

## **BOARD OF APPEALS**

**September 17, 2015**

Members Present: Chairperson Wayne Larson, Joel Davy, Terry Welle, Harold Thompson

Others Present: Ron Strand, Bruce Taralson, Ryan Erickson, Jim Freuh

Chairperson Larson called the meeting to order. Mr. Thompson moved to approve the minutes of the September 3, 2015 meeting and Mr. Davy seconded the motion. All members present voted aye and the motion was declared carried.

Mr. Strand noted that there was no unfinished business for the Board to address. He reminded them that two section numbers had been flagged in the September 3, 2015 minutes for further attention but that that additional review would take place at the end of the code review process. He introduced Mr. Taralson. Mr. Larson reviewed the procedures for the code review hearings.

New Business - Review of changes to the 2015 International Building Code (IBC), Chapters 8-11

### **Chapter 8- Interior Finishes**

**Section 801.4** The reference to NFPA 701 was removed due to it being included in IBC Section 806.

**Section 801.5** Staff recommends continuing the existing local **AMENDMENT** to reference City of Fargo flood ordinances.

**Section 803.3** The word "members" was changed to "elements".

**Sections 806.1-806.4** have been reformatted and clarified.

**Section 806.1** now includes all occupancies. Some revision was done to allowance for increased combustible fabric partitions in an R-2 occupancy with a full sprinkler system.

**Section 806.4** was changed to clarify the acceptance criteria.

### **Chapter 9- Fire Protection Systems**

**Sections 903.2.1 and 903.2.1.1-4** were changed to clarify the requirement for when a sprinkler system is required in "fire areas". "And intervening floors of the building" was added for clarity. Section 903.2.1 must be read prior to reading all other sections as that states between the fire area and the level of exit discharge.

**Section 903.2.1.6** Added section for sprinkler required on all floors between an occupied roof and level of exit discharge, greater than 100 occupants for A-2 and greater than 300 occupants for all other occupancies.

**Section 903.2.1.7** Added provisions for sprinkler requirements for multiple assembly occupancies with shared egress when the occupant load is 300 or more.

**Section 903.2.8** provides for additional level of sprinkler protection for condition 2 as defined in Section 310.6.

**Sections 903.2.9, 903.2.9.1, and 903.2.10.1** 'Commercial trucks or buses' was changed to 'commercial motor vehicles' for clarity.

**Section 903.2.11.3** Airport control towers were removed from the exemptions and the section was clarified.

Mr. Erickson noted that Section 903.3.1 had an existing local **AMENDMENT** in the IFC and that he requested it be mirrored in the IBC amendments.

**Section 903.3.1.1** Staff recommends continuing the existing local **AMENDMENT** adding a second paragraph to read as follows. “Sprinkler heads in unoccupied mall tenant spaces may be installed at ceiling height if allowed by the code official. Permission will be granted on an individual basis. Combustible storage shall not be allowed in these unoccupied tenant spaces if sprinkler heads are installed at the ceiling height. Signage shall be provided outlining the storage restrictions.”

**Section 903.3.1.1.2** is a new exemption to sprinklers in small residential rooms, such as bathrooms, as they were removed from current standards for NFPA 13 sprinkler systems.

**Section 903.3.1.2** “Not exceeding 60’ in height above grade plane” was added for buildings constructed with NFPA 13R sprinkler systems.

**Section 903.3.1.2.1** “Sleeping units” were added to dwelling units.

**Section 903.3.1.2.2** now clarifies that corridors, whether open or enclosed, and their associated exterior stairways and ramps are required to be sprinklered. This overrides NFPA 13R exemption to this area.

**Section 903.3.5** Requirements for sprinkler system water supplies connected to public waterworks systems were added.

**Section 903.3.8** includes a new section along with restrictions that have been placed on limited area sprinkler systems. A reduction in system size to a maximum of six sprinklers within a single fire area (previously 20).

**Sections 904.5-904.10** includes the requirement that “records of inspections and testing shall be maintained” for all such systems.

**Section 904.11** is a new section for automatic water mist systems as an alternative automatic fire-extinguishing system. The section includes design, installation, testing and maintenance information.

**Section 904.13** is a new section for requirements on domestic cooking systems when installed in I-2, condition 1 occupancies. The requirements for domestic appliances installed within commercial facilities when they are used for domestic cooking only have been clarified. This includes provisions for fire extinguishing systems for domestic cooking equipment in nursing homes, assisted living facilities, and similar types of occupancies and buildings.

**Section 905.1.1** Mr. Erickson requested a local amendment to mirror the Fire Department’s **AMENDMENT** regarding standby hose valves.

**Section 905.2** includes a reference to Section 912 for requirements of fire department connections to standpipe systems.

**Section 905.3.3** was clarified to specify that standpipes are only required on interior exit stairways and not all enclosed stairways in a covered and open mall building, to agree with the revision of the code of providing two different types of interior stairways. This also shows up in Section 905.4 along with all its subsections.

**Section 906.1** was clarified by the addition of the phrase “all of”.

**Section 906.2** “Travel distance” was changed to “distance of travel”. This change also shows up in **Tables 906.3(1) and 906.3(2)**.

**Section 907.1.2** clarifies the applicable requirements for fire alarm shop drawings and added item #4 for the minimum audibility level for occupant notification.

**Section 907.2.3** The threshold for alarm systems in group E occupancies has been increased so that a manual fire alarm system is required when occupant load exceeds 50, increased from 30, and an emergency voice/alarm communication system (EVAC) is only required when occupant load exceeds 100, with exceptions. The less than 100 occupant load requirement is new. The base paragraph for this requirement has not changed, only the exceptions.

Jim Frueh with Fargo Public Schools stated that he was requesting consideration of an **AMENDMENT** to this section. He noted that the E occupancies the school system built all had integrated public address systems and that they conducted multiple evacuation drills throughout the school year to facilitate quick response. Mr. Erickson pointed out that not all schools and other E occupancies within the City's jurisdiction were part of the Fargo Public School system. Mr. Strand stated that alarm systems had historically been relied upon to notify occupants but that, in many instances, that alarm was insufficient. He noted that these E occupancies were one of the few instances in which that was not true. He stated that Mr. Frueh would be working with the Fire Marshal to craft language for this proposed amendment that would be acceptable to both parties.

**Section 907.2.6**, exception #2 now includes the requirement for staff evacuation responsibilities.

**Section 907.2.6.1** Exception #1 now specifically addresses new I-1, condition 1 occupancy only.

**Section 907.2.6.2** Condition 1 and condition 2 requirements were added to when a fire alarm and detection system is required.

**Section 907.2.9.3** The scope of fire alarm requirements for group R-2 college and university buildings has been revised to apply to facilities "operated by" the college or university whether they are owned by the school or not. Provided clarification as to what buildings are considered as college or university housing.

**Sections 907.2.11.1 & 907.2.11.2** Staff recommends continuing the existing local **AMENDMENT** to add new subsections #4 to each as follows:

4. In dwelling units where the ceiling height of a room open to the hallway serving the sleeping rooms exceeds that of the hallway by 24 inches (610 mm) or more, smoke detectors shall be installed in the hallway and in the adjacent room.

**Section 907.2.11.3 and 907.2.11.4** The requirements for the installation of smoke alarms near cooking appliances and bathrooms have been introduced in the IBC per NFPA 72 standards to provide guidance on the issues involved with installations.

**Section 907.2.11.7** A section was added to provide information on a smoke detection system when installed as part of a complete fire alarm system.

**Section 907.2.13.1.1** includes additional areas in item #2 that will require area smoke detection.

**Section 907.2.13.2** "Enclosed exit stairway" has been changed to "interior exit stairway" for clarity.

**Section 907.2.14** includes new verbiage to clarify how and where a smoke detection system is required and its operation in an atrium.

**Sections 907.2.22.1 and 907.2.22.2** were added and contain specific language to address where smoke detectors are required to be installed in airport traffic control towers.

**Section 907.4.2.1** Language was added to specify that the 200' requirement only applies in buildings that are not equipped with a NFPA 13 or NFPA 13R sprinkler system.

**Section 907.5.2.1** includes two new exceptions and the use of audible and visual notification appliances in an I-2 occupancy, condition 2 was clarified.

**Section 907.5.2.2.5** was changed to clarify that the requirements for emergency power for an emergency voice/alarm communication system to have power available for 24 hours.

**Section 907.5.2.3** includes a new exception for providing visible alarm notification appliances in critical care areas in I-2 occupancies, condition 2.

**Section 907.6.3** is a new section that dictates when an initiating device is required to be identified by the fire alarm system, with exceptions.

**Section 908.7** now contains the carbon dioxide requirements, which are regulated by the IFC.

**Section 909.4.7** requires consideration of the effects and interaction of smoke control systems for all scenarios when there are multiple systems.

**Sections 909.5, 909.5.1, and 909.5.2** Smoke barrier construction, determination of leakage allowed and testing requirements have been clarified.

**Sections 909.5.3 and 909.5.3.1** now clarifies where opening protection is and is not required in smoke barriers for I-1, condition 2, I-2 occupancy, and ambulatory care facilities.

**Section 909.6.3** is a new section that stipulates that pressurized stairways and pressurized elevator hoist ways must comply with Section 909, as a smoke control system, and with the IFC.

**Section 909.7** The section for velocity design calculations was removed. The section now refers to NFPA 92.

**Section 909.11** Most of this section was removed and now only references Section 2702 for details on emergency power systems.

**Section 909.18.8** A reference to Section 1705.18 was added and qualifications and reporting were clarified.

**Section 909.20** and its subsections were changed to work with the new definitions of means of egress stairways and the allowance for ramps in the means of egress.

**Section 909.21.1** now provides alternatives to general elevator hoist way pressurization requirements through exceptions.

**Section 910** has been reformatted and the technical requirements for smoke and heat removal systems have been revised. Revisions include an allowance for mechanical smoke removal systems as an alternative to smoke and heat vents. The scoping paragraph was changed to limit applications of this section only to required systems.

**Sections 910.1 and 910.2** All exceptions from general Section 910.1 for smoke and heat removal were moved to Section 910.2 and exception (#3) was added for buildings with special-application sprinkler systems.

**Section 910.2.1** was modified for the allowance of mechanical exhaust systems in F-1 and S-1 occupancies on lower stories that do not have ability to vent through the roof.

**Section 910.2.2** was modified to address non-sprinklered buildings, and requires mechanical systems on lower stories that do not have ability to vent through roof.

**Section 910.3-6** was modified for vent area calculations and mechanical exhaust system design and maintenance requirements.

**Section 911** was changed to reflect definition changes to means of egress and stairways.

**Section 911.1.6** includes a new requirement for a “fire fighter air replenishment system” in #12.

**Section 915** This section has been relocated, reformatted, and revised. Occupancy changes now exclude I-3 and add E occupancy. Revisions include clarifying previous requirements in regard to where and what is required and adding the requirements for E occupancies. Group E was added due to many states adding requirements for carbon monoxide (CO) detection in educational occupancies. The revised section now requires CO detectors in all dwelling units and sleeping units regardless of the forced air furnaces location. If a common area CO system is installed where common area appliances are installed, such as furnaces, boilers or fireplaces, then CO detection is not required in the units unless they have their own appliances. Specific locations are now included in this new section. Combination smoke and CO detection systems are still allowed.

## **Chapter 10- Means of Egress**

Many revisions are due to the chapter being reformatted and renumbered. Many change notations are just terminology clarifications expanding ‘width’ to ‘width or capacity’.

**Section 1003.2** includes a new exception for parking garages.

**Section 1003.3** has been modified for protruding objects on are circulation paths.

**Section 1004.1.1** The determination of accumulative design occupant load for intervening spaces, adjacent levels, and adjacent stories has been clarified.

**Section 1004.2** The occupant load for a mercantile occupancy has been doubled to 60 for all areas or stories.

**Sections 1005.3.1 and 1005.3.2** has new exceptions for facilities with smoke-protected seating.

**Sections 1005.4, 1005.5, and 1005.6** have been clarified.

**Section 1006** is a new section, revised, relocated and reformatted to combine and clarify number of exits and exit access components. **Section 1007** is now Exit and Exit Access Door Configuration requirements and **Section 1009** is now Accessible Means of Egress. This reformatting provides for a natural flow of determining occupant load, sizing and number of exits and configuring of exits.

**Section 1006.2** is now Egress from Spaces, and Section 1006.2.1 now determines number of exits and if one exit or exit access is allowed. It combines Sections 1014 and 1021 with the two tables used for common path of travel and spaces with one exit. The section on common path of travel has been eliminated but the term has been revised and is referred to in Section 1006.2.1. The table now used is titled Spaces with One Exit or Exit Access Doorway.

**Section 1006.3** now addresses occupied roofs. The most significant change is in Tables 1006.3.2(1) and 1006.3.2(2), which now use the common path of travel instead of exit access travel distance.

**Sections 1007 and** subsections **1007.1.1-3** have been revised, modified, and clarified. Specific information was added regarding the point where exit separation is to be measured. There is added language describing three exits and how they are configured or adequately separated.

**Section 1008.1** is a new scoping paragraph with references. **Section 1008.2.2** was added and requires additional lighting at exit discharge to account for failure of lighting in I-2 occupancies. Emergency power for illumination for rooms and spaces that require two or more means of egress was clarified versus buildings that require two or more means of egress. **Section 1008.3.5** added a requirement in I-2 occupancies for no emergency light level lower than .2 footcandles when there are light fixture failures.

**Section 1009.3** includes new exceptions for exit access stairs from mezzanines, for exit access stairways where two-way communication is provided at elevator, and for stairways accessed from a refuge area in conjunction with a horizontal exit.

**Sections 1009.4-7** have been rewritten in code paragraph format for ease of understanding.

**Section 1009.8** now clarifies when two-way communication systems are and are not required and that the communication system can serve a bank of elevators.

**Section 1010.1.1** includes two new exceptions to the sizes of doors for freezers and coolers and Group R-1 shower or sauna doors in non-accessible rooms.

**Section 1010.1.4** was reformatted and clarified. New exceptions were added.

**Section 1010.1.9** was extensively edited for clarity.

**Section 1010.1.9.3** The word “exterior” was removed from #2. This has the same requirements for occupant load, etc. but allows interior spaces to use the sign and locking arrangement if it complies with the three subsections.

**Section 1010.1.9.4** Items #4 and #5 were changed from “meet egress width requirements” to “meet egress capacity requirements”.

**Section 1010.1.9.6** was modified to add I-1 to the section which previously only allowed I-2. Additional requirements were added to allow locking. Exceptions were also added.

**Section 1010.1.9.7** now includes additional requirements for delayed egress locks and listing requirements.

**Sections 1010.1.9.8 and 1010.1.9.9** include new listing requirements. I-1, I-2m and I-4 occupancies were added where previously not allowed unless called out in another section.

**Section 1010.1.10** includes a new exception for A or E occupancies to be locked with compliance with Section 1010.1.9.9 and all subsections.

**Section 1011.1** is a new scoping paragraph to recognize the new sections for ladders.

**Section 1011.2** Staff recommends continuing the existing local **AMENDMENT** adding exception #4 thus:

4. Stairways used only to attend equipment or private stairways serving an occupant load of 10 or fewer persons and which are not accessible to the public. Mr. Strand explained the reasoning behind this amendment.

**Section 1011.5.2** Staff recommends continuing the existing local **AMENDMENT** revising #3 and adding #6.

3. In Group R-3 occupancies; within dwelling units in occupancies in Group R-2 occupancies; and in Group U occupancies, that are accessory to an occupancy in Group R-3 occupancy or accessory to individual dwelling units in Group R-2 occupancies; the maximum riser height shall be 7.75 inches (197 mm) 8.00 inches and the minimum tread depth shall be 10 inches (254 mm) 9 inches; ....

6. Stairways used only to attend equipment or private stairways serving an occupant load of 10 or fewer persons and which are not accessible to the public are permitted to have a maximum 8 inch riser height and minimum 9 inch tread depth.

**Section 1011.5.4** includes a new exception and revised section for non-uniform riser heights along slopes.

**Section 1011.5.5** now specifies a minimum nosing profile of 1/16” inch.

**Section 1011.11** Staff recommends continuing the existing local **AMENDMENT** adding exceptions 5 and 6 as follow:

5. Vehicle service pits stairways are exempt from the rules for stairway railing and guards, if they would prevent a vehicle from moving into position over the pit.

6. Stairways used only to attend equipment or private stairways serving an occupant load of 10 or fewer persons and which are not accessible to the public are permitted to have a handrail on one side only.

**Section 1011.12** was revised and an exception added that allows a ship's ladder or permanent ladder as an alternative to an alternating tread device.

**Section 1011.13** a section on guards at roof hatch openings was added.

**Section 1011.14** was modified to add a stipulation that alternating tread devices shall not have a rise greater than 20' between levels or landings.

**Sections 1011.15 and 1011.16** Information for ship's ladders, and their allowed locations, and a new section for ladders have been added. These sections now refer to the International Mechanical Code (IMC).

**Section 1013.4** The word 'visual' has been added to the requirements for exit signs.

**Section 1014.1 & .2**, exception #3 and **Section 1014.4**, exception #5 now include handrails at stepped aisles and ramped aisles.

**Section 1014.8** now provides guidance regarding potential obstructions in the required egress width of a stairway where a pair of intermediate handrails are provided.

**Section 1015.2** now calls out guards for aisles.

**Sections 1015.6 and 1015.7** now read "various components that require service". The details of guards have been clarified and an exception for permanently installed fall protection and standards for same were added.

**Section 1015.8** The exceptions were removed and this section now has four requirements, of which one must be met to be code compliant. Mr. Strand stated that the fall protection requirement was 36" in the IBC and the International Residential Code (IRC) required the protection be at 24". He noted that staff was not currently recommending an amendment to make those two code match because each addresses different uses.

**Section 1016.2** now allows egress through an elevator lobby as long as one exit is provided without going through the lobby.

**Section 1017.2.2** allows an increased exit access travel distance for groups F-1 and S-1 where specific requirements are met.

**Table 1017.2** The footnotes were clarified and one added for H occupancies.

**Sections 1018.3 and 1018.5** The required width for aisles in all occupancies other than assembly is now consistent with widths required for corridors.

**Section 1019** The previous exceptions for sprinklered buildings have been combined into one. Several exceptions were removed and institutional occupancies now have their own subsection.

**Section 1020.2** includes a new exception that allows reduced widths in I-2 occupancies.

**Section 1021.4** Item #2 was added to clarify that the egress balcony needed protection even from the building it would be used to exit.

**Section 1023.1** The words “shall be enclosed” were added to interior exit stairways and ramps.

**Section 1023.3** includes a new exception that allows all exit enclosures to be combined to provide a continuous path of travel to an exit discharge.

**Section 1023.3.1** An exception was added that allows an exit passageway to extend an interior exit stairway with the provision that there are no openings into the exit passageway.

**Section 1023.9** now requires that signs include visual characters.

**Section 1023.10** includes a new section that requires elevator lobby identification signs on interior exit stairways that have two or more doors on a landing that lead to a floor with access to an elevator lobby.

**Section 1024.7** includes a new section on ventilation requirements for exit passageways.

**Section 1028.1**, exception #1, item 1.4, was added to clarify the distance separation required.

**Section 1028.1**, exception #2, item 2.3, was added to clarify the required separation for this exception.

**Section 1029** has been revised, reformatted, and expanded for clarity. Sections have been added for the determination of stairs and stepped aisles. The term ‘aisle stairs’ has been replaced with “stepped ‘aisles’”.

**Section 1029.13.2.2.1** A subsection has been added for construction tolerances for variation between adjacent risers within stepped aisles.

**Section 1029.13.2.4** is a new section on nosing and profile which refers back to the stairway section. Mr. Strand asked about the tolerance for treads and Mr. Taralson responded that an exception existed for such variation.

**Section 1029.15.1** has been revised to specify mid-aisle handrails.

**Section 1029.15.3** includes a new section on mid-aisle handrail requirements.

**Section 1029.16.1** A section was added on perimeter guards that addresses the perimeter around seating in addition to guards adjacent to seating

The Board took a recess at 10:51 and resumed the meeting at 10:56.

## **Chapter 11- Accessibility**

**Section 1103.2.2** “Raised courtroom stations” were deleted.

**Sections 1103.2.3 through 1103.2.14** “Not required to be accessible” was changed to “not required to comply with this chapter” in each section.

**Section 1103.2.8** includes a new exception for certain areas in religious buildings.

**Section 1103.2.10** includes a new exception for highway tollbooths.

**Section 1104.4** Changes have been made to coordinate the IBC with the Americans with Disabilities Act (ADA). Staff recommends continuing the existing local **AMENDMENT** to further coordinate the IBC with the ADA by editing exception 1 as follows. “1. An accessible route is not required to stories, basements and mezzanines that have an ~~aggregate~~ area of not more than 3,000 square feet (278.7 m<sup>2</sup>) and are located above and or below accessible levels and are below the third story...”



Mr. Strand explained the history of this amendment and stated that, if the ADA requirements changed or were found not to agree with this change, staff would recommend its removal.

**Sections 1107.3 and 1107.4** have been modified to identify areas with a change in elevation between stories or mezzanines. These new exceptions were created to coordinate with ADA and its exceptions and to provide clarity regarding when accessible routes are and are not required in residential occupancies. Exception #4 requires dormitory housing provided by places of education to provide an accessible route to all levels.

**Sections 1107.5.1.1 and 1107.6.4.1** The minimum number of accessible units required in assisted living facilities is now dependant on the capabilities of the residents.

**Section 1107.5.5.1** The number of required Group I-3 accessible units was revised to 3 percent and not less than one.

**Section 1107.6.1.1** The method used to determine the required number of accessible units on a site has been modified to consider building size in addition to total units on a site to coordinate with federal Department of Justice requirements.

**Section 1107.6.2.1** now includes a section to clarify when accessibility is required in a live/work unit.

**Section 1107.6.2.2.1** was clarified regarding when bedrooms in a monastery or convent would be considered.

**Sections 1107.6.3 and 1107.6.4.1** were changed to clarify when to consider bedrooms in a congregate living facility or R-4 occupancies.

**Section 1108.2.9** and exception #2 clarifies when an accessible route is required to mezzanines used for dining and drinking areas.

**Section 1109.2**, exception #6 includes a new exception for bariatric patient room toilet and bathing facilities.

**Sections 1109.2.2 and 1109.2.3** The quantity of accessible toilet compartments and lavatories required when there are more than one in a room has been revised. If an accessible lavatory is provided inside a toilet compartment an additional accessible lavatory is now required outside toilet compartment.

**Section 1110** More-detailed scoping requirements for recreational facilities have been included. The changes will coordinate with new ADA provisions and Chapter 11 of the ICC/ANSI A117.1 standard.

**Section 1111.1** includes a new exception for accessible parking signage for parking spaces when the spaces are assigned to specific units.

**Section 1111.3**, #6 & 7 Subsection 6 revised to read "floor level signage required". Subsection 7 was added to indicate when signage is required at amusement rides that are required to be accessible.

There being no further business to come before the Board, the meeting was adjourned.

Respectfully Submitted,

Ron C. Strand  
Board Secretary