 and R-4 occupancies are residential-style congregate structures. Group R-3 congregate occupancies are smaller one and two-family dwellings licensed for congregate care, while Group R-4 occupancies are larger residential care and assisted living facilities. This lower cost sprinkler system is commonly known as "NFPA 13D" (based on the name of the installation standard). NFPA 13D requires far less water than commercial-style sprinkler systems (26 gallons per minute as opposed to at least 90 gallons per minute for commercial systems). NFPA 13D is also specifically designed and tested to work in residential occupancies.

IFC Section 903.2.8.2, State licensed facilities. This section of the 2012 IFC is modified to clarify that state licensed facilities located within Group R occupancies must meet the fire sprinkler requirements of the state licensing authority or this Code, whichever is more restrictive. In many cases, the state licensing authority has fire sprinkler system design requirements for licensed facilities that are more restrictive than this code. In those cases, the fire sprinkler system must be installed to the more restrictive requirements of the respective state licensing authority. This proposed rule will help prevent conflicts between other agencies' requirements and this code.

IFC Section 903.2.8.3, Residential hospice facilities. This section changes the section number to comply with reformatting of the 2012 IFC, but maintains the existing language for residential hospice facilities to be sprinkler-protected.

Subpart 2. IFC Section 903.2.11.4, Fire protection for exhaust systems. This subpart is amended by deleting the existing language requiring any portion of an exhaust system utilizing combustible components to be constructed of material listed for use without sprinkler protection. The subpart is also modified by changing the section numbers from "903.2.12.1" to "903.2.11.4" to coordinate with numbering changes made to the 2012 IFC. Section 903.2.11.4 in the 2012 IFC requires sprinkler protection in all ducts conveying hazardous materials when such ducts are over 10 inches in diameter. The modified language requires fire protection when it is required by the International Mechanical Code and when such ducts convey flammable or combustible materials

[10] *See* SONAR, Introduction at p.2.

or have the potential for combustible residue accumulation inside the ductwork. This change is necessary to coordinate with requirements under the Minnesota Mechanical and Fuel Gas Codes, Minnesota Rules, chapter 1346. In addition, the subpart carries forward the current requirement specifying the minimum size of duct at which the sprinkler requirement would apply, to address square or rectangular ducts and not just circular ducts. Instead of requiring sprinkler protection in ducts over 10 inches in diameter, this rule subpart requires 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 x 25 $\approx$ 75 inches).

Subpart. 2a. IFC Section 903.3.1, Standards. This new subpart modifies 2012 IFC Section 903.3.1 by adding a sentence to the end of the section pertaining to fire sprinklers and State of Minnesota licensed or registered facilities. Facilities licensed by the State of Minnesota may have more restrictive requirements for the installation of sprinkler systems than those required by the national standards referenced in the building code (NFPA 13, NFPA 13R or NFPA 13D). This modification is necessary to provide direction to designers regarding possible additional fire sprinkler installation requirements mandated by other state licensing agencies.

Subpart 4. IFC Section 903.3.1. This subpart modifies 2012 IFC Section 903.3.1 and amends the existing rule subpart by adding several sections addressing various sprinkler standards and exceptions.

IFC Section 903.3.1.6.2, Elevator shafts and equipment. An exception is added that requires sprinkler protection for elevator shafts, elevator pits, and elevator machine rooms in Group I-2 occupancies (hospitals and nursing homes). In the last adoption process, a modification was included that generally exempted sprinkler protection in elevator shafts, elevator pits, and elevator machine rooms. However, it was later determined that the Center for Medicare/Medicaid Services ("CMS") does not allow these areas to be excluded from sprinkler protection in hospitals and nursing homes receiving federal Medicare/Medicaid reimbursement. In the opinion of CMS, exempting hospital and nursing home elevator shafts, pits, and equipment rooms from mandatory sprinkler provisions results in these buildings being not "fully sprinkler-protected," and therefore out of compliance with federal regulations and not eligible for Medicare/Medicaid reimbursement. Because these facilities rely on federal Medicare/Medicaid reimbursement for funding, this change is needed to comply with federal Medicare/Medicaid standards and to prevent confusion by building designers, owners, and code officials.

IFC Section 903.3.1.6.4, NFPA 13 modifications. This section carries forward existing modifications to the sprinkler installation requirements of NFPA 13, but contains one change concerning waterflow test data.

Section 22.2.1.1 of NFPA 13 is modified to require waterflow test data to be no more than 36 months old when submitting calculations for fire sprinkler installations. Currently, NFPA 13 requires this data to be no more than 12 months old. This waterflow data comes from the available water in the public municipal system in the area of the proposed project and is used to design the fire sprinkler system and to ensure that there is adequate water flow and pressure. Generally, local municipalities in Minnesota keep good records on the water flow tests of their water distribution systems. Many times these tests are conducted at the concept stage of a project, but actually utilized by a sprinkler designer at some later point to design a building's fire sprinkler system. It is

common for the sprinkler design not to begin until after building construction has already begun. Indeed, it is common for this lag-time to be more than 12 months after the initial waterflow test data were collected by the municipality. It is unreasonable and a waste of water resources to require the sprinkler contractor or the municipality to perform an additional water flow test in such a short time period when it is reasonable to assume that results will be unchanged. Further, if this design is started during months when the temperatures are below freezing, it is impractical to perform waterflow tests which require flowing water from fire hydrants. The ice problems this can cause could have profound safety consequences to both vehicle and pedestrian traffic. The State Fire Marshals Division has extensive experience with flow testing data of municipal water systems. This experience has shown that municipal water system flow data changes very little if at all over a 3 year period. In addition, a 5 pound safety factor is built into all sprinkler system designs per Minnesota Rules, part 7511.0903, subpart 4a, section 903.3.8.

IFC Section 903.3.1.6.5, Vestibules. This rule part is added to exempt sprinkler protection in smaller vestibules if they meet certain construction criteria. There is a freezing problem in Minnesota vestibules during cold climate months. Often these vestibules are located outside of the building's insulated thermal envelope. To provide sprinkler protection in these areas which are susceptible to freezing temperatures, building owners would be required to separately heat these areas to prevent the water-filled piping from freezing or install fairly expensive and maintenance-intensive dry sprinkler head protection. Both of these propositions are expensive and lack efficiencies necessary to justify their expense. Therefore, it is reasonable and necessary to provide an exemption to the sprinkler requirement for certain vestibules.

To qualify under the exemption, the Minnesota vestibule must meet certain conditions: it must be built from non-combustible or limited-combustible construction materials, be 225 square feet or less in size, have sufficient glass that allows any smoke in the vestibule to be visible before entry into it, and its purpose must be for ingress and egress only. The vestibule must also have no fueled equipment present and not be used for larger quantities of material storage. However, a small amount (5 cubic feet or less) of incidental storage is allowed, which roughly translates into a newspaper vending machine or newspaper/magazine rack.

Although some fires do occur in vestibules, they are rare and often intentionally set. The number of documented fires occurring in Minnesota vestibules, however, pales in comparison to the number of sprinkler pipe freeze-ups occurring in these spaces. Moreover, small glass-enclosed vestibules allow fires to be easily observed and defensive action can be taken by occupants.

IFC Section 903.3.1.6.6, NFPA 13D sprinkler systems. This rule part is a reformatting of NFPA 13D installation standards for Group R-3 and R-4 congregate residence occupancies. Much of this language was previously found in Minnesota Rules, part 7511.0903, subpart 1, and has been moved into this rule part and updated to coordinate with changes made to NFPA 13D installation standards found in recently adopted Chapters 1309 and 1305 of the Minnesota State Building Code.

Subpart 5. IFC Section 903.3.8, Sprinkler system design pressure safety margin. Existing Minnesota Rules, part 7511.0903, subpart 5, is amended by adding an exception to the 5-pound design safety margin found in section 903.3.8. The exception exempts NFPA 13D sprinkler systems from this 5-pound design safety margin. NFPA 13D fire sprinkler systems are

designed for Group R-3 occupancies, which consist of one and two-family dwellings. The design standard for these systems is much different than for sprinkler systems designed and installed in commercial occupancies. In most cases, the design pressure and water flow for Group R-3 occupancies uses only the flow from two fire sprinkler heads, as opposed to the design pressure and water flow for commercial occupancies which use the flow from twelve to thirteen sprinkler heads operating at the same time. Applying the rule's 5-pound safety factor to a sprinkler system designed for a single family home would require a new water service from the city main to be installed. This added requirement for Group R-3 occupancies is unnecessary, as it would not increase either the reliability or effectiveness of the residential sprinkler system. Accordingly, adding this exception for one and two-family dwellings is reasonable so as not to add unnecessary expense with no added benefit to property owners.

Subpart 8. IFC Section 903.6, Existing buildings. Subpart 8 is being repealed. These requirements deal with existing buildings and are being relocated to Minnesota Rules, part 7511.1103, subpart 6 (IFC Chapter 11), which now addresses these type of structures.

7511.0904 SECTION 904, ALTERNATIVE AUTOMATIC FIRE-EXTINGUISHING SYSTEMS.

IFC Section 904.2.1.1, Protection of existing cooking equipment. This existing amended language for section 904.2.1.1 is being deleted. This requirement is now covered in 2012 IFC Section 609.2, so the amendment is no longer necessary.

IFC Section 904.1.1, Certification of service personnel for fire-extinguishing equipment. 2012 IFC Section 904.1.1 requires that either a governmental agency or other approved organization certify personnel who service and maintain fire extinguishing systems. However, in Minnesota there is no governmental agency currently authorized to certify or license these types of personnel. Therefore, the language is modified to remove any reference to a governmentally-issued certificate or license for fire extinguishing systems' service and maintenance personnel. In addition, the rule maintains section 904.1.1's exemption for certification of automatic sprinkler system service and maintenance personnel under that section as these contractors are already licensed and certified in this state under Minnesota Statutes, section 299M.03 (2014).

7511.0905 SECTION 905, STANDPIPE SYSTEMS.

Standpipes are water supply systems typically installed in tall or large buildings. The purpose of standpipes is to provide a fixed water supply and a hose connection inside the buildings so that fire personnel do not have to advance hose lines from firetrucks to the building interior and up multiple stories. Most fire engines carry a limited amount of fire hose and typically not enough to be able to stretch up multiple stories in a building.

There are no proposed changes to Minnesota Rules, part 7511.0905, subparts 1, 2, 3, and 5.

Subpart 4. IFC Section 905.3., Required installations. Subpart 4 contains a numbering change from 2012 IFC Section 905.3.8 to 905.3.9, to reflect renumbering and format changes in

the 2012 IFC, but the existing language concerning detention and correctional facilities in the first part of the subpart remains unchanged.

Section 905.3.9, Group R-2 occupancies, is renumbered to section 905.3.10, to reflect renumbering and format changes in the 2012 IFC. The amendments to this existing rule part also delete references to "Class III wet standpipes" or "standpipes" and replace them with references to "small hose connections." Although the intent of the existing rule part was to provide a small hose connection for firefighting mop-up and overhaul operations, it was originally drafted as a Class III standpipe requirement. Confusion among building designers and building officials concerning this requirement quickly became evident over the past few years as several jurisdictions interpreted the regulation as requiring additional, full Class III standpipes, rather than small hose connections for mop-up and overhaul operations. Accordingly, this amendment to the subpart attempts to clarify its intent by now requiring "small hose connections," rather than a Class III standpipe, which is a better description of the subpart's underlying intent.

Additionally, specific requirements for small hose connections have been added to the rule subpart to ensure uniformity and reduce confusion in the design, placement and operation of these important connections. Moreover, providing these design requirements will assist in eliminating general confusion regarding the actual intention of this subpart, which is to provide a limited water supply for mop-up operations of the firefighters after the sprinkler system has controlled the fire. This amendment is reasonable and needed to clarify the actual intent of this existing modification to the IFC.

Finally, a requirement for signage, which identifies small hose connections, is added to the subpart. This signage requirement is reasonable and needed to quickly and clearly identify for fire personnel where this type of hose connection is located in the building.

7511.0906 SECTION 906, PORTABLE FIRE EXTINGUISHERS.

Subpart 1. IFC Section 906.1, Where required. This existing rule part is amended by adding new subparts to enhance readability and accommodate the addition of modifications to other subsections in this section of the 2012 IFC. The section reference numbers are also added to the titles to provide clarity about the subsection being addressed.

Consistent with changes made to the 2012 IFC, the exception in Subpart 1 is further amended by removing Group A and Group B occupancies from this existing exception; however, Group E occupancies in Minnesota will remain in the exception. While the 2012 IFC language removed this exception from section 906.1 in its entirety, Minnesota has had this well-established exception in its fire code for over ten years and has decided to maintain it for Group E occupancies. Due to instances of easy theft and vandalism, Minnesota educational occupancies have successfully moved portable fire extinguishers away from common areas and spaces, where they are more susceptible to these acts, without sacrificing fire safety. In educational occupancies, the objective is for staff to evacuate students to safe areas, not to fight a fire. Nevertheless, portable fire extinguishers are still required in hazardous areas of Group E occupancies where custodial and administrative staff, who are not charged with specific evacuation duties, may attempt extinguishment of a small fire. Minnesota State Fire Marshal Division data from state fire reports

indicate that the top three places for a fire to start in an educational occupancy are kitchen/cooking areas, trash collection areas, and lavatory/locker rooms. Under the retained exception for educational occupancies in Subpart 1, portable fire extinguishers are still required in or near these areas. Moreover, this exception only applies to an educational occupancy that is equipped throughout with an approved automatic fire sprinkler system. This change is reasonable and needed to comply with national model codes; the Minnesota retention of the Group E occupancy exception is reasonable due to the proven performance and safe fire history of Minnesota's educational occupancies and the required functioning of various staff during fire emergencies.

In addition, a reference to section 903.3.1.2 is deleted from this rule part and the sentence structure is grammatically corrected due to that deletion. This section reference is deleted because it references a type of sprinkler system that is used for apartments and hotels (known as "NFPA 13R"). However, since the amended exception contained in Subpart 1 does not apply to apartments or hotels, the reference to this type of system is no longer needed. The term "janitors" is also deleted and replaced with the word "custodial," immediately found before the term "closets." This change is needed and reasonable since the term "custodial" is now more widely used to describe persons who perform cleaning activities. Finally, the exception is amended to clarify that fire extinguishers are only required in storage rooms over 100 square feet in size. This additional language is reasonable and needed because many rooms can be considered "storage rooms," but not all of these spaces need a fire extinguisher (*e.g.*, a small coat closet or reach-in closet).

Subpart 1 is also amended by changing the final IFC section reference number to section 3315.1. This change is necessary to coordinate with reformatting and numbering changes made to the 2012 IFC.

Subpart 2. IFC Section 906.2.1.1, NFPA 10 modification. Subpart 2 is added to delete section 7.1.2 from NFPA 10, the portable fire extinguisher standard referenced and adopted as part of the state fire code in Chapter 80 of the 2012 IFC (Referenced Standards). Section 7.1.2 requires fire extinguisher service personnel to be certified, pass an exam, and possess a certificate or document to establish those qualifications. The State Fire Marshal Division does not have adequate staff or resources to administer a fire extinguisher certification program, nor do most local units of government. In addition, these types of fee generating credentialing programs would need legislative authorization in Minnesota, but no such legislative approval currently exists.

Subpart 3. IFC Section 906.2.1, Certification of service personnel for portable fire extinguishers. A new Subpart 3 is added to modify 2012 IFC Section 906.2.1, which also pertains to the certification of fire extinguishing service personnel. Section 906.2.1 is new language in the 2012 IFC, but is similar to IFC Section 904.1.1. This IFC section requires that a governmental agency certify personnel who service and maintain these fire extinguishing systems. As noted in Subpart 2 above, there currently is no state or local governmental agency to certify these types of personnel in Minnesota. Therefore, the language in section 906.2.1 is modified to allow fire extinguisher service personnel to possess a certificate of qualifications issued by an approved organization for the type of work performed. Several organizations offer certifications that will confirm to code officials that individuals are qualified to perform maintenance on alternative automatic fire extinguishing systems and portable fire extinguishers. The International Code Council ("ICC"), in conjunction with the National Association of Fire Equipment Distributors

offer certifications to individuals who service and inspect portable fire extinguishers. Also, most manufacturers of portable fire extinguishers offer corporate certifications to individuals who will install and inspect them. Such certifications are beneficial to code officials because they confirm that individuals are qualified to install or maintain fire protection equipment produced by a specific manufacturer.

7511.0907 SECTION 907, FIRE ALARM AND DETECTION SYSTEMS.

There are no changes proposed to existing rule subparts 2, 6, 9, and 15.

Subpart 1. IFC Section 907.1.3, Protection of control units. This existing rule subpart is being deleted. It is no longer needed because this requirement is now included in the installation standard, NFPA 72, Section 10.15. Additionally, NFPA 72 is included in the list of referenced standards found in Chapter 80 of the 2012 IFC.

Subpart 3. IFC Section 907.2.1, Group A, general. Subpart 3 contains an amendment to existing Exception #2, which clarifies that fire alarm systems are not required in Group A (Assembly) occupancies with fewer than 1,000 people. This modification coordinates with the requirements of 2012 IFC Section 907.2.1.3, which requires additional fire alarm requirements in assembly occupancies with 1,000 or more people. In addition, the term "fire extinguishing" is deleted and replaced with "fire sprinkler" because automatic fire sprinklers are specifically required in these types of assembly occupancies and this will create consistency with the same term and requirement in other parts of the code. Finally, the language in Exception #3 is changed to coordinate with the way Chapter 1305 of the State Building Code classifies assembly areas in a Group E occupancy. These assembly areas were treated as a separate occupancy in the previous codes, but are now considered an accessory use to the Group E occupancy. However, the alarm requirements remain unchanged.

Subpart 4. IFC Section 907.2.2, Group B, general. In this subpart, the term "outpatient clinic" is deleted and replaced with the term "ambulatory care facility" in several locations. This new term "ambulatory care facility" is included in the definition section located in Chapter 2 of the 2012 IFC. There are no technical changes to the requirements.

IFC Section 907.2.2.1, Initiation. The term "outpatient clinic" is deleted and replaced with the term "ambulatory care facility." This new term "ambulatory care facility" is included in the definition section located in Chapter 2 of the 2012 IFC. There are no technical changes to the requirements.

IFC Section 907.2.2.3, Ambulatory care facilities. This subpart is amended by deleting the term "outpatient clinic" and replacing it with the term "ambulatory care facility" in the title and in the body of the rule subpart to coordinate terminology changes that have been made elsewhere within the 2012 IFC. The new term "ambulatory care facility" is included in the definition section located in Chapter 2 of the 2012 IBC. Finally, the sentence was revised grammatically to provide better clarity to the requirement.

Subpart 5. IFC Section 907.2.3.1, Initiation. In subsection 907.2.3.1, the term "janitors'" is deleted and replaced with the word "custodial," immediately found before the term "closets." This change is needed and reasonable since the term "custodial" is now more widely used to describe persons who perform cleaning activities. Additionally, in Exception #1, the word "supervised," immediately found before the term "fire sprinkler system," is deleted. Other parts of the 2012 IFC have requirements for fire sprinkler systems that require supervision or monitoring, so it is not necessary to repeat it here. This change will also help eliminate any potential conflicts between the same requirements found in other sections of this code.

Subpart 7. IFC Section 907.2.5, Group H, general. In two locations in this subpart, chapter references to chapters "37, 39, and 40" are deleted and replaced with references to chapters "60, 62, and 63." This change is necessary to coordinate with chapter numbering changes made in the 2012 IFC.

Subpart 8. IFC Section 907.2.6, Group I, general. This existing rule subpart is amended by changing the section reference "907.2.6 through 907.2.6.4.3" to "907.2.6 through 907.2.6.4.2" to coordinate with numbering changes made to the 2012 IFC. Additionally, much of the existing rule language is reformatted to coordinate with the format of other alarm requirements contained in the proposed rule. *See e.g.*, sections 907.2.6.2 through 907.2.6.4.2 within Subpart 8. The specific requirements have not changed, but the requirements for I-1 occupancies are now subdivided into general requirements, alarm initiation requirements, and alarm notification requirements. This new format will help clarify the requirements for the user. The existing rule language does not contain general group I-1 alarm requirements; this omission caused confusion because the existing language contains specific alarm requirements for group I-2 and I-3 occupancies, but not for group I-1 occupancies.

IFC Section 907.2.6.1.1, Initiation. This subsection has two minor changes. The first is to replace the word "janitors'" with the term "custodial." This change is needed and reasonable since the term "custodial" is now more widely used to describe persons who perform cleaning activities. The other change to this subsection is to delete the word 'waiting" that is found immediately before the phrase "areas that are open to corridors" and replace it with the words "corridors and". This is a grammatical change needed to provide added clarity to this subsection.

Subpart 10. Section 907.2.8, Group R-1, general. This subpart contains proposed grammatical and numbering changes and modifies an exception found in subsection 907.1.8.1. The section reference "907.2.10" is deleted and replaced with "907.2.11" to coordinate with numbering changes made to the 2012 IFC. The term "guest room" has been changed to "sleeping unit" and the term "detectors" has been changed to "alarms" to coordinate with language changes made in the 2012 IFC. Finally, the amendment to the existing exception permits the elimination of alarm pull boxes at exits in fully sprinklered hotels. This exception for hotels designed with automatic sprinkler systems has been common industry practice in Minnesota for years and provides consistency with similar requirements located in other sections of the 2012 IFC.

Subpart 11. IFC Section 907.2.9, Group R-2, general. This subpart is changed by deleting the term "guest room" and replacing it with the term "sleeping room" and changing the term "detectors" to "alarms" so as to coordinate with language changes made in the 2012 IFC. The subpart is also amended by adding new uses to Condition #4, located in section 907.2.9. The new

uses are added because older versions of the State Fire Code used the term "congregate residences" to describe several types of identifiable sleeping facilities. "Congregate residences" are facilities such as dormitories, fraternities, sororities, group homes and shelters, and similar facilities where there are often three or more persons sleeping in a single room. Previous code editions required fire alarm systems in congregate residences having 20 or more occupants, so this amendment does not represent a change; it merely adds "congregate living facility" and "group home or shelter" to the list of occupancies needing a fire alarm system when they exceed 20 people, for better clarity.

Subpart 11a. IFC Section 907.2.10, Group R-4, general. Section 907.2.10 is new language that requires a fire alarm system in Group R-4 occupancies, with exceptions.

Exception #1 is similar to IFC Section 903.2.8, in that an alarm system is not required when the rooms are fire-separated, are limited in height (two stories maximum), and where each sleeping room has an exit directly to the exterior of the building. This type of building is similar to the older-style "motor hotel" where guests enter their rooms from a parking lot or yard, not though an interior corridor or lobby. Since these units are fire separated, limited in height, and have exit doors leading directly to the outside, the fire risk to occupants is greatly reduced. Therefore, it is reasonable to provide for an exception to the building fire alarm system otherwise required by this code for Group R-4 occupancies. Moreover, based on the design prerequisites, this exception will tend to decrease costs for buildings of this type.

Exception #2 is added to this section to exempt buildings containing five or fewer sleeping units with smoke alarms installed, which are required for one and two-family dwellings. When smoke alarms are provided according to the requirements for one and two-family homes, a complete building fire alarm system for R-4 occupancies is not required. Smaller buildings of this type are similar in design to that of one or two-family dwelling units, in both appearance and function. Therefore, this exception is a reasonable design alternative, compared to the requirements of a more expensive building fire alarm system. Moreover, a smoke alarm system meeting the code requirements for one or two-family dwellings also provides adequate life-safety features when installed in smaller buildings of this type. Based on the requirements of this section, this modification will also tend to decrease construction costs for buildings of this type.

Subsection 907.2.10.1, Initiation, specifies where automatic detection is required in a Group R-4 occupancy if a fire alarm system is installed. These locations are identical to those specified for Group R-1 and R-2 occupancies. However, an exception is added to exempt detectors when the building is sprinkler-protected. This exception is reasonable and needed to maintain consistency with other Group R occupancy smoke alarm system exceptions and to further the reduction of construction costs.

Subpart 12. IFC Section 907.2.10.1.4, Fire station and emergency medical quarters [REPEAL]. This subpart requires smoke alarms in the sleeping areas of fire stations and emergency medical quarters. Fire stations and emergency medical quarters are considered mixed occupancies in the 2012 codes. Therefore, any sleeping areas in fire stations or emergency medical quarters would be considered an "R" occupancy and already require single station smoke alarms. Therefore, this existing rule subpart is no longer needed and is proposed to be repealed.

Subpart 13. IFC Section 907.2.11.4, Power source. The section reference "907.2.10.2" is deleted and replaced with "907.2.11.4" to coordinate with numbering changes made to the 2012 IFC. Additionally, subsection 907.2.11.4 is modified by adding a third exception to the list of exceptions to allow battery powered smoke alarms in Group R-3 occupancies that have a complete automatic fire sprinkler system installed. This new exception is reasonable as it recognizes the effectiveness of residential automatic sprinkler systems in these types of occupancies.

Subpart 14. IFC Section 907.2.10.5, Smoke alarms in arc-fault protected circuits [REPEAL]. This subpart contains a modified requirement for backup power supplies for smoke alarms that receive their primary power from circuits that have arc-fault circuit interruption protection. This requirement is now contained in the 2012 IFC, so the modification is no longer needed.

Subpart 15a. IFC Section 907.3, Fire safety functions. This subpart relocates language that is currently located in subpart 22 to coordinate with numbering changes made to the 2012 IFC. The language in the body of the subpart remains unchanged.

Subpart 15b. IFC Section 907.6.5, Monitoring. 2012 IFC Section 907.6.5 is deleted because it requires all fire alarms to be monitored, which has never been required in Minnesota as a general requirement. Past practice has been that only certain occupancies need fire alarm central station monitoring, such as Group I occupancies where the occupants cannot escape without assistance. The Department has determined that it is reasonable for monitoring requirements to continue to be occupancy specific. Depending on location and type of monitoring required, alarm monitoring can be expensive. It is not reasonable to require this additional expense for every property in Minnesota if it already has a fire alarm system.

Subparts 16 through 20 [REPEAL]. These subparts all deal with fire alarm requirements in existing buildings. The 2012 IFC has a new Chapter 11 where all the requirements for existing buildings are now located. Therefore, modifications to these requirements currently found in Subparts 16 to 20 of this rule part are being repealed and proposed to be moved to a new rule part, Minnesota Rules, part 7511.1100.

Subpart 21. IFC Section 907.10.2, Audible alarms [REPEAL]. Subpart 21 pertains to the requirement for audible fire alarms. This subpart is proposed to be deleted because the 2012 IFC now contains the requirements currently found in this rule subpart.

Subpart 22. IFC Section 907.11, Fire safety functions [REPEAL]. This subpart pertains to the requirement for automatic fire detectors. This subpart is proposed to be deleted as these provisions have been relocated to subpart 15a.

Subpart 23. IFC Section 907.12, Duct smoke detectors [REPEAL]. This existing rule subpart deletes the requirement for duct smoke detectors from the 2006 IFC. The requirement is no longer contained in the 2012 IFC; therefore, the modification is no longer necessary and subpart 23 is proposed to be repealed.

Subpart 24. IFC Section 907.15, Monitoring [REPEAL]. This subpart deletes the requirement for monitoring from the 2006 IFC. This requirement is now found in 2012 IFC

Section 907.6.5, which is modified by Minnesota Rules, part 7511.0907, subpart 15b. Therefore, this existing rule subpart is no longer necessary and proposed to be repealed.

Subpart 25. IFC Section 907.8.2, Testing. This subpart is amended by changing the section reference number from "907.20.2" to "907.8.2" to coordinate with numbering changes made to the 2012 IFC. There are no other technical language changes to this subpart.

7511.0908 SECTION 908, EMERGENCY ALARM SYSTEMS.

This new rule part deletes 2012 IFC Section 908.7, which requires Carbon Monoxide (CO) alarms in certain occupancies. This section conflicts with Minnesota Statutes, section 299F.50, and is therefore proposed to be deleted.

7511.0909 SECTION 909, SMOKE CONTROL SYSTEMS.

Subpart 1. IFC Section 909.4.7 [REPEAL]. Subpart 1 is being repealed because the requirements are being relocated to a new Subpart 1c. It is necessary to relocate the language in this subpart to numerically accommodate the addition of several new subparts to this rule part.

Subpart 1a. IFC Section 909.1, Scope and purpose. This new subpart modifies the scope of this section. It clarifies that these smoke control systems are meant to provide a tenable atmosphere while occupants are evacuating the area or building. The smoke control requirements found in this section are not necessarily designed to remove all smoke, preserve contents, or restore the property back to operation. The smoke control design in this section is only meant to provide life safety. This modification is necessary because some code officials and designers have misinterpreted this section to mean that these systems must be designed to remove all and any smoke in the design area. If the requirements are enforced in this manner, it adds unnecessary cost to a building's mechanical system and creates additional system maintenance for the building owners. Therefore, these changes are reasonable and needed to clarify the intended scope and application of smoke control system requirements, which will tend to lower construction costs.

Subpart 1b. IFC Section 909.4.6, Duration of operations. This new subpart is added to modify this section of the 2012 IFC by deleting the phrase "or 1.5 times the calculated egress time, whichever is less" and replacing it with "System design shall be for 20 minutes; however, fans shall continue to operate after 20 minutes and shall continue to operate automatically for smoke removal during fire suppression and overhaul efforts for a minimum of 5 minutes for every 10 feet vertically of protected space." This modification is reasonable and needed to clarify minimum system operating timelines when the system is in alarm/operating mode for firefighting and overhaul operations. This clarification will simplify the operating prerequisites for smoke control systems and assist system designers by not having to engage the services of a fire protection engineer in every design project (egress time calculations involve hiring a fire protection engineer). Smoke control system installation is typically performed by a mechanical engineer who is not familiar with egress time calculations. Without this change, a fire protection engineer's assistance would be required for every smoke control system design in Minnesota. While fire protection engineers are necessary for complex fire protection designs, they are not necessary for every smoke control system installation. This modification will also tend to reduce design and

construction costs in Minnesota.

Subpart 1c. IFC Section 909.4.7, Door opening force. This new subpart contains the language that was moved from existing Subpart 1 and deals with door-opening force. The language in the body of the text has not changed.

Subpart 1d. IFC Section 909.20, Maintenance. This proposed subpart adds "post-fire smoke exhaust systems" to the maintenance section. This subpart is needed to provide guidance for the maintenance of these systems. Section 909.20.6 also adds some general requirements for those who inspect these systems. Because smoke control and post-fire smoke exhaust systems are engineered systems of a highly technical nature, some level of required expertise to safely maintain and inspect them is needed and reasonable.

Subpart 2. IFC Section 909.21, High-rise and covered mall smoke-exhaust systems. This subpart is amended by renumbering the section reference from "909.22" to "909.21" to coordinate with numbering changes made to the 2012 IFC. This subpart is further amended by deleting the phrase "and covered mall buildings exceeding 50,000 square feet (4645 m^2) in floor area, excluding anchor stores" and replacing it with "not provided with a smoke control or post-fire smoke exhaust system, shall be equipped with a smoke system installed and maintained in accordance with the Building Code. Covered mall buildings exceeding 50,000 square feet (4,645 m^2) in floor area, excluding anchor stores, and not provided with a smoke control system". This change is needed to clarify which type of smoke exhaust system is required for the two types of buildings addressed in this subpart: a smoke removal system in accordance with the Minnesota State Building Code for high rise structures; and a post-fire smoke exhaust system in accordance with the Minnesota State Building Code for large, covered mall buildings.

7511.0910 SECTION 910, SMOKE AND HEAT VENTS.

Subpart 1. IFC Section 910.1, Required venting method. This subpart remains unchanged.

Subpart 2. IFC Section 910.4, Mechanical smoke exhaust. This subpart is modified by changing the section reference from "910.4.6" to "910.4.7" to accommodate the addition of a new Subpart 7 at the end of this rule part.

Subpart 3. IFC Section 910.4.3, Operation. This subpart is changed by deleting the word "automatically" and replacing it with the word "manually." The remainder of the sentence and the next sentence are deleted. This modification reflects a change in the way the system is required to be activated. Smoke and heat vents will now be required to be manually activated, as opposed to automatically activated, in a fire/heat condition. The subpart is further modified by deleting the exception, which permits manual activation when approved by the code official.

There is no reasonable basis to require the installation of expensive automatic operating capabilities of smoke and heat exhaust and venting systems because it is the fire commander's function at the scene of a fire to determine when or if a system needs to be activated. Most smoke and heat exhaust and venting systems are already designed to be manually activated, and because these systems are intended to be used solely by fire department personnel, control and operation of

the system would commence only if or when necessary. Moreover, automatic systems can experience a premature activation of the mechanical smoke control, which can negatively affect the efficiency of the fire suppression system. These modifications will not reduce minimum levels of life-safety or fire-fighting capabilities. However, the change in requirements will tend to decrease costs related to the design and installation of these systems. These modifications will also reduce associated long-term maintenance requirements and related fees.

Subpart 5. IFC Section 910.5, Calculated engineering design of mechanical smoke exhaust. This subpart is changed by changing the section reference from "910" to "910.5" and by changing the lead-in direction of the subpart to clarify the application of the modification to the 2012 IFC. In addition, subsection 910.5.3 is amended by making the same changes as were made in subpart 3, IFC Section 910.4.3, Operation, above.

Subpart 6. IFC Section 910.6, Testing and maintenance. This section is amended by adding a numerical subpart to the heading to appropriately separate the sections. This section was inadvertently added during the last rulemaking without a subpart heading. Additionally, the reference to sections "909.18.2 through 909.18.5" is deleted and replaced with a reference to section "909.18". This amendment is necessary to coordinate with numbering changes made to the 2012 IFC.

Subpart 7. IFC Section 910.7, Maintenance. This new subpart relocates the requirements for the maintenance of smoke and heat vents. These requirements are currently located in section 910.5 of the 2012 IFC, but needed to be relocated in this proposed rulemaking to follow the reformatting in this rule part. The requirement is unchanged from that found in the 2012 IFC.

7511.1001 SECTION 1001, ADMINISTRATION.

Subpart 1. IFC Section 1001.1 General. This subpart is amended by changing the section references to correspond with the renumbering of the 2012 IFC. This is necessary due to the reformatting that has occurred in the 2012 edition of the IFC.

IFC Section 1001.1.1, Compliance options. This new subsection addresses compliance options for means of egress. Specifically, if the means of egress complies with either the Minnesota State Building Code or the Minnesota State Residential Code, then it is deemed to comply with provisions found in the State Fire Code. This change is reasonable and needed to prevent confusion or conflict with other State codes.

Subpart 1a. IFC Section 1001.1, General. This new subpart deletes the exception from 2012 IFC Section 1001.1. The exception addresses certain detached one- and two-family dwellings and townhouses and provides that these structures may comply with the International Residential Code's means of egress requirements, rather than the IFC. It is reasonable to delete this exception for these structures in Minnesota because new subsection 1001.1.1, found in the newly proposed Minnesota Rules, 7511.1001, subpart 1, now addresses means of egress compliance options for these buildings.

Subpart 2. IFC Section 1001.3, Special exiting provisions for younger students. This existing rule subpart is amended by adding the phrase "latchkey, child care, early childhood family education, teen parent, or similar programs" after the phrase "second-grade pupils." These additional groups of students have been added to the requirement because they are a similar population to the groups addressed in the existing rule and have identical issues concerning egress from rooms contained in these structures during a fire emergency. Historically, structures occupied by these additional groups of children in Minnesota have always been included in this provision. However, this amendment will now specifically recognize those groups and provide needed clarity for building designers, code officials, and program administrators.

7511.1002 SECTION 1002, DEFINITIONS.

This rule part is being repealed because the definition section in the 2012 IFC has been relocated to Chapter 2 of the same. As a result of this 2012 reformatting, the Minnesota modification of the IFC's definitions have also been relocated to proposed Minnesota Rules, part 7511.0202, to coordinate with the reformatting and renumbering of the 2012 IFC.

7511.1008 SECTION 1008, DOORS, GATES AND TURNSTILES.

The majority of the changes to Subparts 1, 2, and 3 are renumbering issues; however, there are some technical changes that are addressed in the following paragraphs.

Subpart 1. IFC Sections 1008.1.9.1, 1008.1.9.2, and 1008.1.9.3. Subpart 1 is changed by deleting the section references "1008.1.8.1, 1008.1.8.2, and 1008.1.8.3" and replacing them with section references "1008.1.9.1, 1008.1.9.2, and 1008.1.9.3" to coordinate with renumbering changes made to the 2012 IFC. In addition, subsection 1008.1.9.2, Hardware height, is amended by adding a sentence that reads "Locks used only for security purposes and not used for normal operation are permitted at any height." This sentence is part of the 2012 IFC and allows security locks to be placed at any height. An example would be an unframed glass door at the front of a tenant space in a mall that has the lock near the floor level. The lock is only used when the store is not open for business; these locks are not required for the normal operation of the door. This provision is reasonable and needs to be included in the rule part, otherwise after-hours security locks would not be allowed and there would be no practical way to secure the business front after an establishment closes.

IFC Section 1008.1.9.3, Locks and latches. This subsection has several changes to the existing numbered conditions:

Condition #2 is amended to replace the term "church" with "places of religious worship." This change is reasonable because it recognizes that various places of religious worship exist that are not commonly referred to as "churches," such as synagogues, temples, and mosques. This change occurs in several locations throughout the 2012 IFC. Therefore, in the interest of uniformity, it is necessary to provide consistency of terminology between the model codes and the State Building and Fire Codes.

Condition #5 is a new condition pertaining to fire doors after the minimum elevated temperature has disabled the unlocking mechanisms. Condition #5 was added to the IFC after the

2006 edition that was last adopted in Minnesota. It reasonably requires that door hardware installed on fire-rated doors fail when subjected to elevated temperatures so that an occupant cannot mistakenly open a door during a fire emergency and be subjected to extreme heat and fire conditions.

Existing Condition #5 has been renumbered to Condition #6 to accommodate the addition of the new Condition #5, discussed above. It also contains a change that deletes the section reference "1008.1.8.6" and replaces it with section reference "1008.1.9.7" to coordinate with numbering changes made to the 2012 IFC.

Existing Condition #6 has been renumbered to Condition #7 to accommodate the addition of the new Condition #5, discussed above. In addition, the term "egress control devices" is replaced with the term "locking arrangements" to coordinate with terminology used elsewhere in the proposed rule and the 2012 IFC. This condition is also changed by deleting the section reference "1008.1.11" and replacing it with section reference "1008.1.9.6." This change is necessary to coordinate with the reformatting of the 2012 IFC.

Existing Condition #7 has been renumbered to Condition #8 to accommodate the addition of the new Condition #5, discussed above. In addition, this condition is amended by deleting the existing language regarding "existing door locking arrangements in Group I occupancies" and replacing it with the sentence "Electromagnetically locked egress doors installed and maintained in accordance with Section 1008.1.9.9." The electromagnetic locking method is added here because, although referenced as an approved locking/latching method in section 1008.1.9.9, it was inadvertently omitted from section 1008.1.9.3 of the 2012 IFC. Therefore, the addition of electromagnetically locked egress doors to Condition #8 of this rule part is reasonable and also needed to correct that previous omission.

Existing Condition #8 has been renumbered to Condition #9 to accommodate the addition of the new Condition #5, discussed above. In addition, this condition is also amended by changing the term "special locking arrangements" to the term "special detention arrangements" to provide consistency in terminology used within other sections of the code. Also, the reference to "section 1008.1.10" is changed to "section 1008.1.11" to accommodate the reformatting of the 2012 IFC.

Subpart 1a. IFC Section 1008.1.9.6, Special locking arrangements in Group I-1, I-2, R-3, or R-4 occupancies. The majority of the language and requirements in this rule subpart come directly from the text of 2012 IFC Section 1008.1.9.6, without change. However, this modification expands the scope of the 2012 IFC special locking arrangement requirements to include other similar occupancies. The 2012 IFC only allows these "special locking arrangements" in Group I-2 occupancies (*e.g.,* hospitals and nursing homes). The Minnesota modification, however, expands their use to other types of occupancies where these types of locking arrangements are necessary due to the needs of the people being cared for in similar facilities. Like Group I-2 occupancies, other institutional occupancies and some residential occupancies have patients and residents with dementia, elopement, behavioral issues, and cognitive impairments where keeping them secured inside of a building is safer than if they were allowed to leave. Many of these are facilities licensed by the Minnesota Department of Health or the Minnesota Department of Human Services and provide specialized care for their residents.

The modification reasonably extends these types of special locking arrangements to Group I-1, R-3, and R-4 occupancies that house persons with issues similar to those found in hospitals and nursing homes. State and federal court rulings in recent decades have directed and encouraged agencies to move these people from institutional to more residential settings. Indeed, the expansion of the scope of the 2012 IFC requirements to other occupancies is consistent with provisions in past editions of the Minnesota State Fire Code which allow their use under certain conditions.

Item #s 1-7 and the exception are virtually identical language to what appears in the 2012 IFC. Item # 8 is added to require 24-hour a day resident or patient supervision. This requirement is assumed in the IFC language since it only applies to I-2 occupancies, which by definition require 24-hour patient supervision. However, it is needed for clarification of the Minnesota modification because it expands the scope of the requirement to other similar institutional and residential occupancies where 24-hour supervision of patients or residents is not always required. Item # 9 requires that the locking devices fail in the "safe" (*i.e.,* unlocked or open) position for both patient/resident safety and ease of emergency personnel access during an emergency. Finally, Item # 10 adds a provision that requires the building to have some form of smoke barrier separation so that occupants can relocate to an area within the building that is not directly impacted by the fire. But an exception is added for one and two-family residential dwellings where the installation of an interior smoke barrier separation area is neither practical, nor cost effective. Instead, this exception reasonably allows a sleeping room with smoke-tight construction and a compliant escape window, in lieu of providing an interior smoke barrier separation area. This exception is reasonable and needed to provide safe and efficient options for the security of residents while simultaneously providing a high level of fire safety.

Subpart 2. IFC Section 1008.1.9.7, Delayed egress door locks. This subpart is changed by renumbering the section reference numbers because the sections were renumbered in the 2012 IFC. This subpart has also been amended to use the complete title of the occupancies where delayed egress locks must not be installed. The reorganization also clarifies that item #s 1-4 apply to the door locks. Item #5 and #6 are renumbered to #1 and #2 under the requirements that apply to items other than the locking devices. Item #3 is new and is needed to reasonably ensure that the locking devices are maintained and will continue to function properly during an emergency.

This subpart is also amended by adding the phrase "and assembly uses within Group E occupancies" to the first sentence. This language is being added because of a change in the 2012 IFC where "assembly uses" connected to an educational occupancy are now classified as an educational occupancy classification (*i.e.,* Group E), instead of an assembly occupancy classification. It is reasonable to prohibit delayed locking mechanisms on doors located in assembly occupancies because in the event of an emergency, large groups of people must be able to evacuate quickly and cannot be locked in for an additional 15 or 30 seconds, risking being crushed by a crowd trying to evacuate. Additionally, several descriptive terms are being added to the subpart to better define and clarify Group A and H occupancies and the phrase "Delayed egress locks shall be installed only" is being inserted before the phrase "in buildings that" to provide further clarity to the subpart.

The first paragraph of the subpart is also amended by deleting the language "an approved automatic smoke detection system installed in accordance with section 907" and replacing it with

the phrase "an approved smoke detection system installed in the means of egress system serving the locked area." This change is needed and reasonable because the 2012 IFC only requires early warning protection by detectors located within the exit system of the building.

Finally, a requirement has been added as Subpart 2's last condition that these delayed egress locking systems be maintained and tested. This change is reasonable and needed because the State Fire Marshals Office has experienced past problems in educational occupancies where the delay mechanism identified in condition #4 of the requirement ("not more than 15 second latch release when a 15 pound force is applied") has been manually overridden. The delay devices can be overridden because these unlocking systems can be controlled by facility staff using a computer program. Therefore, ongoing maintenance and testing of these devices is reasonable and needed to ensure that the 15 second maximum delay has not been overridden by facility staff.

Subpart 2a. IFC Section 1008.1.9.11, Stairway doors. This new subpart modifies 2012 IFC Section 1008.1.9.11. The modification to section 1008.1.11 coordinates with a similar requirement located in Minnesota Rules, part 1305.1003, subpart 4. This modification is reasonable and needed to remove any conflicts and coordinate this portion of the fire code with Chapter 1305 of the Minnesota State Building Code.

Subpart 3. IFC Section 1008.1.11, Special detention arrangements. This subpart is amended by renumbering the section reference number from 1008.1.10 to 1008.1.11 and retitling the section from "Special locking arrangements" to "Special detention arrangements." The sections are renumbered to coordinate with changes made to the 2012 IFC and the section is retitled to better explain the intent of the requirement for use with the 2012 IFC.

In subsection 1008.1.11.1, Locking hardware, a new condition #6 is added to the list of conditions for release of locking devices that states, "Operation of a manual switch located in an approved location." This new condition is reasonable and needed as it provides an additional means to unlock these doors for added safety in these occupancies and most detention installations already provide for this manual switch.

Subsection 1008.1.10.4, entitled "Construction," is retitled to "Door swing." The subsection is also renumbered to 1008.1.11.4 to coordinate with numbering changes made to the 2012 IFC. This subsection is further modified by deleting the current language pertaining to rooms with special locking arrangements, door separating rooms, and interior finishes and replacing it with new language that pertains only to door swing. This change is reasonable and needed to remove any conflicts and coordinate this portion of the fire code with Chapter 1305 of the Minnesota State Building Code.

The language in existing subsections 1008.1.10.4 and 1008.1.10.5, regarding location and construction requirements for rooms with special locking arrangements, is being deleted. Locked areas are already required to be equipped with quick response sprinkler heads and smoke detection and there is no documented history of fire related problems relative to locked rooms with quick response sprinkler heads and smoke detection. Therefore, the existing requirements provide no added value to life-safety and tend to add an unnecessary construction expense. Also, since the rooms with special locking are required to have quick response sprinklers, the fire resistivity of the room or location of the same will not be a significant factor for the life safety of the room occupant.

Finally, smoke detection systems connected to the building fire alarm will notify facility personnel that there is smoke or fire in the room. Existing sprinkler and smoke alarm requirements outweigh the need for unnecessary and expensive fire-resistive construction and is not needed to protect the room occupant. Therefore, it is reasonable to delete these requirements because they tend to unnecessarily increase construction costs and are not needed to fully protect detention occupants.

Finally, subsection 1008.1.12, Exit stair door locking, is deleted in its entirety as this requirement is now covered in subsection 1008.1.9.11, Stairway doors, found in proposed Minnesota Rules, part 7511.1008, subpart 2a, above.

7511.1009 SECTION 1009, STAIRWAYS.

Subpart 1. IFC Section 1009.13, Alternating tread devices. This rule part is amended by adding a subpart and changing the title to the heading. The current subpart language addressing "Outdoor conditions" is deleted and replaced with modified language addressing alternating tread devices.

Outdoor conditions are now covered in section 1010.8.2 of the 2012 IFC, making this rule part no longer necessary. The modified IFC section 1009.13 includes all the current language found in the IFC and adds two sentences to the end of the paragraph. The first sentence directs the code user to the IBC and the State Mechanical Code for access requirements to mechanical equipment on a roof. The second sentence is provided to alert users of this code that sections 1009.13.1, 1009.13.2, and the exception still apply. The additions are reasonable and necessary to coordinate with other state codes.

Subpart 2. IFC Section 1009.14, Ships ladders. A new subpart is added to address ships ladders and allows them to be used in certain limited applications such as guard towers, maintenance areas, unoccupied spaces, and other rarely accessed spaces like the roofs of press boxes, water towers, radio towers, etc. This modification is needed and reasonable because the 2012 IFC only allows ships ladders to be used in guard tower observation areas. However, there are other applications where the use of ships ladders in Minnesota are common, safe and appropriate. Without this modification, all of these ships ladders would need to be replaced by code compliant stairways.

7511.1013 SECTION 1013, GUARDS.

Subpart 1. IFC Section 1013.2, Where required. This new subpart modifies 2012 IFC Section 1013.2 by adding an exception for bleachers that are 55 inches or less in height. This exception is necessary to coordinate and comply with Minnesota Statutes, section 326B.112, the Minnesota Bleacher Safety Act.

Subpart 2. IFC Section 1013.3, Height. This new subpart modifies section 1013.3's exception #4 to require compliance with the Minnesota Bleacher Safety Act, in addition to IFC Section 1028.14. The modification to this exception is reasonable and needed to coordinate the exception with Minnesota Statutes, section 326B.112.

Subpart 3. IFC Section 1013.8, Window sills. This new subpart regarding sill height and window opening control devices is added to the rule to coordinate with similar requirements located in recently adopted Minnesota Rules, part 1305.1013. This new subpart is needed to prevent conflicts between the two rule chapters.

7511.1014 SECTION 1014, EXIT ACCESS (Renumbered to 7511.1017).

7511.1015 SECTION 1015, EXIT AND EXIT ACCESS DOORWAYS.

This rule part is amended by adding the phrase "from spaces" to the heading of the section to coordinate with changes made to the 2012 IFC. The existing exception for condition #1 and the section reference numbers contained in condition #3 are also amended to incorporate changes made to the 2012 IFC. In addition, the existing exception in condition #4 is deleted because it was incorporated into condition #1 in the 2012 IFC, so it is no longer needed in this location of the rule part. Finally, new language is added at the end of this rule part also to coordinate with changes made to the 2012 IFC. These changes are reasonable and needed to coordinate with the 2012 IFC and to avoid any conflicts between the proposed rules and that model code.

7511.1017 SECTION 1017, AISLES.

This rule part is being renumbered and relocated because this section was renumbered from section 1014 to section 1017 in the 2012 IFC. This new rule part deletes the language contained in section 1017 of the 2012 IFC and carries forward existing language from Minnesota Rules, part 7511.1014. The title and two section reference numbers are also changed to coordinate with changes made to the 2012 IFC. Additionally, grammatical changes are made in several sections of this rule part to provide additional clarity to the rule. The remaining content is unchanged.

7511.1018 SECTION 1018, CORRIDORS.

Subpart 1. IFC Table 1018.1, Corridor fire-resistance rating. This new subpart is added to modify table 1018.1 in the 2012 IFC. The table is modified by replacing the phrase "Not Permitted" with a number "1" in the group R occupancy (residential occupancies) row. The 2012 IFC, as published, requires all Group R occupancies to be equipped with an automatic fire sprinkler system. However, in order to coordinate with recently adopted Chapters 1309 and 1305, Minnesota modifies the sprinkler installation requirements in proposed Minnesota Rules, part 7511.0903, subpart 1a, to exempt certain occupancies from that requirement. Therefore, the change to Table 1018.1 is reasonable and needed to recognize that not all Group R occupancies in Minnesota are required to be sprinkled and that buildings that are not equipped with an automatic sprinkler system must have a 1-hour fire-resistive corridor system to protect the exit system from smoke and fire. This change coordinates with the same requirement in the 2012 IBC.

Subpart 2. IFC Section 1018.6, Corridor continuity. The language in the main paragraph is identical to 2012 IFC Section 1018.6, but the exceptions are modified. Language is added to exception #1 to limit the size of the room or space to 1,000 square feet. This language is added because the IFC requirement does not allow rooms or spaces to be open to a fire-resistive rated corridor, other than those identified in the exception (*e.g.*, foyers, lobbies, and reception rooms). However, those rooms identified in the IFC exception have no size limitations and may

pose a hazard to life and safety during a fire due to the potential for combustible loading of these larger room areas.

Exception #2 is modified by allowing spaces to be open to corridors in certain conditions (*e.g.*, rooms not used as sleeping spaces, storage spaces, or hazardous uses). These spaces and corridors must have early warning smoke detection and neither the configuration of the space, nor objects occupying the space, may obstruct egress. These types of spaces are becoming common in apartment buildings, hotels, assisted living facilities, memory care facilities, nursing homes, and hospitals. In most of these buildings, these types of spaces are used for sitting purposes and contain seating furniture and small tables. In hospitals, these areas are sometimes outside patient rooms and used for electronic charting and computer equipment. They may also contain drug carts and emergency "crash carts" for resuscitation in hospitals. The modifications in this subpart are needed and reasonable because they incorporate "alternate" designs or methods that are accepted and have been proven effective over the years. This will provide more uniform application and enforcement of the requirements, while maintaining a level of safety for occupants that use these fire-resistance rated corridors during a fire event.

7511.1019 SECTION 1019, NUMBER OF EXITS AND CONTINUITY [REPEAL].

This amendment is repealed because it is no longer necessary since the requirement is now included in 2012 IFC Section 1021.

7511.1022 SECTION 1022, INTERIOR EXIT STAIRWAYS AND RAMPS.

IFC Section 1022.5, Penetrations. This new rule part modifies section 1022.5 of the 2012 IFC by deleting the exception listed in this section that permits miscellaneous membrane penetrations in the outside membrane material of interior exit stairway enclosure walls when they are protected according to section 714.3.2 of the International Building Code. Examples of miscellaneous membrane penetrations include items such as electrical pipes, plumbing pipes, outlets, or mechanical ducts. The exception is being deleted because these miscellaneous penetrations may cause oversized holes around the items penetrating the wall and could potentially allow fire or smoke to enter the protective enclosure, thus jeopardizing fire protection for occupants while exiting downward in an exit enclosure during a fire. This modification is also being proposed since the same language has recently been adopted in Chapter 1305, which will provide consistency and uniformity between Minnesota codes.

7511.1023 SECTION 1023, EXIT PASSAGEWAYS.

IFC Section 1023.6, Penetrations. This new rule part modifies section 1023.6 of the 2012 IFC by deleting the exception listed in this section that permits miscellaneous membrane penetrations in the outside membrane material of an exit passageway wall when it is protected according to section 714.3.2 of the International Building Code. An exit passageway is a fire-resistive rated "tunnel," used only for the purposes of exiting, that runs from the interior of a building to a safe exterior exit discharge area. The exception is being deleted because these miscellaneous membrane penetrations, if not properly protected, could potentially allow fire or smoke to enter the exit passageway wall cavity and may jeopardize fire protection for occupants while they are exiting through the exit passageway to an exit or exit discharge area in the event of

a fire. This modification is also being proposed since the same language has recently been adopted in Chapter 1305, which will provide consistency and uniformity between Minnesota codes.

7511.1025 SECTION 1025, ASSEMBLY (Renumbered to 7511.1028).

7511.1026 SECTION 1026, EMERGENCY ESCAPE AND RESCUE (Renumbered to 7511.1029).

7511.1027 SECTION 1027, MEANS OF EGRESS FOR EXISTING BUILDINGS [REPEAL].

This rule part is repealed because all of the requirements for means of egress in existing buildings were moved to 2012 IFC Chapter 11.

7511.1028 SECTION 1028, MAINTENANCE OF THE MEANS OF EGRESS (relocated to 7511.1030).

7511.1028 SECTION 1028, ASSEMBLY (renumbered from 7511.1025).

This section and the section reference numbers contained therein are renumbered to coordinate with the reformatting of the 2012 IFC. There are no technical changes to this rule part.

7511.1029 SECTION 1029, EMERGENCY ESCAPE AND RESCUE (relocated from 7511.1026).

This rule part is renumbered from existing Minnesota Rules, part 7511.1026, to coordinate with numbering changes made to the 2012 IFC. The content from the existing rule is being carried forward into this rule part, with amendments. This subpart only applies to new construction and buildings undergoing alteration or repair, including replacement windows. Escape window provisions for existing buildings are now found in proposed Minnesota Rules, part 7511.1104, subpart 18, section 1104.25.

Subpart 1. IFC section 1029.1, General. This subpart is amended to coordinate with changes made to the 2012 IFC and recently adopted Chapter 1305 regarding emergency escape and rescue openings in basements and sleeping rooms of Group R occupancies.

This subpart is amended so this section applies to all Group R occupancies. This is necessary because the 2012 IFC requires *all* Group R occupancies to be protected with an automatic fire sprinkler system. However, in Minnesota, some Group R occupancies below a certain square footage in size are exempt. *See* Minnesota Rules, part 1305.0903, subpart 1a (Group R-1 and R-2 occupancies exempt if less than 4,500 square feet of building area; Group R-3 and R-4 occupancies exempt if less than 4,500 square feet of building area). If the occupancy is not provided with an automatic fire sprinkler system, then a secondary means of egress is required from sleeping areas, such as an escape window. This change is necessary to coordinate with changes made to the 2012 IFC and recently adopted Minnesota Rules, part 1305.1029, subpart 1.

The exceptions to this subpart have been reorganized, amended and additions made to coordinate with recently adopted Minnesota Rule part 1305.1029, subpart 1.

Exception #1 exempts certain occupancies from the emergency escape and rescue openings requirement if the building is equipped throughout with an automatic sprinkler system. However, Exception #1 requires an escape and rescue opening in Group R-2 occupancies (apartments) despite the fact that they may be equipped with a fire sprinkler system because of occupancy loads.

Exception #2 exempts all occupancies except Group R-3 from an emergency escape and rescue opening if the sleeping room has a separate door leading to a fire rated corridor with 2 separate exit paths. This is reasonable and safe because two alternate means of egress from sleeping rooms in these occupancies already exist.

Exception #3 allows an emergency escape and rescue opening to open onto a balcony in an atrium space if it otherwise complies with the State Building Code and the balcony has access to an approved exit. This provision has been included in the building code for some time and is carried forward in recently adopted Minnesota Rules, part 1305.1029, the Minnesota State Building Code. The exception is included to avoid any conflict between the Minnesota State Fire Code and the Minnesota State Building Code.

Exception #4 exempts emergency escape and rescue openings from high rise buildings that meet the requirements of section 403 of the International Building Code. This is reasonable since high rise buildings have numerous additional safety requirements and exiting provisions that far exceed this requirement. This provision has been included in the building code for some time and is carried forward in recently adopted Minnesota Rules, part 1305.1029. This exception is included to avoid any conflict between the Minnesota State Fire Code and the Minnesota State Building Code.

Exception #5 exempts emergency escape and rescue openings if the basement of the sleeping room has a door directly to the exterior of the building. This is reasonable since a door exiting directly to the exterior of the building is a more efficient means of egress than an emergency escape window.

Exception #6 exempts emergency escape and rescue openings from non-habitable spaces under 200 square feet. This exception is reasonable because these areas are generally unlikely to have any persons present other than for maintenance purposes.

Exception #7 is added to provide an option for basements or basement bedrooms if the building is protected with an automatic sprinkler system. In some cases, it may be less costly to install a fire sprinkler system in lieu of emergency escape and rescue openings because of the building's foundation design, soil type, or water table. This amendment is needed and reasonable because it allows buildings to omit emergency escape and rescue openings when the building has a fire sprinkler system installed throughout. This option may be a cost savings in cases where an emergency escape and rescue opening would be more expensive to install than a fire sprinkler system. Identical requirements are also included in the recent adoption of Minnesota Rules, part 1305.1029, subpart 1.

Exception #8 exempts emergency escape and rescue openings from Group R-3 basements that only house mechanical equipment and that do not exceed 200 square feet in area. This exception is reasonable as these residential basements are not considered habitable spaces for building occupants. This new language is also needed to coordinate with identical requirements found in the recent adoption of Minnesota Rules, part 1305.1029, subpart 1.

Exception #9 is added to provide another option for emergency escape and rescue opening requirements in basements or basement bedrooms of Group R-3 occupancies that comply with all the conditions listed in the exception. The first condition applies to buildings constructed prior to August 1, 2008. Buildings in "non-code" enforcement areas constructed prior to that date were not mandated to comply with the Minnesota State Building Code requirements. Therefore, buildings with basements or basement bedrooms constructed prior to that date would be exempt. The second condition requires that the building must be undergoing an alteration or repair. The third conditon identifies specific requirements under which a fire sprinkler system may be installed in lieu of the required emergency escape and rescue opening. This condition requires that an automatic fire sprinkler system be installed in accordance with section 903.3 throughout the entire basement area and installed in all portions of the means of egress to the level of exit discharge, including all the areas on the level of exit discharge that are open to the means of egress. The installation of an emergency escape and rescue opening can become expensive and complex, and in certain cases, may involve altering the foundation and soils surrounding the home because of the building's foundation design, soil type, or water table. Exceptions #7 and #9 provide needed and reasonable alternatives to installing emergency escape and rescue openings for basements or basement bedrooms in difficult circumstances. This new language is also needed to coordinate with identical requirements found in the recent adoption of Minnesota Rules, part 1305.1029, subpart 1, to avoid conflicts between the Minnesota State Fire Code and Minnesota State Building Code.

Subpart 2. IFC section 1029.4, Operational constraints. The language in this new subpart modifies section 1029.4 of the 2012 IFC by adding an exception to permit the installation of window opening control devices that do not require the use of keys or tools to operate if the device is installed in accordance with ASTM F 2090. This modification is needed to coordinate with the same requirement in other parts of this rule and recently adopted Minnesota Rules, part 1305.1029, subpart 2.

Subpart 3. IFC section 1029.6, Replacement windows. The language in this new subpart adds requirements for replacement windows to this section of the 2012 IFC. This modification mirrors that of the recently adopted Minnesota Rules, part 1305.1029, subpart 3, and exempts replacement windows from maximum sill height, minimum opening area, minimum opening width, and minimum opening height requirements if they meet the conditions listed in this rule part. This change is reasonable and needed to coordinate with the recently adopted Chapter 1305 and because most existing windows do not meet current building code requirements for minimum size, height, and opening area. For replacement windows to meet these minimum requirements, window opening sizes would generally need to be increased, which can require extensive remodeling and increased construction costs. This change will allow replacement windows to be the same or different style as the original window, so long as the area of the new window opening is the same size or larger than that of the original opening. This change not only

offers more flexibility in determining what type and style of window can be used, it also ensures that a minimum level of life-safety is maintained in each space where the window is replaced.

IFC section 1029.6.1, Licensed facilities. This new language modifies section 1029.6 by adding new subsection 1029.6.1, Licensed facilities, which states that rooms used for foster care or daycare, which are licensed by or registered with the State of Minnesota, must comply with conditions "a" through "d" or section 1029.6, whichever is more restrictive. This language is based on a current policy enforced by the Minnesota State Fire Marshal Division. The State Fire Marshal Division has had problems concerning replacement windows. Individuals have replaced windows, sought foster care or daycare licensing or registration, and subsequently learned that the windows that were replaced do not comply with the requirements for foster care or daycare licensing or registration requirements. This amended language will inform code users and stakeholders that foster care or licensed or registered daycare in the State of Minnesota must comply with section 1029.6 or 1029.6.1, whichever is more restrictive. This is reasonable and necessary because it clarifies window replacement requirements for rooms used for foster care or day care and will provide uniform enforcement of the code for both building officials and between state agencies. It is also needed to coordinate with recently adopted Minnesota Rules, part 1305.1029, subpart 3, to avoid conflicting requirements between the Minnesota State Fire Code and Chapter 1305 of the Minnesota State Building Code.

7511.1030 SECTION 1030, MAINTENANCE OF THE MEANS OF EGRESS (relocated from 7511.1028).

Subpart 1. IFC Section 1030.2, Reliability. The rule and its subparts have been renumbered and reformatted to coordinate with changes made to the 2012 IFC.

Two new subsections are added to Section 1030.2, Reliability. Subsection 1030.2.1, Security devices and egress locks, is similar to the 2012 IFC language except for the insertion of the phrase "electromagnetically locked egress doors" to the list of special locking arrangements contained in that subsection. This is a new term in the 2012 IFC and it apparently was inadvertently missed in the list of unique locking devices named in that subsection. Subsection 1030.2.1 also adds a reference to these devices that are found in existing buildings under Chapter 11 of this proposed fire code.

Subsection 1030.2.2, Inspection and testing, is also new and added to require maintenance and testing of these unique locking methods and arrangements. It is extremely important that these locks and devices function properly as intended. If these locks and devices fail to work as outlined, then egress becomes impossible and people will be locked inside the building to be subject to the effects of fires, hazardous materials, and intruders. The basic tenet of egress is that people need to be able to escape quickly and efficiently in an emergency situation. Item #1 of the inspection and testing requirements specify operational tests on a monthly basis and item #2 specifies fire alarm system and fire sprinkler system interface and release testing at least annually. Item #3 requires that these tests are to be performed by people knowledgeable with the necessary operating features and components of the locks and locking systems. Finally, item #4 requires that deficiencies must be correctly immediately (*i.e.*, without delay) and that written records of testing and inspections be maintained and available for inspection by the fire code official.

All of these provisions are reasonable and necessary to assure these special locking devices will operate properly and that occupants can escape safely in an emergency.

Subpart 2. IFC Section 1030.3, Obstructions. This rule subpart is amended by changing IFC section reference numbers from "1028.3" to "1030.3" to coordinate with numbering changes made to the 2012 IFC. The text of the rule subpart remains unchanged.

Subpart 3. IFC Section 1030.7, Emergency escape openings. The rule subpart has been renumbered and reformatted for consistency with changes made to the 2012 IFC. Additionally, the phrase "the code that was in effect at the time of construction" is replaced with "this code." The 2012 IFC and the amendments being added in this rulemaking process already have provisions to deal with new and existing conditions in Chapter 11. Therefore, addressing the minimum provisions for existing buildings and the issue of compliance in this subpart are no longer needed. Finally, an exception for "window fall protection required by the [State] building code" is added to this subpart to coordinate with Minnesota Rule Chapters 1305 and 1309 and to avoid conflict between this Code and the State Building Code.

7511.1101 SECTION 1101, GENERAL.

This new rule part modifies Chapter 11 in the 2012 IFC, Construction requirements for existing buildings. The construction requirements for existing buildings previously found in IFC Chapter 7 (Fire-Resistance-Rated Construction), Chapter 9 (Fire Protection Systems), and Chapter 10 (Means of Egress), have now been combined and moved into a new Chapter 11.

Section 1101.1, Scope, is modified to include the Minnesota amendments to the 2012 IFC to be within this chapter's scope of coverage over existing buildings.

Section 1101.2, Intent, is modified by deleting the phrase "where such existing buildings do not comply with the minimum requirements of the International Building Code" from the 2012 IFC language. This change is needed to clarify that this chapter only addresses minimum safety requirements for existing buildings. Compliance with other state codes is addressed in subsections 1101.5 and 1105.6, below.

Section 1101.3, Permits, is modified by deleting the phrase "and the International Building Code" from the 2012 IFC language. This change is needed to provide consistency with the scope and intent of this chapter which is limited to existing buildings.

Section 1101.4, Owner notification, contains the same language as that in the 2012 IFC and has not been modified.

Sections 1101.4.1, Construction documents, 1101.4.2, Completion of work, and 1101.4.3, Extension of time, are modified by changing the phrase "fire code official" to "code official" in each of the sections. While the "fire code official" will often be the authority that will notify building owners on conditions not permitted by Chapter 11, many jurisdictions in Minnesota have permits or plan reviews conducted by other authorized officials (*e.g.*, building officials, plan reviewers). Since the term "code official" is generic, it includes any personnel authorized to inspect existing buildings in Minnesota, not just fire code officials.

Section 1101.5, Compliance option, is being added to this rule part. The requirement is being carried forward from existing Minnesota Rules, part 7511.1027, section 1027.1.1, with amendments. The existing compliance option language is amended by adding "or chapter 1309, the Minnesota Residential Code, chapter 1305, the Minnesota Building Code, or Minnesota Conservation Code for Existing Buildings, Minnesota Rules, chapter 1311, when applicable" to clarify that compliance for existing buildings with these chapters, in lieu of requirements under 2012 IFC Chapter 11, is permitted. This modification is reasonable and needed to prevent conflicts with other chapters of the State Building Code and to reduce construction costs by providing additional options for existing building owners and designers.

Section 1101.6, Previous codes, is being carried forward in its entirety from existing Minnesota Rules, part 7511.1027, section 1027.1.2, but has been revised grammatically to provide for better clarity.

7511.1103 SECTION 1103, FIRE SAFETY REQUIREMENTS FOR EXISTING BUILDINGS.

Subpart 1. IFC Section 1103.1, Required construction. Subpart 1 contains language similar to the 2012 IFC, with the exception of a reference to Table 1103.1, which is deleted. Table 1103.1 is proposed for deletion because it has caused confusion for the end user and provides neither clarity for, nor consistency with, the minimum requirements of sections 1103.2 through 1106.3.2.1, as amended.

Subpart 2. IFC Section 1103.2, Emergency responder radio coverage in existing buildings. Subpart 2 modifies 2012 IFC Section 1103 by deleting subsection 1103.2. This subsection requires emergency responder radio coverage in existing buildings, unless it can be shown that emergency radio coverage is not needed. The proposed modification is needed and reasonable because the installation and testing of this emergency response communication equipment can be very difficult and expensive depending on the construction of the building. Construction variables affecting cost include type of construction materials, availability of below-grade radio signal coverage, and building height. Therefore, in accordance with Minnesota Statutes, section 299F.011, subdivision 4, the IFC requirement is being moved to an optional, adoptable appendix for use by local jurisdictions if radio coverage in existing buildings has become a problem for them.

Subpart 3. IFC Section 1103.3, Elevator operation. Subpart 3 modifies 2012 IFC Section 1103 by deleting subsection 1103.3, in its entirety. This subsection contains numerous requirements for elevator operation which directly conflict with the recently adopted Minnesota Elevator Code, Chapter 1307. The proposed modification is needed and reasonable to prevent a conflict between the provisions of 2012 IFC Section 1103.3 and Chapter 1307 of the Minnesota State Building Code.

Subpart 4. IFC Section 1103.4, Vertical openings. Subpart 4 addresses fire safety requirements for vertical openings in existing buildings and adopts language identical to 2012 IFC Section 1103.4, except that the proposed requirements are in table format, rather than text. The Department believes that table formatting is much easier for the end user to read, interpret and

apply than the lengthy column-and-a-half text format of the 2012 IFC. Other than reformatting, there are no changes from the requirements in the current rule.

Subpart 5. IFC Sections 1103.4.2, 1103.4.3, 1103.4.4, 1104.4.5, 1103.4.6 and 1103.4.7. This subpart proposes to delete the sections listed relating to vertical openings in existing buildings that are in text form. These requirements are now shown in tabular form as proposed in subpart 4, above. The table described above entitled "VERTICAL OPENING PROTECTION REQUIRED" is identical to table 704.1 in the 2007 Minnesota State Fire Code and has been moved forward without change. The Department believes, after conferring with fire code officials and the Minnesota State Fire Chiefs Code Committee that it is inconsistent and unnecessary to have code requirements in both text form and table format. The table for vertical opening protection requirements has been included in the IFC for many years with no apparent confusion or issues for code officials or design professionals. Therefore, the Department is proposing to only include the table format in the proposed rule part.

Subpart 6. IFC Section 1103.5, Sprinkler systems. Subpart 6 modifies 2012 IFC Section 1103.5 by adding two new subsections to the end of section 1103.5. Subsections 1103.5.3 and 1103.5.4 are relocated from existing Minnesota Rules, part 7511.0903, subpart 8, without change. This modification is necessary to coordinate with reformatting changes made to the 2012 IFC.

Subpart 7. IFC Section 1103.7, Fire alarm systems. This new subpart specifies the fire alarm system requirements for existing buildings consistent with the reformatting of the 2012 IFC to gather all the construction requirements for existing buildings into IFC chapter 11. This new subpart modifies section 1103.7 by deleting the language in IFC section 1103.7 and replacing it with language carried forward from currently adopted Minnesota Rules, part 7511.907, subpart 16 (Group A occupancies), subpart 18 (Group E occupancies), subpart 19 (Group I Occupancies), subpart 20 (Groups R-1 and R-2 occupancies) and subpart 21 (Audible alarms), with amendments. Reference and section numbers have been changed to correspond with the reformatting of existing building requirements into IFC chapter 11.

Section 1103.7 carries forward the language found in currently adopted Minnesota Rule Part 7511.0907, subpart 16 with the following amendments. The section and reference numbers have been changes to coordinate with the reformatting of the 2012 IFC. The exception has been changed to an affirmative statement; the language other than reference numbers is unchanged. Finally, the language pertaining to interior fire separation walls (fire barrier walls, fire walls, etc.) not defining a separate building has been deleted from this section. Chapter 11 deals with existing buildings that may be decades-old or even in excess of 100 years old, so fire barrier walls or fire walls likely do not exist in these buildings. Therefore, there is no reason to address this situation and the language has been deleted.

Sections 1103.7.1 through 1103.7.1.3.1 of this subpart carry forward the language found in existing Minnesota Rules, part 7511.0907, subpart 16, which specifies fire alarm requirements for existing Group A occupancies. The language is carried forward without change other than changes in the reference numbers to accommodate the reformatting of the 2012 IFC and two grammatical modifications. The first is in condition #2 which changes the term "fire extinguishing system" to "fire-sprinkler system." This change corresponds to other terminology changes in this proposed

rule chapter for uniformity and consistency. The other grammatical change is found in condition #3 which changes the phrase "Group A occupancies" to the phrase "assembly uses." This corresponds with a change in the 2012 IFC and IBC definitions for assembly type uses in Group E occupancies. This assembly area is no longer considered a separate occupancy, but is instead considered an accessory use to the Group E occupancy.

Sections 1103.7.2 through 1103.7.2.4 of this subpart carry forward language from existing Minnesota Rules, part 7511.0907, subpart 18, which specifies fire alarm requirements for existing Group E occupancies. The language is carried forward without change, except for changes made to reference numbers to accommodate the reformatting of the 2012 IFC and the following:

1. The term "janitors' closets" is changed to "custodial closets" to better describe these rooms and for consistency with other portions of this proposed rule chapter; and
2. The exceptions in subsection 1103.7.2.2.1 have been changed to an affirmative statement and given the title of "Manual activation". However, the specific requirements remain unchanged. This reformatting provides better clarity as to the requirements for manual activation of the fire alarm system.

Section 1103.7.3 of this subpart specifies fire alarm requirements for existing Group I occupancies. This rule subpart directs the user to 2012 IFC Sections 907.2.6 through 907.2.6.4.2, which are the sections specifying fire alarm requirements for new Group I occupancies. Rather than having a separate section that repeats the requirements in IFC Chapter 9 for Institutional occupancies, this section now simply refers the code user to section 907.2.6 (*see* proposed Minnesota Rules, part 7511.0907, subpart 8, for an explanation of those requirements). Group I occupancies are institutional in nature where the occupants movements are restricted in some way, either by specific confinement or by medical condition. Examples of this type of occupancy include hospitals, nursing homes, jails and prisons. The fire safety risk to occupants who are either prohibited or not capable of taking appropriate action in an emergency is much high than in other types of occupancies. However, there is no difference in the fire safety risk between new and existing Group I occupancies. Therefore, it is reasonable to require the same fire alarm requirements for new and existing Group I occupancies.

Sections 1103.7.4 through 1103.7.4.4 of this subpart specify the fire alarm requirements for existing Group R-1 occupancies (*e.g.*, hotel, motel, transient in nature). The requirements are similar to existing Minnesota Rules, part 7511.0907, subpart 19, but have several amendments, as follows:

1. The reference numbers have been changed to correspond to the reformatting of the 2012 IFC;
2. Section 1103.7.4, condition #1, is reworded by using the phrase "two or more stories above the story containing the lowest level of exit discharge" instead of "three or more stories." This change is needed to be consistent throughout the proposed code on the way the number of stories a building contains is accounted for. These changes are made to avoid confusion as to how to count stories in structures that may be a "walk out" type or built into a hill where there could be several levels of exit discharge. In some of these "walk out" type structures, some lower levels may not have an exit. Confusion has occurred in the past as to which stories of the structure are counted to

determine the fire alarm requirement. Therefore, this amendment specifies that the determining factor is whether there is an exit discharge from the story;

3. Section 1103.7.4, condition #2, is a new requirement for existing R-1 occupancies. This condition requires a fire alarm system when any dwelling unit is more than one story below the highest level of exit discharge. Under this situation, the occupants of the dwelling unit would need to travel up to another story to exit the building. In order to safety evacuate a building, the occupants in these lower level dwelling units need adequate early warning of a fire emergency. This proposed code requirement is reasonable and needed to assure that these occupants have the early warning and, therefore, an opportunity to exit the building safely during a fire emergency;
4. Section 1103.7.4, condition #3, requires the installation of a fire alarm system when the building contains 20 or more units. This is exactly the same requirement found in existing Minnesota Rules, part 7511.0907, subpart 20. The requirement has only been reformatted into the list of conditions for this section;
5. Section 1103.7.4, condition #4, is a new requirement for fire alarm systems in existing Group R-1 occupancies that would be used in a congregant living situation. These types of occupancies include dormitories, fraternities, sororities, and other group homes when the occupant load reaches 20 or more. This language is similar to language in existing Minnesota Rules, part 7511.0907, subpart 20, section 907.3.5, condition #4, that requires a fire alarm system for these same types of occupancies classified as a Group R-2 occupancy. This proposed subpart amendment will have the same fire alarm requirements for congregant living situations that might be classified as Group R-1 occupancies. There is no distinguishable difference in fire safety risk between a congregant living situation of a Group R-1 or a Group R-2 occupancy, only the length of stay is different. Since the fire risk is similar, if not the same, it is reasonable to require the same fire alarm systems in both these occupancies;
6. Section 1103.7.4.1 has been amended to an affirmative statement of the exception found in existing Minnesota Rules, part 7511.0907, subpart 20, section 907.3.4. The language is identical, but the requirement has been reformatted from an exception to an affirmative statement for better clarity;
7. Section 1103.7.4.2, detailing requirements for fire alarm initiation, is carried forward from existing Minnesota Rules, part 7511.0907, subpart 20, section 907.3.4.1, but the exception has been amended. The exception has be changed into an affirmative statement, placed in subsection 1103.7.4.2.1, and given the title "Sprinkler protection." This new subsection carries forward the same language as the existing exception, but adds an additional sentence allowing the elimination of system smoke and fire alarms when the building is provided with a fire sprinkler system and there is a manual way to activate the fire alarm system at a constantly attended location. The amendment allows this same situation to occur when a constantly attended location is not provided, as long as there is a manual pull station located at the main exit that will activate the fire alarm. In many smaller hotels, the front desk is attended most of the day, but at night there generally is only one person on duty. These desk attendants frequently have other responsibilities and are temporarily away from the front desk for periods of time. Therefore, the front desk would no longer be considered a constantly attended location. However, requiring a fire alarm manual pull station at the main exit would reasonably allow anyone (*e.g.*, occupants, visitors, staff, or emergency responders) to easily activate the fire alarm system for occupant notification, which

the Department believes is a safe and reasonable accommodation for this situation; and

8. Section 1103.7.4.4 is carried forward from existing Minnesota Rules, part 7511.0907, subpart 20, section 907.3.4.3, without any change to the technical requirements. However, the exception has been changed to an affirmative statement, placed in subsection 1103.4.4.1, and entitled "Annunciation allowed." Additionally, the phrase "guest room smoke detectors" is changed to "guest room smoke alarms" to correspond with definitional changes found in the 2012 IFC and this proposed code.

Sections 1103.7.5 through 1103.7.5.3 of this subpart specify the fire alarm requirements for existing R-2 occupancies (*e.g.*, apartments, boarding houses, and others with longer stays). The requirements are carried forward from existing Minnesota Rules, part 7511.0907, section 907.3.5, without change to the technical requirements. However, reference numbers are changed to accommodate the reformatting of the 2012 IFC. In addition, each of the exceptions have been changed to an affirmative statement and retitled. However, as noted above, the technical requirements remain unchanged.

Section 1103.7.6 of this subpart specifies the minimum and maximum sound level for audible notification signals of fire alarm and detection systems in existing occupancies. The requirements are similar to those in existing Minnesota Rules, part 7511.0907, subpart 21. However, this proposed rule part only applies to existing occupancies. Therefore, the minimum sound pressure level requirements of 75 dBA in sleeping rooms, 90 dBA in mechanical rooms, and 60 dBA in other spaces were not included as these minimum sound pressure level requirements were intended for new fire alarm systems, not existing fire alarm systems. Existing buildings can rarely meet these minimums. Therefore, the proposed rule requires a 15 dBA above the average ambient sound level for existing building audible notification signals. The Department believes that this is a reasonable benchmark for existing systems as it is consistent with the requirements in NFPA 72 (National Fire Alarm Code) for existing systems.

Subpart 8. IFC Section 1103.8, Single- and multiple-station smoke alarms. Subpart 8 addresses single- and multiple-station smoke alarms in existing institutional and residential occupancies. This new subpart modifies 2012 IFC Section 1103.8 by deleting the introductory paragraph's reference to sections 1103.8.1 through 1103.8.3 concerning location, interconnectivity, and power supply and replaces it with a reference to a new Table 1103.8, Smoke alarm requirements. Table 1103.8 spells out smoke alarm requirements for these existing occupancies in tabular format for better clarity and ease of use. It addresses the four conditions found in existing buildings having sleeping rooms: no smoke alarms at all; smoke alarms in existing buildings constructed on or after August 1, 1989 (required to he hard-wired); smoke alarms in existing buildings constructed before August 1, 1989 (can be battery-powered); and replacement of smoke alarms in existing buildings.[11]

[11] The Minnesota requirement to hard-wire smoke alarms in new dwellings can be found in Minnesota Statutes, section 299F.362, subdivision 3a. The effective date of this requirement was August 1, 1989. *See* Minn. Laws 1989, chapter 322, sections 1-5 and 7. *See also* Minnesota Statutes, section 299F.362, subdivisions 2–4, concerning rulemaking authority for smoke alarm placement.

Section 1103.8.1 addresses when replacement of smoke alarms is necessary and what type of power supply is required. These devices need to be replaced when they fail to operate when tested or when they are more than ten years old. Additionally, when replaced, the new smoke alarm must have the same type of power supply as the existing alarm.

Subpart 9. IFC Section 1103.9, Protection of existing cooking equipment. This new subpart deletes the language contained in 2012 IFC Section 1103.9, Carbon monoxide alarms, and replaces it with new language pertaining to the protection of existing cooking equipment that is currently located in existing Minnesota Rules, part 7511.0904. The language pertaining to carbon monoxide alarms is being deleted because it conflicts with Minnesota Statutes, section 299F.50.

This relocated language requires that existing commercial-type cooking equipment that produces grease-laden vapors be equipped with an automatic fire extinguishing system. This type of equipment is most often seen in public assembly buildings where large volume cooking takes place. Kitchen and cooking related fires represent 45% of all fires in these occupancies.[12] The wording of the proposed rule subpart is identical to existing Minnesota Rules, part 7511.0904, with the exception of the 2012 IFC section reference number.

7511.1104 SECTION 1104, MEANS OF EGRESS FOR EXISTING BUILDINGS.

Subpart 1. IFC Section 1104.1, General This new subpart modifies 2012 IFC Section 1104.1, General, by deleting the language in the 2012 IFC section and carrying forward the language from existing Minnesota Rules, part 7511.1027, section 1027.1, General, with the exception of modifications to the section references, which were changed to coordinate with the numbering and formatting changes made to the 2012 IFC. This change is necessary to coordinate with the reformatting of the 2012 IFC.

This subpart also contains new subsections 1104.1.1, Occupant loads, 1104.1.2, Egress width, 1104.3, Ceiling height, and 1104.1.4, Special exiting provisions for younger students, that are being carried forward from existing Minnesota Rules, part 7511.1027, sections 1027.1.3, 1027.1.4, 1027.1.5, and 1001.3, respectively, to coordinate with the reformatting of the 2012 IFC.

Subpart 2. IFC Section 1104.2, Elevators, escalators, and moving walks. This new subpart modifies the 2012 IFC language in this section by carrying forward the existing language in Minnesota Rules, part 7511.1027, section 1027.2. Like the existing rule part, this subpart modifies the IFC by adding the phrase "where previously approved" to the end of the section and by deleting the exceptions. This modification is reasonable and needed to provide for consistent enforcement and elimination of conflicts between the 2012 IFC and Minnesota Rules, Chapter 1307, Elevators and Related Devices.

Subpart 3. IFC Section 1104.3, Exit signs – general. This new subpart modifies 2012 IFC Section 1104.3 by deleting the language in the IFC section and replacing it with language carried forward from existing Minnesota Rules, part 7511.1027, section 1027.3. The only differences from the existing rule part are changes made to the section reference and subsection

[17] Data provided from "Fire in Minnesota-2011" and is available for viewing at: https://dps.mn.gov/divisions/sfm/mfirs/Documents/Fire%20in%20Minnesota/Fire_In_Minnesota_2011.pdf.

numbers to coordinate with numbering changes made to the 2012 IFC and a minor, grammatical modification to the title of subsection 1104.3.2 from "Number of exits" to "Locations," which better describes the content of that subsection.

Subpart 4. IFC Section 1104.5, Illumination – general. This subpart modifies 2012 IFC Section 1104.5 by deleting the language in its entirety and replacing it with the language contained in existing Minnesota Rules, part 7511.1027, section 1027.5. The only amendment made to the existing rule language is to modify the section reference numbers so they coordinate with numbering changes made to the 2012 IFC.

Subpart 5. IFC Section 1104.6, Guards. This subpart modifies 2012 IFC Section 1104.6 by deleting the language in the section and replacing it with language being carried forward from existing Minnesota Rules, part 7511.1027, section 1027.6. Other than amending the existing rule to modify the section reference numbers so they coordinate with numbering changes made to the 2012 IFC, one change is being proposed to the existing rule language: Condition #3 in existing subsection 1027.6.2, Opening limitations, is being relocated to the end of the proposed section as a general exception to IFC section 1104.6. This exception is being relocated to provide better clarity and explain that a previously approved open guard complies with that section's requirements and may remain.

Subpart 6. IFC Section 1104.7, Doors – general. This subpart modifies section 1004.7 by deleting the language in the section and replacing it with language being carried forward, without change, from existing Minnesota Rules, part 7511.1027, section 1027.7.

Subpart 7. IFC Section 1104.10, Stair dimensions for existing stairs. This subpart modifies section 1004.10 by deleting the language in the section and replacing it with language being carried forward, without change, from existing Minnesota Rules, part 7511.1027, sections 1027.10 and 1027.10.1.

Subpart 8. IFC Section 1104.12, Circular stairways. This subpart modifies section 1104.12 by deleting the phrase "is 10 inches (254 mm) and the smallest radius shall not be less than twice the width of the stairway" and replacing it with "at the outside of the stair is at least 10 inches (254 mm)." This modification is essentially the same requirement, but it is being revised for clarity and ease of evaluation by the code official.

Subpart 9. IFC Section 1104.16, Fire escape stairs. This subpart modifies section 1004.16 by deleting the language in the section and replacing it with language being carried forward from Minnesota Rules, part 7511.1027, section 1027.16. Section reference numbers are being changed to coordinate with numbering changes made to the 2012 IFC. Additionally, one amendment is made to the language being carried forward: the reference to Table 1005.1 in section 1104.16.4, Access, is being deleted and replaced with section 1005.3.2, Other egress components, because there is no Table 1005.1 in the 2012 IFC.

Subpart 10. IFC Section 1104.17, Corridors. This subpart modifies section 1104.17 by deleting the language in the section and replacing it with language being carried forward from Minnesota Rules, part 7511.1027, section 1027.17 and its subsections. The existing rule language being carried forward is amended by deleting section 1027.17.4.2, Existing Group E corridors.

This language allowed existing Group E occupancies constructed prior to October 3, 1975, to have a dead end corridor up to 35 feet in length if the building was protected by a fire sprinkler system. The 2012 IFC allows a dead end corridor in a Group E occupancy up to 50 feet, so this existing rule part is no longer necessary.

Additionally, Table 1027.17.4 being carried forward is amended by changing the dead end corridor limits in Group E occupancies from 20 to 50 feet for both non-sprinklered and sprinklered buildings, which is consistent with the change in 2012 IFC Section 1018.1, Exception #5, allowing new dead-end corridors to be 50 feet in length for Group E occupancies. This table is further amended by changing the distances in the Group U occupancies to coordinate with changes made in the 2012 IFC: the common path limit for sprinklered occupancies is changed from 75 to 100 feet; the dead end corridor limit for sprinklered occupancies is changed from 20 to 50 feet; and the travel distance limit for non-sprinklered occupancies is changed from 200 to 300 feet. These changes are now consistent with the change in 2012 IFC Table 1016.2 for Group U occupancies. The changes to the table in this subpart are also necessary so that existing occupancies do not have more restrictive requirements than new occupancies.

Finally, subsection 1027.17.1.1, Existing churches, is amended by deleting the word "churches" from the title and body of the subsection and replacing it with the term "places of religious worship." This change is reasonable and necessary to recognize that not all places of religious worship are called "churches," such as synagogues, mosques, temples, etc. This change occurs in several locations throughout the 2012 IFC and is further needed to provide consistency among codes.

Subpart 11. IFC Section 1104.18, Exit access travel distance. This subpart modifies section 1104.18 by deleting the language in the section and replacing it with language being carried forward, without change, from existing Minnesota Rules, part 7511.1027, section 1027.18.

Subpart 12. IFC Section 1104.19, Common path of egress travel. This subpart modifies section 1104.19 by deleting the reference to table 1104.17.2 and replacing it with a reference to table 1104.17.4. As noted above, the new table is being amended from the table contained in the 2006 IFC and in existing rule to coordinate with changes made to the 2012 IFC.

Subpart 13. IFC Section 1104.20, Stairway discharge identification. This subpart modifies section 1104.20 by deleting the language in this section and replacing it with language being carried forward, without change, from existing Minnesota Rules, part 7511.1027, section 1027.20. The section reference number, however, is being changed to coordinate with numbering changes made to the 2012 IFC.

Subpart 14. IFC Section 1104.21, Exterior stairway protection. This subpart modifies section 1104.21 by deleting the language in the section and replacing it with language being carried forward, without change, from existing Minnesota Rules, part 7511.1027, section 1027.20.1. The section and table reference numbers, however, are being changed to coordinate with numbering and reformatting changes made to the 2012 IFC.

Subpart 15. IFC Section 1104.22, Minimum aisle width. This subpart modifies section 1104.22 by deleting the language in the section and replacing it with language being carried

forward, without change, from existing Minnesota Rules, part 7511.1027, sections 1027.21 and 1027.21.1. The section and table reference numbers, however, are being changed to coordinate with numbering and reformatting changes made to the 2012 IFC.

Subpart 16. IFC Section 1104.23, Stairway floor number signs. This subpart modifies section 1104.23 of the 2012 IFC by changing the section reference from section 1022.8 to 1022.9. This change corrects a typographical error in the early versions of the 2012 IFC.

Subpart 17. IFC Section 1104.24, Number of means of egress or exits. This subpart modifies section 1104.24 by deleting the language in the section and replacing it with language being carried forward, with amendments, from existing Minnesota Rules, part 7511.1027, section 1027.23 and its subsections. In addition, section and table reference numbers have been changed throughout to coordinate with numbering and reformatting changes made to the 2012 IFC.

Existing Minnesota Rules, part 7511.1027, section 1027.23, Number of means of egress or exits, is amended by adding a paragraph to address the physical separation of egress doors or exits from a room or space when two such egress doors or exits are required. The new language specifies that the doors or exits shall be separated by a distance of not less than one-third of the diagonal dimension of the area served. The intent of this change is to provide required access to a second means of egress door if fire blocks one of the doors. In new construction, the State Building Code specifies that these doors should be separated by at least one-half of the diagonal dimension of the room or space being served. However, because this section of the Fire Code addresses existing buildings and conditions, the required distance between egress doors is being reduced from one-half to one-third of the diagonal dimension to ease construction costs and reasonably account for the fact that this section applies to existing construction.

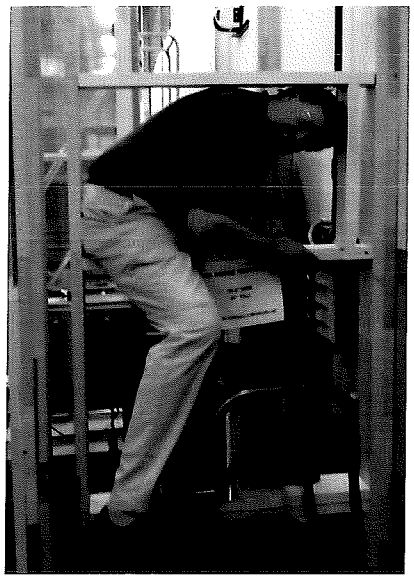
Existing Minnesota Rules, part 7511.1027, subsection 1027.23.1, Number based on capacity, is also being amended to ease construction requirements and costs by allowing existing dormitory rooms to have up to 16 occupants, rather than 10 occupants, before a second means of egress door or exit is required. These occupancies tend to be fairly small rooms with a larger number of occupants due to the use of double or triple bunking. This change will allow dormitory sleeping rooms to have up to 16 occupants without requiring a second egress door from the space if:

- There is a door direct to the exterior;
- The travel distance to the door is 30 feet or less;
- The room is located close to ground level (either ground floor or second floor); and
- There is an emergency escape window located apart from the means of egress doorway.

While this new requirement permits relatively small rooms to have more people than otherwise allowed before a second egress door or exit is required, it does substantially reduce the maximum allowable travel distance to the egress doorway. This 30-foot travel distance requirement limits the room size to 21 feet x 21 feet, if the room's design is square, or about 25 feet x 15 feet, if rectangular in shape. This change is reasonable because the totality of the required conditions, along with the added smoke alarm requirements of 2012 IFC Section 1103.8, provide ample early warning and provisions for rapid escape during a fire emergency.

Subpart 18. IFC Section 1104.25, Escape windows. This new subpart adds new requirements for escape windows in existing buildings that are not contained in the 2012 IFC. The new language is similar to the existing requirements in Minnesota Rules, part 7511.1026, which address escape window requirements for *both* new and existing buildings. However, the inclusion of a new Chapter 11 in the 2012 IFC that addresses only existing building requirements requires that the former rule part now be split between new and existing buildings. The language applying to escape window requirements in new buildings is now found in 2012 IFC Section 1030.7 and modified by these proposed rules in Minnesota Rules, part 7511.1030, subpart 3. The language applying to escape window requirements in existing buildings is now found in 2012 IFC Section 1104.25, and is proposed to be modified by this subpart.

One change proposed in this subpart is the allowance to reduce the escape window size opening from 5.0 square feet to 4.5 square feet, assuming that certain minimum height and width dimensions are met. This reduction in the opening size of escape windows in existing buildings was based on several experiments conducted by the State Fire Marshal's Office in August of 2010 at Andersen Windows in Bayport, Minnesota. In Andersen's facility, mock-ups of various size window openings were made and State Fire Marshal Division staff attempted to climb through. The minimum size window opening that allowed full-grown men to go through was determined to be 4.5 square feet (648 sq. inches) – see photo below.



During this exercise, it was determined that the window sill height (*i.e.*, base of the window opening) was almost as critical as the opening size and that sills higher than 48 inches above the floor severely impeded the use of the window. Minimum width and height dimensions of 20 inches were also determined to be necessary for escape purposes. Based on these experiments the following dimensional requirements were established:

- Minimum opening size of 4.5 sq. ft. (648 sq. inches);
- Minimum width and height of at least 20 inches; and
- Maximum sill height of 48 inches above the floor.

It was determined that these dimensions represented what was necessary for emergency escape purposes in the event of a fire, while at the same time providing a reasonable and cost efficient alternative to the 5.7 square foot opening requirement for new buildings.

Section 1104.25.4 was added to address the issue of emergency escape windows constructed under decks or porches, which may impede safe egress from escape windows. This section allows emergency escape windows to be located under decks or porches, but requires that a minimum escape path of at least 36 inches in height be provided and that these windows be able to open fully.

Finally, sections 1104.25.5, 1104.25.5.1, and 1104.25.5.2 contain language that is being carried forward from existing Minnesota Rules, part 7511.1026, sections 1026.5, 1026.5.1, and 1026.5.2, respectively. The technical requirements have not changed. However, the section

reference numbers are being changed to coordinate with numbering and reformatting changes made to the 2012 IFC.

7511.1106 SECTION 1106, SEPARATION OF OCCUPANCIES AND HAZARDOUS AREAS.

This new rule part adds requirements for separation of occupancies and hazardous areas. These requirements exist in current Minnesota Rules, part 7511.0705. The same language and requirements are being carried forward and added to this section, except that section reference numbers and title headings are being changed to coordinate with numbering and reformatting changes made to the 2012 IFC. In addition, the term "smoke detectors" found in section 1106.2.4.1, Group R compliance options, Condition #5, is replaced with the term "smoke alarms" to coordinate with the new terminology and definition of these single station smoke alarms found throughout the 2012 IFC.

7511.1408 SECTION 1408, OWNER'S RESPONSIBILITY FOR FIRE PROTECTION (Renumbered to part 7511.3308).

7511.2206 SECTION 2206, FLAMMABLE AND COMBUSTIBLE LIQUID MOTOR FUEL-DISPENSING FACILITIES (renumbered to part 7511.2306).

7511.2210 SECTION 2210, MARINE MOTOR FUEL-DISPENSING FACILITIES (renumbered to part 7511.2310).

7511.2306 SECTION 2306, GENERAL FIRE PROTECTION AND LIFE SAFETY FEATURES (renumbered to part 7511.3206).

7511.2306 SECTION 2306, FLAMMABLE AND COMBUSTIBLE LIQUID MOTOR FUEL-DISPENSING FACILITIES (relocated from 7511.2206).

Subpart 1. IFC Section 2306.2.3, Above-ground tanks located outside, above grade (Exception #1). This subpart is modified by changing section, chapter, and table references to coordinate with numbering changes made to the 2012 IFC. The remaining language is unchanged.

Subpart 2. IFC Section 2306.2.3, Above-ground tanks located outside, above grade (Exception #2). This subpart is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. Additionally, the number "2." is added following the word "Exception" to clarify that this is the second exception that is being added to item 2; the first exception is already included in the 2012 IFC section.

Subpart 3. IFC Section 2306.2.3, Above-ground tanks located outside, above grade (Exceptions #6 and #7). This subpart is amended to change the item numbers from "5" and "6" to become "6" and "7," respectively. This change is reasonable and needed to accommodate a new item that was added to the list of items in the 2012 IFC.

Subpart 4. IFC Section 2306.2.3, Above-ground tanks located outside, above grade (Footnote a). This subpart is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. The remaining language is unchanged.

7511.2307 SECTION 2307, LIQUIFIED PETROLEUM GAS MOTOR FUEL-DISPENSING FACILITIES.

Section 2307.1, General. This new rule part modifies 2012 IFC Section 2307 by deleting the language in the section and replacing it with new language pertaining to the same subject matter. This proposed change modifies section 2307.1 to incorporate NFPA 58, rather than 2012 IFC Section 2307 and Chapter 61, as the standard for constructing and installing liquefied petroleum gas (LP-gas) motor fuel-dispensing stations. This change is consistent with proposed Minnesota Rules, part 7511.6101 (formerly Minnesota Rules, part 7511.3800) which adopts NFPA 58 for LP-gas installations, storage, maintenance, and use. This is a needed and reasonable change because NFPA 58 provides a more comprehensive set of LP gas requirements that are used throughout the United States and is supported by the Minnesota Propane Gas Association.

Sections 2307.2, Approvals; 2307.2.1, Approved equipment; and 2307.2.2, Listed equipment. Proposed Minnesota Rules, part 7511.2307, sections 2307.2, 2307.2.1, and 2307.2.2 contain identical language, without change, from those sections of the 2012 IFC and are reprinted here for continuity and ease of use of this Code.

Section 2307.3, Dispensing. This new rule part allows dispensing of LP-gas that complies with 2012 IFC Section 2304, Dispensing operations, and NFPA 58. This section also prohibits the filling of portable containers and tanks on recreational vehicles, other than the tanks used to supply fuel to the engine. Smoking and open flames are prohibited within 25 feet of any dispensing operation.

Section 2307.4, Vehicle impact protection. This new rule part allows two options for providing vehicle impact protection for LP gas storage pumps and dispensers that are utilized for motor fuel-dispensing. These vehicle impact protection options are identical to the options allowed for the dispensing of other motor fuels. The options allow for protection by way of guard posts constructed to the requirements of 2012 IFC Section 312 or by a 6-inch raised curb constructed to the requirements of 2012 IFC Section 2306.7.3. This change is reasonable as these requirements will provide the same vehicle impact protection for LP motor fuel dispensing stations as required for other types of motor fuel products.

Section 2307.5, Self-service fueling of motor vehicles. This new rule part allows self-service fueling of LP-gas vehicles, but only under certain conditions. Unlike typical gasoline dispenser pumps at a gas station, LP-gas fuel dispensers are specialized dispensers which have their own unique risks associated with the fueling operation. Therefore, it is reasonable to impose certain conditions upon LP-gas self-service fueling operations, including specialized operator training and key, special access code, or card operation. These requirements complement 2012 IFC Section 2307.6.1, which outlines specialized training for LP-gas dispensing operation users. These LP-gas fueling dispensers will be controlled by limiting their use by way of a key, electronic code, or access card. In order to obtain the key, code, or access card, individuals would have to

receive training on the proper dispensing of LP-gas, the risks associated with it, and safety features provided.

Section 2307.6, Operational requirements. This new rule part requires that self-service LP-gas dispensing systems comply with all "operational requirements" (*i.e.*, ignition source controls, fire extinguishers, warning signs, etc.) that are found in 2012 IFC Section 2305 for other types of fuel dispensing facilities.

Section 2307.7, Emergency shutoff switch. This new rule part requires an emergency shutoff switch to be installed and labeled in similar fashion to the requirements for gasoline dispensing.

Section 2307.8, Overfilling. This new rule part addresses "overfilling prevention," which is a well-recognized and dangerous problem with LP-gas dispensing as LP-gas is a flammable liquid stored under pressure and will expand when heated. This section contains identical language to 2012 IFC Section 2307.7.

With changes to the nation's energy policy, the push is to provide alternative fuels that are easily accessible to the public for purchase. Therefore, the trend will be toward providing alternative fueling options at traditional gasoline and diesel fueling stations. Currently, LP-gas is about half of the cost of gasoline. Although the mileage decreases with LP-gas, the cost per gallon equivalent is still cheaper than gasoline.

The requirements in 2012 IFC Section 2307 were deemed to be overly restrictive and not congruent with the dispensing requirements of similar products, notably flammable liquids and compressed natural gas. This language was developed based on cooperative discussions with the Minnesota Propane Gas Association.

7511.2310 SECTION 2310, MARINE MOTOR FUEL-DISPENSING FACILITIES (renumbered from part 7511.2210).

This rule part is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. This language is being carried forward from existing rule, without change, to accommodate the reformatting of the 2012 IFC.

7511.2404 SECTION 2404, SPRAY FINISHING.

IFC Section 2404.2, Location of spray finishing operations. The 2012 IFC does not allow any flammable spray finishing in a Group E occupancy unless it is in a fully compliant spray room constructed to the International Building Code and separated from the remainder of the building. However, small-scale spray finishing is common in secondary school woodshops and art rooms. Most school shops do not conduct continuous or even frequent large-scale spray finishing operations. Typically, school shops or art rooms will do limited spray painting or spray-varnishing (*i.e.*, via aerosol cans) for small projects. These processes have been going on for some time in Minnesota schools with no data to suggest any related health or safety issues. The Department believes that it is unreasonable for a school to have to spend tens of thousands of dollars for an IBC-compliant spray finishing room when the spraying operations are small-scale, limited, and

have not shown to be problematic in the past. Therefore, the Department is proposing to modify section 2404 to allow limited spray finish operations in Group E occupancies in accordance with 2012 IFC Section 2404.9. This change will provide a reasonable level of safety for these limited spray finishing operations and will provide the educational occupancy with a reasonable and economic option to continue with this process.

7511.2701 SECTION 2701, GENERAL (renumbered to part 7511.5001).

7511.2703 SECTION 2703, GENERAL REQUIREMENTS.

Subpart 1. IFC Section 2703.8.3.4, Separation [REPEAL]. This subpart is being repealed because this regulation is now included in the 2012 IFC and the rule is no longer needed.

Subpart 2. IFC Section 2703.8.3, Control areas (renumbered to part 7511.5003).

7511.3006 SECTION 3006, MEDICAL GAS SYSTEMS (renumbered to part 7511.5306).

7511.3201 SECTION 3201, GENERAL (renumbered to part 7511.5501).

7511.3206 SECTION 3206, GENERAL FIRE PROTECTION AND LIFE SAFETY FEATURES (relocated from part 7511.2306).

This existing rule part is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. The existing rule language remains unchanged.

7511.3301 SECTION 3301, GENERAL (renumbered to part 7511.5601).

7511.3308 SECTION 3308, FIREWORKS DISPLAY (renumbered to part 7511.5608).

7511.3308 SECTION 3308, OWNER'S RESPONSIBILITY FOR FIRE PROTECTION (relocated from part 7511.1408).

This existing rule part is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. The existing rule language remains unchanged.

7511.3404 SECTION 3404, STORAGE (renumbered to part 7511.5704).

7511.3406 SECTION 3406, SPECIAL OPERATIONS (renumbered to part 7511.5706).

7511.3800 CHAPTER 38 – LIQUEFIED PETROLEUM GASES (renumbered to part 7511.6101).

7511.4500 CHAPTER 45 – REFERENCED STANDARDS [REPEAL]

The referenced standards have been moved to new 2012 IFC Chapter 80. The referenced standards have been updated, so there is no longer a need for these amendments.

7511.4600 CHAPTER 46 – ADULT DAY CARE CENTERS, RESIDENTIAL HOSPICE FACILITIES AND SUPERVISED LIVING FACILITIES (renumbered to part 7511.8100).

7511.5001 SECTION 5001, GENERAL (relocated from 7511.2701).

This rule part is amended by changing the section and chapter reference numbers to coordinate with numbering changes made to the 2012 IFC. The existing rule language remains unchanged.

7511.5003 SECTION 5003, GENERAL REQUIREMENTS (relocated from 7511.2703).

Subpart 1. (see repealer in 7511.2703 subpart 1).

Subpart 2. IFC Section 5003.8.3, Hazardous materials above the third floor in laboratories in Group B, E or I-2 occupancies. This subpart is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. The existing rule language remains unchanged.

7511.5306 SECTION 5306, MEDICAL GAS SYSTEMS (relocated from 7511.3006).

This existing rule part is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. Two grammatical changes are made to the body of the text to provide better clarity to the rule part, but there are no other technical changes.

7511.5501 SECTION 5501, GENERAL (relocated from 7511.3201). This rule part is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. One grammatical change is made to the body of the text to provide better clarity to the rule part, but there are no other technical changes.

7511.5601 SECTION 5601, GENERAL (relocated from 7511.3301). This rule part is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. There are no other technical changes.

7511.5608 SECTION 5608, FIREWORKS DISPLAY (relocated from 3308).

This existing rule part is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. In addition, the heading "subpart 1" is deleted from the rule part because the content contained in subpart 2 is being relocated to its own rule part due to numbering changes made to the 2012 IFC. As a result, there is no need for a subpart in this rule part. This language is being carried forward, without change, to accommodate the reformatting of the 2012 IFC.

7511.5609 SECTION 5609, TEMPORARY STORAGE OF CONSUMER FIREWORKS.

This rule part is added because an existing rule is being relocated to coordinate with numbering changes made to the IFC. This amendment is currently located in Minnesota Rules,

part 7511.3308, subpart 2. This language is being carried forward, without change, to accommodate the reformatting of the 2012 IFC.

7511.5704 SECTION 5704, STORAGE (relocated from part 7511.3404).

Subpart 1. IFC Section 5704.1.1, Application of sprinkler protection tables. This subpart is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. The language of the subpart remains unchanged.

Subpart 2. IFC Section 5704.2.11.3, Depth and cover. This subpart is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. The language of the subpart remains unchanged.

Subpart 3. IFC Section 5704.3.1.2, Rigid nonmetallic intermediate bulk containers. This subpart is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. The language of the subpart remains unchanged.

Subpart 4. IFC Section 5704.3.3.11, Fire-extinguishing systems. This subpart is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. The language of the subpart remains unchanged.

7511.5706 SECTION 5706, SPECIAL OPERATIONS (relocated from part 7511.3406).

Subpart 1. IFC Section 5706.5.1.18, Security. This subpart is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. The language of the subpart remains unchanged.

Subpart 2. IFC Section 5706.5.4, General. This subpart is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. The language of the subpart remains unchanged.

Subpart 3. IFC Section 5706.5.4.1, Marine craft and special equipment. This subpart is amended by changing the section reference numbers to coordinate with numbering changes made to the 2012 IFC. The language of the subpart remains unchanged.

7511.6101 CHAPTER 61 – LIQUIFIED PETROLEUM GASES (relocated from part 7511.3800).

This rule part is being relocated from existing Minnesota Rules, part 7511.3800, without change to any technical requirements. However, the proposed rule is reformatted and amended by changing the section reference numbers to coordinate with numbering and format changes made to the 2012 IFC. Further, the word "Minnesota" has been inserted in front of references to the electrical code in items #7 and #8 to clarify that the requirements specified are to be those requirements found in the adopted Minnesota Electrical Code.

7511.7900 AMENDMENTS TO APPENDICES OF THE INTERNATIONAL FIRE CODE.

Subpart 1. Adoption [REPEAL]. This subpart is being repealed because the requirements for special locking arrangements in Group I occupancies are now in the 2012 IFC, so these modifications are no longer needed.

Subpart 2. IFC Appendix K. This subpart is changed by deleting the reference to appendix "H" and replacing it with a reference to appendix "K." This change is necessary to coordinate with formatting changes made to the 2012 IFC. The language of the subpart remains unchanged.

Subpart 3. Appendix I [REPEAL]. This subpart is being repealed because the requirements for special locking arrangements in Group I occupancies are now in the 2012 IFC, so these modifications are no longer needed.

Subpart 4. Appendix J [REPEAL]. This subpart is being repealed because it references the International Property Maintenance Code as an optional appendix chapter to the State Fire Code. This optional code is not applicable state-wide. Therefore, it is not an appropriate part of the State Fire Code and is being repealed.

Subpart 5. IFC Appendix L. This new subpart adds a new Appendix L, Emergency Responder Radio Coverage, to the State Fire Code. The requirements from 2012 IFC Chapter 5, Section 510, Emergency Responder Radio Coverage, are being moved from the body of the Code, where they are mandatory for all buildings, to an optional adoptable appendix which can be adopted by a local jurisdiction if radio coverage is deemed to be an issue for that jurisdiction. After consultation with the Minnesota State Fire Chiefs Association's Fire Code Committee and a representative of the State of Minnesota's Emergency Communications Network, it is the opinion of the State Fire Marshal that requiring all new buildings to test and install these enhancements is an unreasonable requirement. However, moving these requirements to an optional appendix will allow fire officials to require such testing or equipment installation based on the specific needs of the specific community, and not necessarily in every building.

In addition to making these requirements optional, the section was also reformatted and renumbered to reflect changes in the 2012 IFC and to fit the appendix chapter.

The Minnesota Department of Public Safety Emergency Communications Networks Division ("ECN") reviewed these requirements and recommended some minor changes to the language found in 2012 IFC Section 510, which has been moved to this optional appendix. The title of section L104.2.1 has been changed from "Amplification systems allowed" to "In-building coverage systems allowed" to correspond with terms used in Minnesota by ECN and public safety emergency services. Further, this section is modified by adding additional antenna types that will be allowed in Minnesota. This change is necessary to include all the antenna types that are allowed to connect to the Statewide Communications Radio Network.

The title of Section L104.2.4 has been changed from "Signal booster requirements" to "In-building coverage system requirements" and the term "signal booster" in items #1 and #3 have been changes to "in-building coverage." As noted above, this terminology change is needed to correspond with the terms used in Minnesota so as to avoid any confusion.

In Section L105.3, Acceptance test procedure, the minimum performance standard has been changed from 90% to 95% to correspond with Minnesota standards as recommended by ECN. This change is also consistent with the signal strength requirements found in Section L104.1.

Finally, a condition #8 is added to Section L105.3, Acceptance test procedure, which requires a test of the system to be considered a "failure" if the transmission of voice or data to the appropriate public safety dispatch center is "unintelligible." Consistent with ECN testing recommendations, it is reasonable to consider the inability of a building's emergency system to broadcast an intelligible signal a failure of the system.

7511.8000 PURPOSE AND SCOPE (renumbered to part 7511.8400).

7511.8010 PRESSURIZED FLAMMABLE GAS (renumbered to 75.11.8410).

7511.8020 WARNING SYMBOL REQUIRED (renumbered to part 7511.8420).

7511.8030 SYMBOL DESIGN (renumbered to part 7511.8430).

7511.8040 SYMBOL PLACEMENT (renumbered to part 7511.8440).

7511.8100 CHAPTER 81 - ADULT DAY CARE CENTERS, RESIDENTIAL HOSPICE FACILITIES AND SUPERVISED LIVING FACILITIES (relocated from part 7511.4600).

All of the technical requirements are the same and are being carried forward, without change, to this rule part due to the reformatting of the 2012 IFC. Section reference numbers, however, are being changed to coordinate with changes made to the 2012 IFC. In addition, one grammatical change occurs in section 8102.1.3.3, Fire alarm and detection, where the term "janitor closets" is being replaced with the term "custodial closets" to remain consistent with previous changes to that term made within this proposed rule chapter.

7511.8400 PURPOSE AND SCOPE (relocated from part 7511.8000).

Subpart 1. Purpose. This subpart is amended by changing the rule part reference numbers to coordinate with renumbering and reformatting changes made to the 2012 IFC. The language of the subpart remains unchanged.

Subpart 2. Scope. This subpart is amended by changing the rule part reference numbers to coordinate with renumbering and reformatting changes made to the 2012 IFC. The language of the subpart remains unchanged.

7511.8410 PRESSSURIZED FLAMMABLE GAS (renumbered from part 7511.8010).

This rule part is renumbered to coordinate with renumbering and formatting changes made to the 2012 IFC. The language of the rule part remains unchanged.

7511.8420 WARNING SYMBOL REQUIRED (renumbered from part 7511.8020).

This rule part is renumbered to coordinate with renumbering and formatting changes made to the 2012 IFC. The remainder of the language is unchanged.

7511.8430 SYMBOL DESIGN (renumbered from part 7511.8030).

This rule part is renumbered to coordinate with renumbering and formatting changes made to the 2012 IFC. The remainder of the language is unchanged.

7511.8440 SYMBOL PLACEMENT (renumbered from part 7511.8040).

This rule part is renumbered to coordinate with renumbering and formatting changes made to the 2012 IFC. The remainder of the language is unchanged.

CONCLUSION

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

12/16/15
[Date]

Ken B. Peterson, Commissioner
Department of Labor and Industry

12/16/15
[Date]

Bruce West
Minnesota State Fire Marshal

EXHIBIT A

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EXHIBIT B

Minnesota Department of Public Safety
State Fire Marshal Division
Statement of Policy #INS-02

APPLIES TO:
All Inspection Personnel, Inspection Supervisors, Code/Plans Specialists.

PURPOSE:
To provide for uniform application of compliance times, simplify the process of granting requests for time extensions for corrective orders and reduce the workload of the Fire Marshal Code Advisory Panel (FMCAP).

POLICY:
SECTION 1 . TIME EXTENSIONS FOR ORDERS
Requests for time extensions can be granted for corrective orders by the deputy that issued the orders and the respective supervisor in accordance with the procedures outlined below.

The maximum time frame allowed for initial orders is 90 days. It is recognized, however, that quite often compliance will take substantially longer than 90 days.

Requests for additional time extensions can be granted under the following conditions:
1. There has been substantial compliance with the other items in the order.
2. A plan of corrective action has been developed:
a. for orders where the time needed for correction is less than 180 days from the date of the orders, the plan shall show compliance dates and the proposed method of correction.
b. for orders where the time needed for corrections is 180 days or more from the date of the orders, a "written plan of correction" shall be required from the property owner or owner's representative. The plan must show specific dates when items will be corrected, proper justification for the length of time requested, and show that compliance is progressing.
3. The Deputy shall notify the requestor, in writing, of the amount of additional time being granted, as well as any other stipulations or conditions that must be met (NOTE: This can be accomplished on the Order form or in a separate written letter).
4. Approval of the plan of corrective action should be based on the perceived life safety hazard and realistic compliance times.
5. For occupancies which are seasonal in nature (i.e., resorts, schools, etc.), the Deputy is allowed to use the seasonal opening as a target compliance time, as opposed to a number of days (EXAMPLES: "Prior to opening May 1, 2007" - or - "Prior to opening for the 2007/2008 school year").
6. Time extensions up to 3 years from the date of the orders can be given by the Deputy inspecting the property. Compliance times beyond 3 years must be reviewed and approved by the supervisor. Requests for time extensions exceeding 5 years must be referred to the Fire Marshal Code Advisory Panel ("FMCAP"). Forms shall be provided for this procedure.