

## BOARD OF APPEALS

November 19, 2015

Members Present: Chairperson Wayne Larson, Joel Davy, Terry Welle, Dave Obermiller

Others Present: Ron Strand, Ryan Erickson, James Garvey

Chairperson Larson called the meeting to order. Mr. Welle moved to approve the minutes of the November 5, 2015 meeting and Mr. Davy seconded the motion. All members present voted aye and the motion was declared carried. Mr. Strand introduced Mr. Erickson. Mr. Larson reviewed the code hearing procedures.

### Item 1 – Review the Changes to the 2015 International Fire Code, Chapters 1-27

#### Chapter 1

**Section 101.1** Staff recommends continuing the existing local **AMENDMENT** changing this section to read: These regulations shall be known as the *Fire Code* of ~~[NAME OF JURISDICTION]~~ the city of Fargo, hereinafter referred to as “this code.”

**Section 101.3** was changed to further clarify safety of firefighters and emergency responders by adding “reasonable level”

**Section 102.1** Staff recommends continuing the existing local **AMENDMENT** deleting Subsection 3 in its entirety. Existing buildings that were compliant with the code at the time they were constructed will not be required to be retrofitted with additional requirements at this time.

**Section 102.6** Staff recommends continuing the existing local **AMENDMENT** deleting the phrase “as required in Section 1103.1.1” from the end of this section as Section 1103.1.1 was deleted under the amendment deleting Chapter 11 in its entirety.

**Section 103.4** was further clarified by added “civilly or criminally” as types of liability that code enforcement officials are not liable of.

**Section 103.4.1** was further clarified by including “criminal” complaints in the legal defense.

**Section 104.9** Added “Where the alternative material, design or method of construction is not approved, the fire code official shall respond in writing, stating the reasons why the alternative was not approved.”

**Section 105.1.4** is a new section regarding emergency repairs. Emergency repairs may be performed and the permit application shall be completed the next working business day.

**Section 105.6.4** Staff recommends including a new local **AMENDMENT** changing the amount requiring a permit to 500lbs. The Board discussed typical tank sized and the reasoning for this amendment with Mr. Erickson.

**Table 105.6.9** includes a new footnote regarding carbon dioxide dispensing applications.

**Section 105.6.17** Staff recommends continuing the existing local **AMENDMENT** to alter Subsection 2 as follows: To store, handle or use Class 1A liquids in excess of ~~5~~ 30 gallons, Class 1B liquids in excess of 60 gallons, Class 1C liquids in excess of 90 gallons (19 L) in a building or ~~in excess of 10 gallons (37.9 L)~~ outside of a building, except that a permit is not required for the following:...

The existing exemption limits were not practical for requiring a permit and have increased them accordingly.

**Section 105.6.17** Staff recommends continuing the existing local **AMENDMENT** to alter Subsection 3 as follows: To store, handle or use Class II or Class IIIA liquids in excess of ~~25~~ 120 gallons (~~95~~~~L~~) in a building or in excess of ~~60~~ 120 gallons (~~227~~~~L~~) outside a building, except for fuel oil used in connection with oil-burning equipment. The existing exemption limits were not practical for requiring a permit. See Table 5003.1.1(1).

**Section 105.6.24** Staff recommends adding a new local **AMENDMENT** deleting Subsections 1, 5, and 6 in their entirety. These areas are either unenforceable or were not felt to be necessary for requiring a permit.

**Section 105.6.30** Staff recommends continuing the existing local **AMENDMENT** deleting this section in its entirety.

**Section 105.6.31** now separates the permit for motor fuel dispensing the repair garage permit. Staff recommends a new local **AMENDMENT** deleting this section due to city licensing requirements.

**Section 105.6.34** Staff recommends continuing the existing local **AMENDMENT** as follows: An operational permit is required to use open flames or candles in connection with assembly areas, dining areas of restaurants or drinking establishments. For purposes of this provision, churches shall not be deemed to be assembly areas and shall not be required to obtain a permit to utilize candles in religious ceremonies. This exemption is for the church altar area only.

**Section 105.6.41** Motor fuel dispensing has been removed from the repair garage permit. Motor fuel dispensing facilities as noted in this section are licensed through the Auditor's Office.

**Section 105.7.1** Staff recommends continuing the existing local **AMENDMENT** deleting this section in its entirety. This section is covered under other permitting guidelines.

**Section 105.7.3** Staff recommends continuing the existing local **AMENDMENT** deleting this section in its entirety. This section is adequately covered under the operational permit section of the code.

**Section 105.7.6** Staff recommends continuing the existing local **AMENDMENT** deleting this section in its entirety. This section is covered under other permitting guidelines.

**Section 105.7.7** Staff recommends continuing the existing local **AMENDMENT** deleting this section in its entirety. This section is covered under other permitting guidelines.

**Section 105.7.9** is a new permit requirement for constructing a gate or barricade across a fire access road. Staff recommends adding a local **AMENDMENT** deleting this section as it is adequately covered under other sections of the code.

**Section 105.7.12** Staff recommends continuing the existing local **AMENDMENT** adding the following to this section: "A construction permit is required for installation of or modification to an LP-gas system with a single container in excess of 2000 gallons water capacity or the aggregate capacity of containers is more than 4000 gallons in water capacity." This section was modified to match the construction document submittal requirements for LPG. See Section 6101.3.

**Section 105.7.13** clarifies that maintenance does not require a permit. Staff recommends adding a local **AMENDMENT** deleting this section as the installation is covered under the building permit process.

**Section 105.7.14** added a new permit to install or alter a smoke control or smoke exhaust system. Staff recommends adding a local **AMENDMENT** deleting this section as these systems are reviewed and permitted through the building permit process.

**Section 105.7.15** clarified that maintenance does not require a permit. Staff recommends adding a local **AMENDMENT** deleting this section as these systems are reviewed and permitted through the electrical wiring certificate process.

**Section 105.7.17** Staff recommends continuing the existing local **AMENDMENT** deleting this section in its entirety. This section is covered under other permitting guidelines.

**Section 105.7.18** added temporary stage canopy to the tent permit requirements. Staff recommends a new local **AMENDMENT** deleting this requirement as this is adequately covered under the operational permits section.

**Section 107.2** removed a section regarding test and inspection records

**Section 107.3** is a new section requiring records to be stored and maintained on site for no less than 3 years. The fire code official is authorized to require certain records.

**Section 109.4** Staff recommends continuing the existing local **AMENDMENT** changing this section to read as follows: "...shall be guilty of an [SPECIFY OFFENSE] infraction, punishable by a fine of not more than [AMOUNT] dollars or by imprisonment not exceeding [number of days], or both such fine and imprisonment. Every person, firm or corporation violating an ordinance which is punishable as an infraction shall be punished by a fine not to exceed \$1,000.00; the court to have power to suspend said sentence and to revoke the suspension thereof."

**111.4** Staff recommends continuing the existing local **AMENDMENT** changing this section to read as follows: "Any *person* who shall continue any work after having been served with a stop work order, except such work as that *person* is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than [AMOUNT] or more than [AMOUNT] five hundred dollars."

## **Chapter 2**

Mr. Erickson noted that there had been a large number of verbiage changes but that none of the were significant to the intent of the code.

## **Chapter 3**

**Section 305.5** includes a new section for unwanted fire ignitions. Acts that have caused repeated ignition of unwanted fires shall be modified to prevent future ignition.

**Section 308.1.4** Staff recommends continuing the existing local **AMENDMENT** changing this section to read: Charcoal burners and other open-flame cooking devices shall not be operated on combustible balconies or decks or within 10 feet (3048 mm) of combustible construction.

### **Exceptions:**

1. One- and two-family *dwelling*s.
2. Where buildings, balconies and decks are protected by an *automatic sprinkler system*.
3. LP-gas cooking devices having LP-gas container with a water capacity not greater than ~~2 ½ pounds~~ 47.8 pounds [nominal 20 pounds (9 kg) LP-gas capacity].

Most LPG grills come with a 20-pound tank and would probably pose less of a hazard by reducing the amount of times needed for refilling and changing out tanks.

**Section 308.1.6.3** is a new section that specifies that sky lanterns shall not be released.

**Section 308.3** includes a new exception to cover the use of Sterno or similar products to warm food.

**Section 312.3** was revised to allow for a performance-based design.

**Section 315.3.1** Staff recommends continuing the existing local **AMENDMENT** adding an exception as follows: This requirement does not apply to storage adjacent to and within 30 inches of the wall area. This exception was added to clarify the intent of the code based on an official code interpretation. If the storage along exterior walls is relatively shallow, there may be adequate access for hose streams.

**Section 315.6** is a new section that specifically prohibits storage in plenum spaces.

## **Chapter 4**

Mr. Erickson pointed out that the code sections had been regrouped and organized but that there were no significant changes to intent.

**Section 403.10.1.3** Staff recommends adding a local **AMENDMENT** to this section as follows to coincide with the amendment proposed for Section 404.1. "Fire Safety and evacuation instructions. Information shall be provided in the fire safety and evacuation plan when required by Section 404 to allow guests to decide whether to evacuate to the outside, evacuate to an *area of refuge*, remain in place, or any combination of the three."

**Section 403.10.2.2** Staff recommends continuing the existing local **AMENDMENT** deleting this section and its subsections in their entirety as the requirements are not enforceable from a fire department standpoint.

**Section 404.1** Staff recommends continuing the existing local **AMENDMENT** adding the phrase "when required by the building official" to the end of the section.

**Section 405.1** Staff recommends adding a local **AMENDMENT** editing this section as follows: Emergency evacuation drills ~~complying shall comply~~ with Sections 405.2 through 405.9 ~~shall be conducted not less than annually where the fire safety and evacuation plans are required by Section 403 or where required by the fire code official.~~ Drills shall be designed in cooperation with the local authorities.

## **Chapter 5**

**Section 503.4** Staff recommends continuing the existing local **AMENDMENT** adding the following sentence to this section as the Fargo Municipal Code (FMC) contains ordinances to deal with parking that are used as guidelines for enforcement. "Enforcement of such prohibited parking may be accomplished in the same manner as regulations contained in Article 8-10 and in Section 9-0705 of the Fargo Municipal Code."

**Section 510.1** Staff recommends continuing the existing local **AMENDMENT** adding the phrase "When required by the fire code official" to the beginning of this section. Staff discussed how often radio contact was a problem in various buildings. Mr. Erickson noted that it was a problem but that the radio system was in the process of changing so they were cautious about requiring compliance for systems that may not work with new radios. Mr. Obermiller asked Mr. Erickson to get an example of the typical cost of such a system.

## **Chapter 6**

**Section 604.1** contains updated referenced section numbers. Several sections were added to the emergency and standby power section to coincide with requirements that were previously only in the IBC.

**Section 604.1.7** is a new section that specifies that, when an electrical system is located in a flood hazard area, it shall be installed in accordance with ASCE 24.

**Section 605.11.1.2** includes a new exception that clarifies that the requirements do not apply to one or two family dwellings that are regulated under the International Residential Code (IRC). The IFC does regulate access, water supply, etc.

**Section 605.12** is a new section that requires the removal of abandoned cables in air handling plenums.

**Section 606.12.3** now clarifies the requirement to systems with more than 6.6 lbs of flammable refrigerant.

**Section 606.12.4** was clarified to specify that the requirements apply to systems with more than 6.6 lbs of toxic or highly toxic refrigerant.

**Section 606.12.5** was clarified requirement to systems with more than 6.6 lbs of ammonia refrigerant, and reorganized section.

**Section 607.6** is a new section that requires methods to prevent water from infiltrating a hoistway of an occupant evacuation elevator.

**Section 609.2** includes a new exception to clarify that a Type 1 hood is not required over electric cooking appliances provided the effluent is greaseless.

**Section 609.3.3.3.1** is a new section requiring a tag to be attached to a commercial kitchen hood indicating the inspector and date.

**Section 609.4** is a new section that requires connected piping to be listed and complying with ANSI Z21.69.

**Section 611** is a new section added for hyperbaric facilities, their inspection, and record keeping.

## **Chapter 7**

The title changed from fire-resistance-rated construction to Fire and Smoke Protection Features. Mr. Erickson stated that there had been no other significant changes.

## **Chapter 8**

**Section 806.1.1** The cut tree restriction was extended to include ambulatory care facilities. Staff recommends continuing the existing local **AMENDMENT** adding an exception as follows: “3. For purposes of this provision, churches shall not be deemed public buildings and may utilize natural or resin bearing cut trees in the altar area of the church. No electric lighting is allowed on the tree.” Staff discussed the intent of the last sentence and how it might be reworded to address ignition sources of all types.

**Section 807.3** was reorganized and reworded for clarity.

**Section 807.5.2.3** is a new section that limits artwork in classrooms to 50% of wall area. Staff discussed the difficulty of enforcing this provision with Mr. Erickson. Mr. Erickson noted that annual inspections were performed on schools and that this provision had already existed for corridors.

**Section 807.5.6** is a new section limiting the amount of combustible decorations allowed in sleeping units and dwelling units so as not to create a fire hazard.

## **Chapter 9**

Mr. Garvey pointed out that Chapters 9 and 10 were also included in the International Building Code (IBC) so the Board had already reviewed many of these changes.

**Section 901.4.1** has been clarified concerning how an inspector can determine if a fire protection system is to be considered a “required” system or a “nonrequired” system.

**Section 901.8.2** Existing 1½-inch hose lines can now be removed under certain circumstances.

**Section: 903.2.1** When fire Sprinklers are required in a Group A occupancy located on a story other than the level of exit discharge, fire sprinklers must be installed on all stories leading to all levels of exit discharge that are used by the Group A occupancy.

**Section 903.2.1.6** Fire sprinklers are now required on all floors between the occupied roof and the level of exit discharge when assembly uses occur on the rooftop of buildings and the occupant load exceeds 100 for Group A-2 or 300 for other Group A occupancies.

**Section 903.2.1.7** When multiple Group A-1, A-2, A-3, or A-4 fire areas share egress paths, the occupant load threshold is 300 or more.

**Section 903.2.9** now provides a specific definition for commercial motor vehicles, which is applicable when the fire code official is determining whether a fire sprinkler is required in specific occupancies.

**Section 903.2.11.3** was revised to clarify how the height of a building is to be measured and that the section applies to buildings that have one or more stories. The exception for the airport control tower has been deleted.

**Section 903.3.1** Staff recommends continuing the existing local **AMENDMENT** changing this section to read: "Sprinkler systems shall be designed with a 5 psi safety margin and installed in accordance with Sections 903.3.1.1, 903.3.1.2 or 903.3.1.3 and other chapters of this code, as applicable." This amendment is requested due to the fluctuation of water pressure at various times of the day and also day of the year.

**Section 903.3.1.1** Staff recommends continuing the existing local **AMENDMENT** adding the following paragraph to the end of this section: "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 ceiling height. Signage shall be provided outlining the storage restrictions." Mr. Erickson clarified that the sprinklers must be installed but that the section provides the option to place the sprinklers at deck height.

**Section 903.3.1.1.1** This change introduces the concept of machine room-less elevators to the IFC and provides correlation with ASME A17.1-2007/CSA B44-07. Mr. Garvey noted that the change more closely matches modern elevator installation practices.

**Section 903.3.1.1.2** is a new section providing criteria for not installing sprinklers in bathrooms of specific Group R occupancies.

**Section 903.3.1.2** This change correlates Group R limitations on height with the scope of NFPA 13R.

**Section 903.3.1.2.2** was clarified regarding when an NFPA 13R sprinkler system is used, additional heads are required in the open-ended corridor (breezeway). An associated change is in Section 1027.6 for the exterior stairways and ramps. To correlate the open-ended corridor concept in existing buildings with these changes, Section 1104.22 has been changed through the deletion of exception 1, which allows the open-ended corridor criteria to dictate the solution. Mr. Obermiller asked if this would apply to open-air stairs between apartment units and Mr. Erickson responded that it would.

**Section 903.3.8** The number of sprinkler heads that can be used in a limited area sprinkler system was reduced from 20 heads to 6 heads. This change provides additional criteria regarding the use of these heads.

**Section 903.8.1** now limits the number of sprinklers allowed on a limited area sprinkler to 6 per fire area.

**Section 903.3.8.2** limits limited-area sprinkler systems to Light Hazard or Ordinary Hazard Group I areas.

**Section 903.3.8.3** allows for the use of residential plumbing system supplying the limited-area sprinkler system if no wet standpipe system is available.

**Section 903.3.8.4** clarifies that all control valves between the water supply and sprinklers will be supervised.

**Section 903.3.8.5** now states that hydraulic calculations shall be used to prove the system will work.

**Section 904.2** The words “where required” were changed to “where permitted”.

**Section 904.11** now recognizes automatic water mist systems as an alternative, on a limited basis, to automatic fire sprinkler systems to allow for new technology.

**Section 904.13** UL 300A has been added to the IFC and the new definition of Institutional Occupancy Group 2, Condition 1 (Nursing Homes, Assisted Living, etc.) from the IBC for an extinguishing system within the domestic cooking hood of such occupancy has been incorporated.

**Section 905.1.1** Staff recommends adding a local **AMENDMENT** to add this section as follows: “Section 905.1.1 Standpipe Hose. The installation of fire hose on standpipes may be omitted when approved by the fire code official. Approved standpipe hose valves and connections shall be provided where required.”

**Section 907.1.2 #4** Shop drawings shall include design minimum audibility level for occupant notification where applicable.

**Section 907.2.6 Exception 2** The change links the use of “private mode” signaling under NFPA 72 to the fire safety and evacuation plan requirements of Chapter 4.

**Section 907.2.9.3** The new language “occupancies operated by a college or university for student or staff housing” is intended to clarify this section and the requirement for automatic smoke detection.

**Sections 907.2.11.3 and 907.2.11.4** These new sections provide designers, plan examiners and field inspectors with the criteria for locating smoke alarms in relation to cooking appliances and bathrooms to reduce the number of nuisance alarms.

**Section 907.2.11.7** States that smoke detection systems may be used as an acceptable alternative to single-and multiple station smoke alarms.

**Section 907.2.14** This change clarifies that smoke detection in atriums is to be based on rational analysis prescribed in Section 909.4 and that generic requirement for installation of smoke detection is not necessarily warranted.

**Sections 907.2.22.1 and 907.2.22.2** now include precise rules for where smoke detectors are required in airport traffic control towers.

**Section 907.5.2.1** now allows for the use of private mode audible alarm in critical care areas.

**Section 907.8.3** Staff recommends continuing the existing local **AMENDMENT** deleting this section in its entirety as the detector sensitivity requirements as outlined in this section are unrealistic. Mr. Erickson pointed out that the annual inspection would verify that the devices did work.

**Section 909.4.7** is a new section requiring the analysis of multiple mechanical smoke control systems. Buildings using smoke control systems may have more than one type of smoke control system, and the interaction of these systems must be evaluated in the design.

**Section 909.6.3** is a new section that clarifies the responsibility and authority between the fire code official and the building in relation to smoke control systems.

**Section 909.12.1** now allows the fire code official the discretion to bypass individual components from the weekly preprogrammed smoke control verification testing and requires testing of all bypass components on a semiannual basis.

**Section 910** has been extensively rewritten. It provides direction on Group F-1 and S-1 occupancies greater than 50,000 square feet of undivided area and high-piled combustible storage. Criteria for using either smoke and heat vents or mechanical smoke removal are provided.

**Section 913.2.2** is a new provision that references UL Standard 2196 for the survivability of the wiring that supplies power to a fire pump.

**Section 915** The requirements for carbon monoxide detectors have been completely rewritten for clarity, relocated to a new Section 915, and expanded to address classrooms in Group E occupancies.

## **Chapter 10**

Mr. Garvey noted that the chapter has been reformatted with provisions for egress requirements from a space or story being consolidated into new Sections 1006 and 1007.

**Section 1004.1.1** The determination of the cumulative design occupant load for intervening spaces, adjacent levels and adjacent stories has been clarified and combined into a single section. A subsection has been added to address egress from adjacent stories are not added together unless there is a convergence of egress at an intermediate level by occupants leaving a story from above and below that point.

**Section 1004.1.2** This change has revised the mercantile occupant load factor and created one factor for all floors.

**Section 1007.1** now provides specific information regarding the point where exit separation is to be measured. Where three or more means of egress are required, the code restores performance language to ensure the egress paths are adequately separated.

**Section 1009.8** now clarifies that a two-way communication system may serve multiple elevators and that the systems are not required at service elevators, freight elevators, or private residence elevators.

**Section 1010.1.9** Numerous revisions throughout these locking provisions help clarify requirements and their application by system exception for main doors that are not located at the exterior of the building.

**Section 1011.5.2** Staff recommends continuing the existing local **AMENDMENT** to change exceptions 3 and 6 to read as follows in order to match the building code amendments.

“3. In Group R-3 occupancies; within dwelling units in Group R-2 occupancies; and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual dwelling units in Group R-2 occupancies; the maximum riser height shall be ~~7 ¾ inches (197 mm)~~ 8 inches; 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 tread depth.”

**Section 1014.15 and 1015.16** have been added to the locations where ladders can be used for access. Permanent ladders must follow the construction requirements from the International Mechanical Code (IMC) in order to provide consistent installation and a safe usable ladder.

**Section 1014.8** This section now provides guidance and enforceable language so the building official can determine when a pair of intermediate handrails begins to obstruct the required egress width of a stairway. This helps to clarify when width of the stairs must be increased due to the two intermediate handrails reducing the available egress width.

**Section 1016.2** This modification allows occupant egress through an elevator lobby provided access to at least one exit is available without the occupant passing through the lobby. It addresses the extent of the required elevator lobby protection.



**Section 1017.2.2** This modification allows an increased exit access travel distance within Group F-1 or S-1 occupancies meeting specific requirements. Also, it restores travel distance that was allowed in the 2006 code but not allowed in the 2009 or 2012 editions.

**Sections 1018.3 and 1018.5** The required width of aisles in Group B and M occupancies as well as aisles in other occupancies are now tied to the widths required for corridors and not just to the capacity based on the occupant load served.

**Section: 1020.2** includes a new exception to clarify the width requirements for corridors within Group I-2 occupancies for areas where bed or stretcher movement is not necessary.

**Section 1023.3.1** An interior exit stairway is now permitted to continue directly into an exit passageway without the need for a fire door assembly to separate the two elements.

**Section 1029.13.2.2.1** is a new section addressing the variation allowed between adjacent risers within a stepped aisle. The previous code did not limit variation for these risers.

### **Chapter 11**

Staff recommends continuing the existing local **AMENDMENT** deleting Chapter 11 in its entirety

### **Chapters 20-22**

Mr. Garvey stated that there had been no significant changes made to this chapter.

### **Chapter 23**

Section 2303.1 Staff recommends continuing the existing local **AMENDMENT** adding subsection 6 as follows: "6. On new installations, dispensing devices used to fill portable containers with home heating fuels shall not be located on the same island where Class I liquids are dispensed."

**Section 2306.1** Staff recommends continuing the existing local **AMENDMENT** adding the reference to Fargo Municipal Code Section 9-0604 for the licensing of service stations and bulk oil dealers as per the auditor's office.

**Section 2307.4** LP-gas requirements have been revised to improve correlation with other industry standards and to allow self-service LP-gas refueling by the public.

### **Chapters 24-27**

Mr. Garvey stated that there had been no significant changes made to this chapter.

Mr. Larson noted that the rest of the changes to the IFC and its Appendices would be reviewed at the December 3, 2015 meeting. There being no further business to come before the Board, the meeting was adjourned.

Respectfully submitted,

Ron C. Strand  
Board Secretary