

BOARD OF APPEALS

September 3, 2015

Members Present: Chairperson Wayne Larson, David Obermiller, Harold Thompson, Terry Welle

Members Absent: Joel Davy, Jeff Furstenau

Others Present: Ron Strand, John Shea, Ryan Erickson, Deb Wendel Daub, Bruce Taralson

Chairperson Larson called the meeting to order. Mr. Obermiller moved to approve the minutes of the November 6, 2014. All members present voted aye and the motion was declared carried. Mr. Thompson moved to approve the meetings of the February 5, 2015 meetings. All members present voted aye and the motion was declared carried. Mr. Strand stated that there was no unfinished business to address.

New Business - Review of changes to the 2015 International Building Code (IBC), Chapters 1 through 7

Mr. Larson reviewed the procedures for the code hearings and the proposed schedule. Mr. Strand explained that staff had reviewed the International Code Council changes between the currently adopted codes and the new, 2015 editions. He stated that the presentations to the Board would be limited to what each staff member considered to be significant in financial, design, or enforcement terms. He noted that staff would point out existing local amendments where possible but that any missed would be addressed at the end of the hearing cycle with other sections that required further review.

Mr. Obermiller asked if local contractors and engineers were directly notified of the code hearings. Mr. Strand responded that the agendas and hearing schedule were posted publicly and that staff attempted to identify relevant groups who might have an interest in the particular areas of the codes under review for a specific meeting. He noted that Fargo's code adoption process also paved the way for North Dakota's review of these same changes. Mr. Thompson asked if groups had been in contact with staff and Mr. Strand responded that he had directed those people who had to bring their proposed changes to the Board at the appropriate meeting. He stated that staff would not change the schedule to reduce the time available before the published hearing date.

Chapter 1 Scope and Administration

Section 101.1 Staff recommends continuing the existing local **AMENDMENT** inserting Fargo, North Dakota.

Section 101.2 The exception clarifies that accessory structures to one- and two-family residential structures regulated under the IRC. Mr. Thomsen clarified that a designer could still choose to design townhomes as multi-family dwellings and Mr. Strand agreed.

Section 101.4.3 Staff recommends continuing the existing local **AMENDMENT** replacing the words "International Plumbing Code" with "North Dakota State Plumbing Code".

Section 101.4.6 adopts the International Energy Conservation Code (IECC) by reference. This section may need to be revised for clarification depending on the Board's action regarding the IECC.

Section 101.4.7 adopts the International Existing Building Code (IEBC) by reference. Mr. Strand noted that this meant that the IEBC no longer need be adopted as a separate code instead of the duplicative Chapter 34, which has been removed.

Section 102.6 cites the International Property Maintenance Code (IPMC) and the IEBC as authorities for the continued use of existing structures. Two conditions are enumerated for buildings not previously occupied for their intended purpose and those previously occupied. If the building was not previously occupied it must comply as if it were a new building. A building previously legally occupied may continue in use.

Section 104.2.1 Staff recommends continuing the existing local **AMENDMENT** deleting the Flood provision. Mr. Strand noted that staff recommended that all flood provisions be stricken and reference made to the existing Fargo Floodproofing Code.

Section 104.8 Staff recommends continuing the existing local **AMENDMENT** adding the following language to the final paragraph: “This code shall not be constructed to relieve from or lessen the responsibility of any person owning, operating, or controlling any building or structure for any damages to persons or property caused by defects, nor shall the code enforcement agency or the city be held as assuming any such liability by reason of the inspection authorized by this code or any permits or certificates issued under this code.”

Section 104.10.1 Staff recommends continuing the existing local **AMENDMENT**: deleting the flood provision.

Section 105.2 Staff recommends continuing the existing local **AMENDMENT** to alter the subsections as follows:

2. Fences not over ~~7~~ 8.5 feet (~~2134 mm~~) high.

6. Sidewalks and driveways ~~not more than 30 inches (962 mm) above adjacent grade, and not over any basement or story below and are not part of an accessible route.~~

12. Window awnings in ~~Group R-3 and U occupancies, supported by an exterior wall that do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support.~~

Section 107.2.5.1 Staff recommends continuing the existing local **AMENDMENT** deleting the flood-related subsection.

Section 107.2.6 refers to construction documents containing the information specified in IBC Section 1603, which deals with depicting structural elements and loading.

Section 107.3.1 Staff recommends continuing the existing local **AMENDMENT** regarding the plans required to be stamped “approved” and kept on the construction site. Mr. Strand explained the reasoning behind this amendment.

Section 108.2 The previous minimum compliance requirements for temporary structures are now contained in Section 310.3.1.1.

Section 110.3.3 and **Section 110.3.10.1** Staff recommends continuing the existing local **AMENDMENT** deleting flood-related subsections.

Section 111.1 outlines when a change of use will require a Certificate of Occupancy.

Section 116.5 Chapter 34 has been removed from the code. This section designates the IEBC as the governing code for repairs, alterations, additions and changes of occupancy. This section, together with Section 101.4.7, establishes the IEBC as adopted.

Chapter 2 Definitions

Mr. Strand stated that there were no significant changes to this chapter. Mr. Thompson asked whether the definition of the common path of egress change was significant and Mr. Strand stated that the definition was not but that its use in the appropriate sections may be.

Chapter 3 Use and Occupancy Classification

Section 304.1 has been clarified so that food processing, training, and skill development centers were specifically included in this occupancy group.

Section 305.2 Staff recommends continuing the existing local **AMENDMENT** changing this section to read: “Group E, day care facilities. This group includes buildings and structures or portions thereof occupied by more than ~~five~~ twelve children older than 2 ½ years of age who receive educational supervision or personal care services for fewer than 24 hours per day.” Mr. Strand noted that the amendment had originally been made to agree with the State of North Dakota allowances. He stated that, should staff find that number had changed at the state level, the local amendment and that to Section 305.2.2 would be updated to match.

Section 305.2.2 Staff recommends continuing the existing local **AMENDMENT** changing this section to read: “~~Five~~ Eleven or fewer children. A facility having ~~five~~ eleven or fewer children receiving such day care shall be classified as part of the primary occupancy.”

Section 306.2 Food processing, training, and skill development centers larger than 2,500 square feet are now explicitly included in this occupancy group.

Table 307.1(1) Footnote c no longer contains “industrial products” in the list of exempted alcohol-containing products if not over a 1.3 gallon capacity. Footnote e adds “gas rooms” as an acceptable storage area for the 100% increase. Footnote p.2 refers to the International Fire Code (IFC) and not to the IBC. Footnote p.5 requires that alcohol based hand rub dispenser locations be shown on the construction documents. Mr. Strand stated that these present a particular hazard as they are commonly found in corridors and near exit doors.

Section 307.5 now includes a reference to Section 414.1.3, which requires a report to the Building Official of the hazardous quantities and locations.

Section 308.3 While changes recognize that there may be custodial care occupancies where all occupants are capable of exiting the building under condition 1, the code anticipates that most I-1 will include custodial care occupancies with some occupants who will require assistance to exit the building. These conditions require more stringent requirements, including limitations on number of stories and the inclusion of smoke barriers, smoke detection, and sprinkler protection. The relative ability to respond to emergency situations has been addressed by the inclusion of Conditions 1 and 2 to provide appropriate requirements for either case.

Section 308.4 Conditions 1 and 2 have also been added to the code applications for Group I-2 occupancies. Condition 1 applies to long-term care facilities and Condition 2 to short-term care.

Section 310.6 Conditions 1 and 2 have been added to Residential R-4 occupancies to differentiate between those occupancies for custodial care for persons not requiring assistance to deal with an emergency (Condition 1) and those in which any persons require some limited verbal or physical assistance.

Section 311.1.1 establishes the threshold of one hundred square feet to determine whether a storage room will be considered part of the R occupancy or as an S occupancy.

Chapter 4 Special Detailed Requirements

Section 403.1 Number 3 changes from the entire building in which an A-5 is located to the portion of the building containing the A-5 occupancy. Item 5 now indicates the specific subsections of Section 415 to be applied to H-2 and H-3 occupancies, specifically liquefied petroleum gas facilities and dry cleaning plants.

Section 403.2.1.2 now refers to interior exit stairways rather than exit enclosures with no change to intent or impact.

Sections 403.3.2 and 403.3.3 deal respectively with buildings more than 420 feet in height and buildings located in Seismic Design Categories C, D, E or F. Neither of these conditions are likely to apply locally.

Section 403.4.8.2 Fuel line piping now requires two-hour protection unless in a sprinklered building, in which case the protection may be reduced to one hour.

Section 403.4.8.3 Paragraph 4 contains material that has been relocated.

Section 403.5.2 contains a new requirement that pertains to buildings over 420 feet in building height.

Section 403.6.1 refers to Section 3002.4, which requires that a fire service elevator car be sized to accommodate an elevator stretcher.

Section 404.5 The exception now requires smoke control for a two-story atrium serving I-2 and I-1, Condition 2, occupancies.

Section 404.9 has been clarified. Egress not through an atrium or through an atrium but only at the level of discharge must comply with Section 1017. If egress is at other levels, the 200-foot travel distance applies within the atrium.

Section 404.10 now specifies that, if the atrium complies with the requirements of Section 1028, 50% of the interior exit stairways may egress through the atrium.

Section 406.3 has been reorganized to make the section easier to understand and use.

Section 406.3.1 Group U occupancies are limited to now 1,000 square feet. There may be more than one in a building so long as they are separated by 1-hour barriers and/or horizontal assemblies. The total area is limited by Sections 503 and 506.

Section 406.3.4.1 Staff recommends continuing the existing local **AMENDMENT** deleting the final sentence requiring a self-closing, latching door.

Sections 407.2.5 and 407.2.6 provides circumstances within which shared living spaces and cooking spaces may be open to corridors.

Section 407.4 Fire safety and evacuation plans required by Section 1001.4 now have to identify the building components necessary to support a defend-in-place emergency response in compliance with Sections 404 and 408 of the IFC.

Section 407.4.1 now provides for corridor width reduction from 96" to 72" in I-2, Condition 1, occupancies if all six conditions listed are met.

Section 407.5 increases smoke compartment size for I-2, Condition 2, occupancies from 22,000 square feet to 40,000 square feet, largely because of the allowable travel distance of 200'.

Section 407.10 contains text that has been relocated from another portion of the code.

Section 408.4.2 contains requirements for power-operated doors and locks. Such doors must be openable by a manual release mechanism at the door with two exceptions.

Section 410.3.5 now contains a one-hour, fire-rated sliding door as an allowable closure for a proscenium opening at a stage as an alternative to a fire curtain or an approved water curtain.

Section 412.3.4.1 now requires that, if an air traffic control tower is supplied with only one exit stairway, the interior finishes of the stairway must be Class A or B.

Section 412.3.6 now states that occupied floors of an air traffic control tower that are more than thirty-five feet above the lowest level of fire department equipment access must have a fire sprinkler.

Section 412.3.7 now requires that elevator car wires and cables be protected by one-hour rated construction.

Section 412.3.8 refers to Section 3008 for elevators provided for occupant evacuation.

Section 412.7 includes a new subsection and table that provide expanded provisions for travel distances over those contained in Section 1017.1 in order to accommodate larger facilities. The expanded travel distances are conditioned on the building being Type I or Type II construction and the exit access travel distance not exceeding those allowed in Table 412.7.

Section 414.3 The stipulation that ducts conveying the listed types of discharge proceed directly to the exterior of the building without passing through any other areas was removed.

Section 414.5.2 The requirement for monitor control equipment was removed and subsequent sections have been renumbered.

Section 414.5.3 The exception to standby or emergency power for storage, use, and handling areas for highly toxic or toxic materials has been relocated to the IFC.

Section 415.5 has been added to require emergency alarms in H-1, H-2, H-3, H-4, and H-5 occupancies.

Section 415.7 now includes requirements for special provisions for Group H-1 occupancies.

Section 420.1 Group R-4 occupancies have been added to the scoping of this section.

Section 421 has been rewritten but the changes do not appear to be dramatic.

Section 422.3.1 Where ambulatory care facilities require smoke compartmentation, the fire safety evacuation plan is required to identify the building components necessary to support a defend-in-place emergency response.

Sections 423.3 and 423.4 The changes would not apply here as we are in a 200 mile per hour zone according to Figure 304.2(1) of the ICC 500 Standard.

Section 426 is a new section that deals with combustible dusts, including grain processing and storage in H-2 occupancies.

Mr. Strand introduced Mr. Shea. At 10:35 AM the Board recessed for five minutes.

Chapter 5 General Building Heights and Areas

Section 503.1 The provisions that regulate building height and area have been revised for clarity.

Table 504.3 has been reformatted to show allowable height plus any increase if the building is sprinklered.

Table 504.4 now shows number of stories allowable plus any increase if the building is sprinklered.

Section 505.2.3 Exception 2 now allows a mezzanine to be fully or partially enclosed with two or more exits and specifies that one of the exits does not have to go directly to an exit component.

Table 506.2 has been reformatted to for clarity. It details allowable area based on occupancy, type of construction, and whether the building is sprinklered, has frontage to public way or open space, and is a single- or multi-story building. The allowable building area from the 2012 Code has not changed. New formulas have been added to determine the allowable area for single-occupancy one story buildings in Section 506.2.1, single-occupancy multi-story buildings in Section 506.2.3, and mixed-occupancy multi-story buildings in Section 506.2.4.

Section 507.1 Basements are now more clearly identified as being allowed in unlimited area buildings as long as they are only one story below grade.

Section 507.9 now allows occupancy group H-5 semiconductor manufacturing facilities to be unlimited as long as they are constructed according to the laundry list provided.

Table 509 now includes incidental spaces that are considered hazardous to the healthcare or ambulatory facilities. Laboratories, storage rooms, and patient rooms with padded surfaces have been added to the list.

Section 510.2 now allows more than one story above grade that occurs below the three-hour horizontal assembly.

Section 510.8 now allows more than a one-story, occupancy group B or M, building below a group S-2 parking garage.

Chapter 6 Types of Construction

Table 601 Footnote d, which allowed an NFPA 13 automatic sprinkler system to substitute for one-hour fire-resistance construction, has been deleted. It had limited use and was improperly used.

Table 602.4 includes a new addition that covers Structural Composite Lumber.

Section 602.4.2 now allows cross-laminated timber in an exterior wall of Type IV construction. This lumber must be covered on the exterior surfaces with fire-retardant treated 15/32-inch wood sheathing, ½-inch gypsum board, or a non-combustible material.

Section 602.4.8.2 is a new section explaining what types of woods or non-combustible material can be used in Type IV construction.

Section 603.1 now allows wood in the wall construction of freezers and coolers provided they are less than 1000 square feet, lined on both sides with non-combustible material and the building is fully sprinklered.

Chapter 7 Fire and Smoke Protection Features

Section 704.4 now states that secondary members in a horizontal assembly can be protected by a ceiling or membrane as long as the ceiling or membrane has the required fire-resistive rating.

Section 705.2 modifies the required fire separation distance from the leading edge of the projection to the lot line.

Table 705.2 is new. It attempts to make Section 705.2 easier to use.

Section 705.2.3 now requires that any combustible projection that comes within five feet of the fire separation distance must be protected by one-hour construction, Type IV construction, fire-retardant wood, or comply with Section 1406.3.

Section 705.3 Exception 2 is new and deals with S-2 parking garage of Type I or II construction and Group R-2 building with no fire separation distance between the buildings. There may be openings between the buildings but the opening in the S-2 occupancy must be protected by a minimum 1½-hour fire protective rating.

Section 705.6 Floors and roofs that act as interior structural elements are no longer required to have the same fire*resistive rating as the exterior walls, as stated in Table 601.

Section 705.8.5 If openings in the exterior walls are within five feet horizontally and three feet vertically, and the opening in the lower floor is not ¾-hour fire protection rated, then the openings must be separated by a

minimum of three-foot spandrel girders, one-hour rated walls protected from both sides, or flame barriers that extend not less than 30 inches from the exterior wall.

Section 706.2 Fire wall construction, referenced in NFPA 221-2012 Edition, now allows for “tied” and “cantilevered” options.

Section 706.6 Staff recommends continuing the existing local **AMENDMENT** adding item seven to read as follows: “7. Fire walls installed within detached structures of Group U occupancies may terminate at the underside of the roof sheathing provided such walls are not required to be fire-resistive construction due to proximity to property lines.”

Section 707.5 Exceptions 2 and 4 were moved from supporting construction for a fire barrier to become exceptions 1 and 2 under continuity. These exceptions now make it easier to understand how a shaft can terminate beneath the floor or roof sheathing.

Section 709.4 was clarified to specify that smoke barrier walls for smoke compartments must be continuous from the outside wall to outside wall.

Section 709.4.2 combines exceptions 2 and 3 from the 2012 IBC and explains how the smoke barrier walls can terminate around areas of refuge and elevator lobbies.

Section 711 has been reformatted to clarify that only fire-resistance or non-fire-resistance rated horizontal assemblies (which include floor and roof assemblies) will be covered in this section.

Section 712.1 now deals only with the requirements that relate to the protection of vertical openings.

Section 713.1 Exit access stairways have been moved to Section 1019.3.

Section 714.3.2 Exception 6 is new and defines the required protection for when a membrane penetration of a maximum two-hour fire-resistive wall or partition by a steel outlet box greater than 16 square inches or 100 square inches in 100 square feet of wall.

Section 714.4.2 includes a new exception seven that allows a wall to interrupt a 1- or 2-hour fire resistance rated horizontal assembly with double wood top plates as long as the wall is sheet rocked with Type X gypsum board on both sides providing all penetrations through the top plates are properly fire stopped.

Section 716.2 is new and adds fire-resistance-rated glazing to floor/ceiling assemblies.

Section 716.3.1 now requires that the label must show the door meets the hose stream test, temperature requirements, and fire rating in minutes.

Section 716.3.2 now requires that the label must show the window meets both the hose stream test and fire rating in minutes.

Section 717.1.1 clarifies the use of an HVAC duct system that exits from one shaft, moves horizontally, and then enters a second shaft. Dampers will be required where the duct exits and re-enters a shaft.

Section 717.3 “Corridor Damper” that has been designed, tested and listed to be used in a corridor wall, in a horizontal position, as permitted by Section 708.4, exception 3 has been added to the code.

Section 717.5 explains where corridor dampers may be installed.

Deb Wendel Daub with Roers Development, Inc. asked if the requirements for labeling and specialized dampers had been communicated to manufacturers. Mr. Strand replied that most manufacturers were heavily

involved in the code development process and often were aware of the changes well in advance of adoption. The Board discussed fire ratings and dampers with Ms. Wendel Daub and Mr. Strand.

Mr. Thompson stated that multi-family building garages were divided into 3,000 square foot subdivisions under the current edition of the IBC. Mr. Strand explained the reasoning for the requirements that allow for larger accessory buildings with smaller subdivisions inside.

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

Respectfully Submitted,

Ron C. Strand
Board Secretary