

160.01 ADOPTION OF FIRE CODE. That a certain document, being marked and designated as the *International Fire Code*, 2018 edition, including Appendix Chapters **B, C, D, I, K, and M** (see *International Fire Code* Section 101.2.1, 2018 edition), as published by the International Code Council, be and is hereby recommended as the Fire Code of the **City of Indianola, Iowa** for regulating and governing the safeguarding of life and property from fire and explosion hazards arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises as herein provided; and each and all of the regulations, provisions, penalties, conditions and terms of said Fire Code are hereby referred to, adopted, and made a part hereof, as if fully set out in this legislation, with the additions, insertions, deletions and changes, if any, prescribed in Section 160.02.

160.02 AMENDMENTS, MODIFICATIONS, ADDITIONS AND DELETIONS. The following sections of the *International Fire Code*, 2018 edition, including Appendix Chapters **B, C, D, I, K, and M** (see *International Fire Code* Section 101.2.1, 2018 edition), as published by the International Code Council, are hereby revised:

Section 101.1. Insert: **City of Indianola, Iowa**

Delete Code Section IFC 110.4.

Insert the following language:

110.4 Violation penalties. Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction documents or directive of the fire code official, or of a permit or certificate used under provisions of this code shall, upon conviction, be subject to the penalties set forth in Chapter 4 of this Code of Ordinances or a violation of any of the provisions of this chapter shall constitute a municipal infraction and may be enforced under Chapter 4 of this Code of Ordinances.

Delete Code Section IFC 112.4.

Insert the following language:

112.4. Failure to comply. Any person who shall continue any work after having been served with stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition shall, upon conviction, be subject to the penalties set forth in Chapter 4 of this Code of Ordinances or a violation of any of the provisions of this chapter shall constitute a municipal infraction and may be enforced under Chapter 4 of this Code of Ordinances.

Section 3. That the geographic limits referred to in certain sections of the 2018 *International Fire Code* are hereby established as follows:

Section 5704.2.9.6.1 (geographic limits in which the storage of Class I and Class II liquids in above-ground tanks outside of buildings is prohibited): **Corporate Limits of the City of Indianola, Iowa**

Section 5706.2.4.4 (geographic limits in which the storage of Class I and Class II liquids in above-ground tanks is prohibited): **Corporate Limits of the City of Indianola, Iowa**

Section 5806.2 (geographic limits in which the storage of flammable cryogenic fluids in stationary containers is prohibited): **Corporate Limits of the City of Indianola, Iowa**

Section 6104.2 (geographic limits in which the storage of liquefied petroleum gas is restricted for the protection of heavily populated or congested areas): **Corporate Limits of the City of Indianola, Iowa**

Delete Code Section: IFC 308.1.4

Replace with the following language:

308.1.4 Open-flame cooking devices.

Charcoal burners, other open-flame cooking devices, and other devices that produce ashes or embers shall not be operated on balconies or within 20 feet (3048 mm) of combustible construction. Location of LP containers shall comply with Section 6104.

Exceptions:

1. One- and two-family *dwelling*s, constructed in accordance with the *International Residential Code*.
2. LP-gas cooking devices having LP-gas container with a water capacity not greater than 20 pounds.

Insert New Code Section: IFC 503.1.4

Insert the following language:

503.1.4 Outdoor Venue Access. A 10 ft. wide emergency access roads designed to support 36,000 lb. weight load shall be provided within 350-feet of all portions of an outdoor venue (e.g. soccer complex, park, skate park, sports fields) to facilitate emergency vehicle access.

Exception: The fire code official is authorized to increase the dimension of 350 feet where emergency access roads cannot be installed because of location on property, topography, waterway, nonnegotiable grades, or other similar conditions, and an approved alternative means of emergency access is provided.

Delete Code Section: IFC 503.2.1

Replace with the following language:

503.2.1 Dimensions. Fire apparatus access roads shall have a minimum unobstructed width of not less than 20 feet (6096 mm), exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 14 feet (4268 mm).

Delete Code Section: IFC 505.1

Replace with the following language:

505.1 Address identification.

New and existing buildings shall have *approved* address numbers, building numbers or *approved* building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall be black or white and shall contrast with their background. Where required by the *fire code official*, address numbers shall be provided in greater dimension or additional *approved* locations to facilitate emergency response. Address numbers shall be Arabic numbers or alphabetical letters. Numbers and letters shall be a minimum height and a minimum stroke width as dictated by Table 505.1. Where access is by means of a private road and the building cannot be viewed from the *public way*, a monument, pole or other sign or means shall be used to identify the structure. Address numbers shall be maintained.

Table 505.1
Minimum Height and Stroke Width^{a b}

Distance from the centerline of the Public Way (ft)		Minimum Height (in)	Minimum Stroke Width (in)
Less than 100		4	1/2
100	199	6	3/4
200	299	8	1
For each additional 100		Increase 2	Increase 1/2

^a Exterior suite identification, minimum height shall be 4 inches and stroke width shall be ½ inch.

^b Interior suite identification, minimum height shall be 2 inches and stroke width shall be ¼ inch.

Delete Code Section: IFC 507.5.1.1

Replace with the following language:

507.5.1.1 Hydrant for fire department connections.

Buildings equipped with a fire department connection installed in accordance with Section 912 shall have a fire hydrant located on a fire access road within 100 feet (30 m) of the fire department connection as measured by an approved route around the exterior of the building.

Exception: The distance shall be permitted to exceed 100 feet (30 m) where approved by the *fire code official*.

Delete Code Section: IFC 507.5.5

Replace with the following language:

507.5.5 Clear space around hydrants. A 5-foot (1524 mm) horizontal clear space shall be maintained around the circumference of fire hydrants, as measured from the center-point of the hydrant, except as otherwise required or *approved*.

Insert New Code Section: IFC 507.5.7

Insert the following language:

507.5.7 Fire Hydrant Markers and Identification Color. When required by the Fire Code Official, hydrant locations shall be identified by the installation of an *approved* reflective marker. Both public and private hydrants shall comply with and be painted to Local Water Utility specifications.

Insert New Code Section: IFC 507.5.8

Insert the following language:

507.5.8 Fire Hydrant Installation. Fire hydrants shall be installed with the grade mark on the fire hydrant at the level of finished grade. The large diameter connection shall be installed such that the connection is oriented facing the fire department access road.

Modify Code Section: IFC 508.1

Replace with the following language:

508.1 General. Where required by other sections of this code, Table 508.1, and in all buildings classified as high-rise buildings by the *International Building Code*, a *fire command center* for fire department operations shall be provided and shall comply with Sections 508.1.1 through 508.1.6.

Add Code Section: IFC Table 508.1

Add the following language:

Table 508.1 Fire Command Center Thresholds

Occupancy	Threshold Requiring a Fire Command Center
Group A	1,000 occupants
Group E	100,000 gross square feet

Group F	200,000 gross square feet
Group H	100,000 gross square feet
Group I-2 or I-3	100,000 gross square feet
Group M	100,000 gross square feet
Group R1	Greater than 200 <i>dwelling units or sleeping units</i>
Group S	200,000 gross square feet

Add Code Section: IFC 511

Language:

Section 511 Fire and Emergency Vehicle Lanes.

Section 511.1 General. Fire and emergency vehicle lanes shall be provided and maintained in accordance with section 511.1 through 511.6 and referred to as fire lanes in this ordinance.

Section 511.2 Purpose. The requirement that Fire Lanes be established in certain parking areas and the enforcement of restrictions on parking in such Fire Lanes established in this Chapter are designed to ensure adequate access to commercial, office, multi-family, and other high density use facilities by fire-fighting and other emergency vehicles.

Section 511.3. Designation. The Fire Code Official may designate fire lanes on private and public property as deemed necessary for the protection of life and property.

Section 511.4 Obstruction. No person shall park or place a vehicle or other obstruction in a designated fire lane that would prevent such fire lane from being immediately accessible to emergency vehicles or deter or hinder emergency vehicles from gaining immediate access to the fire lane. A written request to the jurisdictional Fire Code Official for temporary obstruction of a fire lane shall be submitted for approval.

Section 511.5 Signs and markings. Wherever a fire lane has been designated, the Code Official shall cause appropriate signs and markings to be placed identifying such fire lanes. Signs or markings shall always be maintained in a clean and legible condition and shall be replaced or repaired when necessary to provide adequate visibility. Fire lanes may be established or relocated at the time of plan review, pre-construction site inspection, and/or post construction site inspection, as well as any time during the life of the occupancy as needed to provide and maintain emergency vehicle access. All designated fire lanes shall be clearly marked in the following manner:

1. Vertical curbs shall be painted red on the top and side, extending the length of the designated fire lane. Rolled curbs or surfaces without curbs shall have a red (6) inch wide stripe painted the length of the designated fire lane. One of the following identification lettering methods shall be utilized:

- A. The words “NO PARKING – FIRE LANE (Except for Emergency Vehicles)” shall be stenciled with three (3) inch white letters and a minimum three – quarter (¾) inch stroke on the face of the curbing, or in the absence of vertical curbing, on the red stripe, and spaced at fifty (50) foot intervals or portions thereof, or
- B. The pavement adjacent to the painted curbs shall be marked with minimum eighteen (18) inch in height block lettering with a minimum three (3) inch brush stroke reading: “NO PARKING - FIRE LANE.” Lettering shall be red and spaced at fifty (50) foot intervals or portions thereof.

2. Signage identifying fire lanes shall conform to the following: Fire lane signs shall be 18 inches tall x 12 inches wide with red letters on a white reflective background to read “Fire Lane No Parking Except For Emergency Vehicles” or similar verbiage as approved by the code official. Fire lane signs shall be placed 2 - 4 feet from the edge of the Fire Lane. The bottom of fire lane signs shall be between five (5) and seven (7) feet from the ground. Intermediate fire lane signs shall be set every one hundred (100) feet in a continuous fire lane. The BEGINS sign shall mark the beginning of a fire lane and shall be mounted below the first fire lane sign. The ENDS sign shall mark the ending of a fire lane and shall be mounted below the last fire lane sign. The BEGINS and ENDS signage may be omitted by the Code Official due to the location of the fire lane. Signs may be placed on a building when approved by the Fire Code Official.

Section 511.6 Maintenance. The owner, manager, or person in charge of any property upon which designated fire lanes have been established shall provide marking as required above and, shall maintain fire lanes at their expense as often as needed to clearly identify the designated area as being a fire lane.

Delete Code Section: IFC 605.12.4 Item #5 “By other approved means.”

Do not replace with any other additional language.

Delete Code Section: IFC 806.1.1 Exception #2 “Trees shall be allowed within *dwelling units* in Group R-2 occupancies.”

Do not replace with any other additional language.

Insert New Code Section: IFC 901.4.6.1.1 (correlation: IBC 902.1.1.1)

Insert the following language:

901.4.6.1.1 Fire Sprinkler Riser Room. A fire sprinkler riser room shall be separated from the electrical room. The riser room shall have no electrical panels, devices, or apparatus inside the room other than the outlets or support equipment (lighting, air compressor, and heater) required for the use of the fire sprinkler system and/or the fire alarm panel. The sprinkler riser room shall not be exclusively accessed from the electrical room, but the electrical room may be accessed from the fire riser room.

Insert New Code Section: IFC 903.1.2 (correlation: IBC903.1.2)

Insert the following language:

903.1.2 Existing Buildings. For other than new construction or where current code contains retroactive provisions an automatic sprinkler system shall be provided pursuant to the building and fire codes in effect at the time of construction in accordance with provisions of the International Existing Building Code.

Modify Code Section: IFC 903.2 (correlation: IBC 903.2)

Replace with and add the following language:

903.2 Where required. *Approved automatic sprinkler systems* in new buildings and structures shall be provided in the locations described in Sections 903.2.1 through 903.2.12

Exceptions:

1. Prior to July 1, 2016 any jurisdiction calculating fire areas by other methods not defined by the *International Fire Code* or *International Building Code*, may continue to utilize those methods in calculating fire sprinkler square footage requirements as previously established by local jurisdiction.
2. Prior to July 1, 2016 any jurisdiction requiring reduced fire areas or reduced occupant loads in determining the requirements for automatic sprinkler systems in Section 903.2.1 through 903.2.12 may continue to utilize these methods as previously established by local jurisdiction.
3. Spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided those spaces or areas are equipped throughout with an automatic smoke detection system in accordance with Section 907.2 and are separate from the remainder of the building by not less than 1-hour *fire barriers* constructed in accordance with Section 707 of the *International Building Code* or not less than 2-hour horizontal assemblies constructed in accordance with Section 711 of the *International Building Code*, or both.

Delete Code Section: IFC 903.2.1.1 (correlation: IBC 903.2.1.1)

Replace with the following language:

903.2.1.1 Group A-1. An automatic sprinkler system shall be provided throughout stories containing Group A-1 occupancies and throughout all stories from the Group A-1 occupancy to

and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds 6,000 square feet (1115 m²).
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.
4. The fire area contains a multiple-theater complex.

Delete Code Section: IFC 903.2.1.2 (correlation: IBC 903.2.1.2)

Replace with the following language:

903.2.1.2 Group A-2. An automatic sprinkler system shall be provided throughout stories containing Group A-2 occupancies and throughout all stories from the Group A-2 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds 1,500 square feet (1115 m²).
2. The fire area has an occupant load of 50 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.
4. The fire area contains a multiple-theater complex.

Delete Code Section: IFC 903.2.1.3 (correlation: IBC 903.2.1.3)

Replace with the following language:

903.2.1.3 Group A-3. An automatic sprinkler system shall be provided throughout stories containing Group A-3 occupancies and throughout all stories from the Group A-3 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds 6,000 square feet (1115 m²).
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.

Delete Code Section: IFC 903.2.1.4 (correlation: IBC 903.2.1.4)

Replace with the following language:

903.2.1.4 Group A-4. An automatic sprinkler system shall be provided throughout stories containing Group A-4 occupancies and throughout all stories from the Group A-4 occupancy to

and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds 6,000 square feet (1115 m²).
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.

Delete Code Section: IFC 903.2.2 (correlation: IBC 903.2.2)

Replace with the following language:

903.2.2 Group B. An *automatic sprinkler system* shall be provided throughout buildings containing a Group B occupancy where one of the following conditions exists:

1. A Group B *fire area* exceeds 6,000 square feet (557.5 m²).
2. A Group B *fire area* is located more than three stories above grade plane.
3. The combined area of all Group B *fire areas* on all floors, including any mezzanines, exceeds 12,000 square feet (1115 m²).

Insert Code Section: IFC 903.2.2.1 (correlation: IBC 903.2.2.1)

Insert the following language:

903.2.2.1 Ambulatory care facilities. An automatic sprinkler system shall be installed throughout the entire floor containing an ambulatory care facility where either of the following conditions exist at any time:

1. Four or more care recipients are incapable of self-preservation.
2. One or more care recipients that are incapable of self-preservation are located at other than the level of exit discharge serving such a facility.

In buildings where ambulatory care is provided on levels other than the level of exit discharge, an automatic sprinkler system shall be installed throughout the entire floor as well as all floors below where such care is provided, and all floors between the level of ambulatory care and the nearest *level of exit discharge*, the *level of exit discharge*, and all floors below the *level of exit discharge*.

Exception: Floors classified as an open parking garage are not required to be sprinklered.

Delete Code Section: IFC 903.2.3 (correlation: IBC 903.2.3)

Replace with the following language:

903.2.3 Group E. An automatic sprinkler system shall be provided throughout stories containing Group E occupancies and throughout all stories from the Group E occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:

1. The fire area exceeds 1,500 square feet (1115 m²).
2. The fire area has an occupant load of 50 or more.
3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.

Delete Code Section: IFC 903.2.4 (correlation: IBC 903.2.4)

Replace with the following language:

903.2.4 Group F-1. An *automatic sprinkler system* shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists:

1. A Group F-1 *fire area* exceeds 6,000 square feet (557.5 m²).
2. A Group F-1 *fire area* is located more than three stories above grade plane.
3. The combined area of all Group F-1 *fire areas* on all floors, including any mezzanines, exceeds 12,000 square feet (1115 m²).
4. A Group F-1 occupancy used for the manufacture of upholstered furniture or mattresses exceeds 2,500 square feet (232 m²).

Delete Code Section: IFC 903.2.7 (correlation: IBC 903.2.7)

Replace with the following language:

903.2.7 Group M. An *automatic sprinkler system* shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:

1. A Group M *fire area* exceeds 6,000 square feet (557.5 m²).
2. A Group M *fire area* is located more than three stories above grade plane.
3. The combined area of all Group M *fire areas* on all floors, including any mezzanines, exceeds 12,000 square feet (2230 m²).
4. A Group M occupancy used for the display and sale of upholstered furniture or mattresses exceeds 5,000 square feet (464 m²).

Delete Code Section: IFC 903.2.9 (correlation: IBC 903.2.7)

Replace with the following language:

903.2.9 Group S-1. An *automatic sprinkler system* shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:

1. A Group S-1 *fire area* exceeds 6,000 square feet (557.5 m²).

2. A Group S-1 *fire area* is located more than three stories above grade plane.
3. The combined area of all Group S-1 *fire areas* on all floors, including any mezzanines, exceeds 12,000 square feet (1115 m²).
4. A Group S-1 *fire area* used for the storage of commercial motor vehicles where the *fire area* exceeds 5,000 square feet (464 m²).
5. A Group S-1 occupancy used for the storage of upholstered furniture or mattresses exceeds 2,500 square feet (232 m²).

Modify Code Section: IFC 903.2.9 (correlation: IBC 903.2.9)

Insert the following language (adding a 6th condition):

6. A Group S-1 occupancy used for Self-Service Storage Facility (mini-storage) exceeds 6,000 square feet (557 m²).

Delete Code Section: IFC 903.2.9.1 (correlation: IBC 903.2.9.1)

Replace with the following language:

903.2.9.1 Repair garages. An *automatic sprinkler system* shall be provided throughout all buildings used as repair garages in accordance with Section 406.8 of the *International Building Code*, as shown:

1. Buildings having two or more stories above grade plane, including *basements*, with a *fire area* containing a repair garage exceeding 10,000 square feet (929 m²).
2. Buildings not more than one story above grade plane, with a *fire area* containing a repair garage exceeding 3,500 square feet (325 m²).
3. Buildings with repair garages servicing vehicles parked in *basements*.
4. A Group S-1 *fire area* used for the repair of commercial motor vehicles where the *fire area* exceeds 3,500 square feet (325 m²).

Modify Code Section: IFC 903.3.1.2 (correlation: IBC 903.3.1.2)

Replace with the following language:

903.3.1.2 NFPA 13R sprinkler systems. *Automatic sprinkler systems* in Group R and I occupancies up to and including four stories in height in buildings not exceeding 60 feet (18 288 mm) in height above grade plane shall be installed throughout in accordance with NFPA 13, unless allowed to be sprinklered in accordance with NFPA 13D by the *International Building Code*. The number of stories of Group R occupancies constructed in accordance with Sections 510.2 and 510.4 of the *International Building Code* shall be measured from the horizontal assembly creating separate buildings.

Modify Code Section: IFC 903.2.11.1.3 (correlation: IBC 903.2.11.1.3)

Replace with the following language:

903.2.11.1.3 Basements. Where any portion of a *basement* is located more than 75 feet (22 860 mm) from openings required by Section 903.2.11.1, the *basement* shall be equipped throughout with an *approved automatic sprinkler system*.

Modify Code Section: IFC 903.4.2 (correlation: IBC 903.4.2)

Replace with the following language:

903.4.2 Alarms. An *approved weather proof audible device suitable for outdoor use* with 110 candela visual signal shall be connected to every *automatic sprinkler system*. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Alarm devices shall be provided on the exterior of the building in an *approved* location. Where a fire alarm system is installed, actuation of the *automatic sprinkler system* shall actuate the building fire alarm system.

Insert Code Section: IFC 905.3.9 (correlation: IBC 905.3.9)

Insert the following language:

905.3.9 Building Footprint and Access. Where the most remote portion of a floor or story is more than 400 feet from a hose connection or fire department access road the fire code official is authorized to require standpipes to be provided in *approved* locations. Class I manual standpipes shall be allowed.

Modify Code Section: IFC 907.2 (correlation: IBC 907.2)

Add the following exception:

3. Prior to July 1, 2016 any jurisdiction requiring reduced fire areas or reduced occupant loads in 907.2.1 through 907.2.23 may continue to utilize these methods as previously established by local jurisdiction determining the requirements for fire alarm systems in Section 907.2.1 through 907.2.23.

Insert Code Section: IFC 907.1.4 (correlation: IBC 907.1.4)

Insert the following language:

907.1.4 FACP (Fire Alarm Control Panels)

Each building shall have no more than 1 FACP.

Installation of fire alarm panel shall not exceed six feet in height measured from the floor to the top of the unit.

Exception: Suppression system releasing panels are not required to meet the height requirement or the limitation in the number of panels.

Modify Code Section: IFC 907.6.6 (correlation: IBC 907.6.6)

Replace with the following language:

907.6.6 Monitoring. Fire alarm systems required by this chapter or by the International Building Code shall be monitored by a central station approved and listed under UL 827 in accordance with NFPA 72.

Exception: Monitoring station is not required for:

1. Automatic sprinkler and fire alarm systems in one- and two- family dwellings.

Modify Code Section: IFC 910.2.1 (correlation: IBC 910.2.1)

Replace with the following language:

910.2.1 Group F-1 or S-1. Smoke and heat vents installed in accordance with Section 910.3 or a mechanical smoke removal system installed in accordance with Section 910.4 shall be installed in buildings and portions thereof used as a Group F-1 or S-1 occupancy having more than **30,000** square feet (2787 m²) of undivided area. In occupied portions of a building equipped throughout with an automatic sprinkler system in accordance with 903.3.1.1, where the upper surface of the story is not a roof assembly, a mechanical smoke removal system in accordance with Section 910.4 shall be installed.

Exception: Group S-1 aircraft repair hangars.

Modify Code Section: IFC 914.3.1.2 (correlation: IBC 403.3.2)

Replace with the following language:

914.3.1.2 Water supply to required fire pumps. Required fire pumps shall be supplied by connections to a minimum of two water mains located in different streets. Separate supply piping shall be provided between each connection to the water main and the pumps. Each connection and the supply piping between the connection and the pumps shall be sized to supply the flow and pressure required for the pumps to operate.

Exception: Two connections to the same main shall be permitted provided the main is valved such that an interruption can be isolated so that the water supply will continue without interruption through at least one of the connections.

Modify Code Section: IFC 1008.3.3 (correlation: IBC 1008.3.3)

Replace with the following language:

1008.3.3 Rooms and spaces. In the event of a power supply failure, an emergency electrical system shall automatically illuminate all the following areas:

1. Electrical equipment rooms
2. Fire command centers
3. Fire pump rooms
4. Generator rooms
5. Public restrooms that contain more than one water closet/urinal or that are accessible
6. Meeting/conference rooms with an area greater than 400 square feet.
7. Classrooms in an E occupancy with an area greater than 400 square feet.

Modify Code Section: IFC 1009.2 (correlation: IBC 1009.2)

Insert item # 11 with the following language:

11. Components of exterior walking surfaces shall be concrete, asphalt, or another approved hard surface.

Add Code Section: IFC 1010.1.6.1 (correlation: IBC 1010.1.6.1)

Insert the following language:

1010.1.6.1 Frost Protection. Landings required by Section 1010.1.5 to be at the same elevation on each side of the door exterior landings at doors shall be provided with frost protection.

Modify Code Section: IFC 1010.1.9.1 (correlation: IBC 1010.1.9.1)

Replace with the following language:

1010.1.9.1 Hardware. Door handles, pulls, latches, locks and other operating devices on doors required to be accessible by Chapter 11 of the International Building Code shall not require tight grasping, tight pinching or twisting of the wrist to operate. This includes thumb turn locks.

Insert Code Section: IFC 1013.1.1 (correlation: IBC 1013.1.1)

Language:

1013.1. 1 Additional Exit Signs. Exit signs may be required at the discretion of the Code Official to clarify an exit or exit access.

Modify Code Section: IFC 1014.4 (correlation: IBC 1014.4)

Insert item # 6 with the following language:

6. Handrails within a dwelling unit or serving an individual dwelling unit of groups R-2 and R-3 shall be permitted to be interrupted at one location in a straight stair when the rail terminates into a wall or ledge and is offset and immediately continues.

Add Code Section: IFC 1015.9 (correlation: IBC 1015.9)

Insert the following language:

1015.9 Walking surfaces. A guard shall be provided along retaining walls where a finished walking surface such as sidewalks, patios, driveways, parking lots or similar is located on the top side of a retaining wall. The guard shall be installed along any portion of the wall measuring 30 inches or greater in height measured at any point within 36 inches horizontally to the edge of the open side. A guard shall not be required along portions of the retaining wall where the horizontal distance between the edge of the finished walking surface and the face of the wall is greater than 72 inches.

Insert Code Section: IFC 1028.5.1 (correlation: IBC 1028.5.1)

Insert the following language:

1028.5.1 Hard Surfaces. Components of exterior walking surfaces shall be concrete, asphalt, or another approved hard surface.

Insert Code Section: IFC 1030.4.3 (correlation: IBC 1030.4.3)

Insert the following language:

1030.4.3 Window wells drainage. All window wells shall be provided with approved drainage.

Insert New Code Section: IFC Section 1107.1

Insert the following language:

SECTION 1107

REQUIREMENTS FOR FUEL FIRED APPLIANCES

1107.1 Protection of Fuel Fired Appliances. Where required or upon notification from the fire code official an existing building or tenant space containing a fuel fired appliance(s) shall be protected with 1 hour rated construction enclosure or a limited area sprinkler system complying with Section 903.3.8.

Exception: Buildings protected by an approved automatic fire sprinkler system complying with Section 903.3.1.1 or 903.3.1.2.

Insert New Code Section: IFC Section 1107.2

Insert the following language:

1107.2 CSST Bonding Requirements in Rental Dwellings. All rental dwellings shall be bonded in accordance with sections 310.2.1 through 310.2.5 of the International Fuel Gas Code, unless deemed technically infeasible by the Code Official.

Insert New Code Section: IFC Section 1107.3

Insert the following language:

1107.3 CSST Bonding Requirements for Alterations, Repairs, or Additions. For other than rental dwelling units, where alterations, repairs or additions requiring a permit to occur, CSST shall be bonded in accordance with sections 310.2.1 through 310.2.5 of the International Fuel Gas Code, unless deemed technically infeasible by the Code Official.

Insert New Code Section: IFC 1203.7

Insert the following language:

Section 1203.7 Shutdown of Emergency and Standby Power Systems. In addition to the requirements of NFPA 110 for a remote manual stop, a switch of an approved type shall be provided to shut down the generator. The switch shall be provided at an approved location.

Note: 2018 moved this to Chapter 12, the above has been renumbered to accommodate this change.

Insert New Code Section: IFC 1203.8

Insert the following language:

Section 1203.8 Emergency Generator Signs. Main electrical disconnects and main breaker panels supplied by the generator shall be provided with approved signs. Additionally, doors accessing emergency and standby power systems shall be provided with approved signs. When

approved switches for emergency power shut-down are located remote from the fire alarm annunciator, an approved sign shall be provided at fire alarm annunciator. Approved signs shall contain the word CAUTION in black letters at least 2 inches (50 mm) high on a yellow background. Such warning signs shall be placed so as to be readily discernible.

Note: 2018 moved this to Chapter 12, the above has been renumbered to accommodate this change.

Insert New Code Section: IFC Section 3202

Insert the following language:

SECTION 3202

DEFINITIONS

3202.1 Definitions.

The following terms are defined in Chapter 2:

SPECULATIVE BUILDING. A Group S, F or M occupancy having an interior clear height greater than 12 feet (3657 mm) where high-piled storage may accrue and the client leasing or the occupant owner does not know the commodity that will be stored or the method of storage.

3206.2.2 Speculative building. Group S, F and M speculative buildings that have an interior clear height greater than 12 feet where high piled storage may accrue shall comply with this chapter.

3206.4.2 Sprinkler design.

3206.4.2.1 General.

The design of *automatic sprinkler systems* for the protection of Group M and S occupancies containing high-piled storage or high-challenge commodities over an area equal to or greater than 2,500 ft.² (232 m²) and designed for the protection of hazardous materials stored more than one pallet high in Group M, S or H occupancies, shall be in accordance with this section. This section does not apply to miscellaneous storage within the scope of NFPA 13.

3206.4.2.2 Requirements for all plan submittals.

See Section 903.1.9. and 3201.3 for plan submittal requirements.

3206.4.2.3 Minimum design requirements for speculative warehouses.

The design of the *automatic sprinkler system* for speculative warehouses shall be based on storage of a cartoned Class A nonexpanded plastic to the available storage height. The storage

height shall be determined by subtracting 48 inches (from the highest point of the roof above each system for ESFR and 30 inches for area density applications.

3206.4.2.4 Minimum requirements for client leased or occupant-owned warehouses. The design of an automatic sprinkler system for client leased or occupant owned buildings containing high piled storage shall be based on the requirements of NFPA 13. The responsible Fire Protection Contractor shall perform a survey of the building to determine commodity classification, storage configuration, building height and other information related to the development of an appropriate sprinkler system design. The Contractor shall also make reasonable efforts to meet with the building owner or operator to understand seasonal or customer related fluctuations to the stored commodities, storage height, and configuration.

The sprinkler design shall be based on the most demanding requirements determined through the on-site survey and discussions with the building owner or operator. Technical Report shall clearly define the basis for determining the commodity and sprinkler design selection, along with how the commodities will be isolated or separated, and the referenced design document(s), including NFPA 13 or the current applicable Factory Mutual Data Sheets. If a specific fire test is used as the basis of design, a copy of the fire test report shall be provided at the time of plan review.

3206.4.2.5 Required information at plan submittal.

All plans, hydraulic calculations and technical reports shall be submitted with the plan submittal form. The individual submitting the design package shall ensure that all the required information requested on the plan submittal form is included.

3206.4.2.6 Minimum plan information requirements.

In addition to the requirements of NFPA 13, the following information shall be included in the plans or technical report.

3206.4.2.6.1 Class I-IV and Group A plastic commodities.

- A) An owner's certificate in accordance with NFPA 13. The design criteria, e.g., NFPA 13, Factory Mutual Data Sheet, or a specific fire test report.
- B) A Water Supply Flow & Pressure Test Report performed within 90 days of the plan submittal
- C) The type of design, e.g., Control Mode Density/Design Area Method; Specific Application Control Mode Method; Suppression Mode Method, including appropriate code references.
- D) A description of the stored commodities and how the commodity classification was determined.

- E) A layout of the proposed storage arrangement. If the storage is in racks, a plan and elevation detail illustrating rack heights, flue dimensions and arrangement. This detail is not required for speculation warehouses.
- F) The aisle dimensions between each storage array.
- G) If a high challenge commodity is separated using fire-resistive construction, the boundary of the fire-resistive construction shall be illustrated.
- H) A data sheet for the backflow preventer. If a data sheet is not available, the design professional shall include a statement addressing the minimum required pressure loss.
- I) A data sheet for each installed automatic sprinkler.
- J) A data sheet for each pipe hanger used to hang or support the sprinkler piping.
- K) If a fire pump will be installed or used, the manufacturer's factory test curve shall be included in the submittal.
- L) A cross-section view illustrating obstructions to the ceiling sprinklers, e.g., lights, structural members, cable trays, electrical bus ducts and HVAC ductwork.

3206.4.2.6.2 Hazardous materials.

In addition to the requirements of this section, the following information shall be included in a *hazardous materials* technical report.

- A) A hazardous materials inventory statement
- B) For flammable & combustible liquids, an analysis of the miscibility of Class I liquids, the size and type of the packaging, the packaging materials of construction, and if the containers have a pressure relieving mechanism.
- C) For Level 2 or 3 aerosols, a statement indicating that the aerosols are cartoned or uncartoned.

3206.4.2.7 Identification of sprinkler system capabilities and limitations.

A label shall be permanently installed at or adjacent to each sprinkler riser. When a building contains more than four risers, the sign shall be located at an approved location inside the building. The minimum sign dimension is 6-inches (152 mm) high by 4-inches (101 mm) wide. The sign shall specify the capabilities and limitations of the *automatic sprinkler system*. The sign shall include the following information:

- a) The design base or basis, including the edition used
- b) A statement indicating if the sprinkler design is control mode density area method, control mode specific application, suppression mode, or any combination thereof.
- c) When used, all the storage conditions stipulated NFPA 13 for Special Designs.
- d) The maximum storage height
- e) The minimum required aisle width
- f) If storage is in racks, the maximum rack width and minimum transverse and longitudinal flue widths.
- g) Storage Capabilities: Commodities designed to be protected by the automatic sprinkler system

- h) Limits on storage heights of idle wood and plastic storage
- i) Limits on storage heights of miscellaneous Group A plastic, tire and rolled paper storage
- j) Locations where in-rack sprinklers are required
- k) Locations where horizontal and/or vertical barriers are required
- l) Information explaining the manufacturer, sprinkler identification number, k-factor, and operating temperature of the overhead sprinklers protecting the high-piled storage.
- m) Fire Protection Contractor contact information

The following example illustrates a suggested label or sign:

Automatic Sprinkler System Capabilities & Limitations

Stored Commodity	Class I water miscible flammable liquids in 1- & 5-gallon polyethylene containers in fiberboard cartons
Design Documents	NFPA 13, 2013 edition & NFPA 30
Design Type	Control Mode, Density/Area Method
Max. Storage Height	25 feet
Min. Aisle Width	8 feet
Max. Rack Width	9 feet
Flue Dimensions	Longitudinal: Min. 6 inches Transverse: Min. 3 inches
System Capabilities	Class I-IV commodities, stored commodity, solid pile or palletized Group A plastics to 12 feet; rack storage of Group A plastics to 25 feet.
Idle Pallets	6 feet maximum storage height
Tire Storage	5 feet maximum storage height
Rolled Paper Storage	5 feet maximum storage height
In-rack sprinklers	In-rack sprinklers are required at each of 3 rack tiers containing the stored commodity. In-rack sprinklers are Tyco/Central FS-B, 17/32" orifice, QR 155°F element, SIN TY0041
Horizontal Barriers	Required at each rack tier containing the stored commodity.
Ceiling Sprinkler	Tyco ELO-231B, ¾" orifice, SR 286°F element, upright, SIN TY0030
FP Contractor	ABC Sprinkler Co. Designer: John Smith

Delete Code Section: IFC Section 3301.2

Replace with the following language:

3301.2 Purpose.

This chapter prescribes minimum safeguards for construction, *alteration* and demolition operations to provide reasonable safety to life and property from fire and other emergencies during such operations.

Insert New Code Section: IFC Section 3310.1.1

Insert the following language:

Section 3310.1.1 Construction Site Access. *Approved* fire apparatus access roads shall be provided for every facility, building or portion of a building as soon as construction commences. The fire apparatus access road shall comply with the requirements of Section 503.2 and this section and shall extend to within 100 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an *approved* route around the exterior of the building or facility.

Exception: The *fire code official* is authorized to increase the dimension of 100 feet (45 720 mm) where:

1. The building is equipped throughout with an *approved automatic sprinkler system* that is fully functional and installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.
2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an *approved* alternative means of fire protection is provided.

Delete Code Section: IFC Section 3311.1

Replace with the following language:

3311.1 Stairways required. Where building construction exceeds 30-feet (9.144 mm) in height above the lowest level of fire department vehicle access, two temporary or permanent stairways shall be provided. As construction progresses, such stairways shall be extended to within one floor of the highest point of construction having secured decking or flooring.

Delete Code Section: IFC Section 3313.1

Replace with the following language:

3313.1 Where required. In buildings required to have standpipes by Section 905.3.1, not less than one standpipe shall be provided for use during construction. Such standpipe shall be installed prior to construction exceeding 30-feet (9.144 mm) in height above the lowest level of fire department vehicle access. Such standpipe shall be provided with fire department hose connections at approved locations complying with Section 3311.1. As construction progresses,

such standpipes shall be extended to within one floor of the highest of construction having secured decking or flooring.

Insert New Code Section: IFC Chapter 40

Insert the following language:

CHAPTER 40
SPECIAL EVENTS
SECTION 4001
GENERAL

4001.1 Scope. Special events including trade shows and exhibitions, outdoor assembly events, outdoors mazes, special amusement buildings, and special scaffolding structures shall comply with this chapter and Section 1028. Temporary indoor vehicle displays, and vehicle competition or demonstrations shall comply with this chapter and Section 314.

4001.2 Site plans.

A detailed site plan shall be submitted to the fire code official with each permit application for approval.

1. **Outdoor events:** The permit application and site plan shall be submitted a minimum of 30 business days prior to the event. Site plans shall include, but not be limited to:

1. The means of egress.
2. Location and width of exits and aisles.
3. Location of exit signs.
4. Location of fencing or means used to confine attendees.
5. Total square footage of enclosed space.
6. Location and arrangement of all tents, booths or cooking equipment.
7. Locations of fire apparatus access roads.
8. Location of fire protection equipment.
9. Type and location of heating and electrical equipment where applicable.
10. Location of temporary staffed water stations and permanent water fountains.

2. **Trade shows and exhibitions:** The permit application and site plan shall be submitted a minimum of 30 business days prior to the event. Site plans shall include, but not be limited to:

1. The means of egress.
2. Location and width of exits and aisles.
3. Location of exit signs.
4. Total square footage of space.
5. Location and arrangement of all booths and cooking equipment.
6. Location of all fire protection equipment.
7. Type and location of heating and electrical equipment where applicable.

8. Location of covered or multi-level exhibits or booths.

3. Mazes. The permit application and site plan shall be submitted a minimum of 30 business days prior to the event. Site plans shall include, but not be limited to:

1. Means of egress.
2. Location and width of exits and aisles.
3. Location of exit signs.
4. Total square footage of space.
5. Location and arrangement of all booths and cooking equipment.
6. Location of all fire protection equipment.
7. Location of means to confine attendees.
8. Locations of *fire apparatus access roads*.
9. Type and location of heating and electrical equipment where applicable.
10. Locations of structures.

At time of permit application, the event coordinator shall submit a letter from the property owner authorizing the use of the site, the address of the site, dates and hours of operation and names and 24-hour phone numbers of at least two principals.

4. Temporary indoor vehicle displays: The permit application and site plan shall be submitted a minimum of 10 business days prior to the display of electric, liquid- or gas-fueled vehicles, boats or other motor craft. Floor plans shall include, but not be limited to:

1. The means of egress.
2. Location and width of exits and aisles.
3. Location of exit signs.
4. Total square footage of space.
5. Location and arrangement of all booths and cooking equipment.
6. Location of all fire protection equipment.
7. Type and location of heating and electrical equipment where applicable.
8. Location and size of exhibits and booths.
9. Location of structures.

Exception: Auto dealerships.

5. Vehicle competition or demonstration. The permit application and site plan shall be submitted a minimum of 10 business days prior to the competition or demonstration of electric, liquid- or gas-fueled vehicles, boats or other motor craft. A floor plan shall include, but not be limited to:

1. The means of egress.
2. Location and width of exits and aisles.
3. Location of exit signs.
4. Total square footage of space.

5. Location and arrangement of all booths and cooking equipment.
6. Location of all fire protection equipment.
7. Type and location of heating and electrical equipment where applicable.
8. Location and size of exhibits and booths.
9. Location of structures.
10. Location of *fire apparatus access roads* where applicable.

SECTION 4002

DEFINITIONS

4002.1 Definitions. The following words and terms are defined in Chapter 2.

CROSS AISLES.

EXHIBITS.

FLAME EFFECT.

MAIN AISLE.

MAZE.

OUTDOOR ASSEMBLY EVENT.

TEMPORARY STRUCTURES.

TRADE SHOWS OR EXHIBITIONS.

4003

General Requirements

4003.1 Access for firefighting and medical services.

Approved vehicle access for firefighting and medical services shall be provided in accordance with Sections 503 and 512.

4003.2 Combustible storage. Combustible materials stored at special events shall be stored in approved locations and containers.

4003.3 Crowd managers. Crowd managers shall be provided where the fire code official determines that an indoor or outdoor gathering warrants crowd control. Crowd managers shall be in accordance with Section 403.3.

4003.4 Decorative materials and furnishings.

Curtains, drapes and decorations including, but is not limited to drapes, signs, banners, acoustical materials, cotton, hay, fabric, paper, straw, moss, split bamboo, and wood chips shall be flame resistant as demonstrated by testing in accordance with NFPA 701 or provide documentation of flame retardancy. Field flame test shall be in accordance with Section 320. Materials that cannot be treated for flame retardancy shall not be used unless approved by the fire code official. This includes but is not limited to oilcloth, tarpaper, nylon, plastic cloth, and other plastic materials.

4003.5 Fire protection equipment clearance.

Clearance around all fire protection equipment shall be in accordance with Section 901.4.6.

4003.6 Fire extinguishers.

Fire extinguishers shall be in accordance with Section 906 and NFPA 10

4003.7 Fire watch.

Fire watch shall be in accordance with Section 403.12.1.

4003.8 Fireworks, pyrotechnics.

Fireworks and pyrotechnics shall comply with Chapter 56.

4003.9 Housekeeping. The special event area and related areas shall always be kept free from combustible debris.

4003.10 LP-gas heaters. Fuel supplies for liquefied-petroleum gas-fired heaters shall comply with Chapter 61 of the International Fire Code.

4003.11 Open flame devices.

Open flame devices shall comply with Section 308.

4003.12 Waste disposal. Combustible debris shall not be accumulated at special events. Combustible debris, rubbish and waste material shall be removed from special events at the end of each shift of work. Combustible debris, rubbish and waste material shall not be disposed of by burning on the site unless approved.

SECTION 4004

TRADE SHOWS AND EXHIBITIONS

4004.1 General. Trade shows and exhibitions conducted within any occupancy shall comply with Chapter 40.

4004.2 Vehicles. Liquid- and gas-fueled and electric vehicles, boats or other motor-craft and equipment used for display, competition or demonstration within a building shall be in accordance with Section 314.

4004.3 Means of egress. *Means of egress* shall comply with this section and the requirements of Chapter 10.

4004.3.1 Travel distance. The maximum travel distance from any point in an exhibit to an exit access aisle shall not exceed 50 feet (15240mm).

4004.3.2 Aisles.

4004.3.2.1 Aisle width. Minimum aisle width inside a trade show or exhibition shall comply with the following:

Square Footage of Trade Show or Exhibition	Minimum Aisle Width
Greater than 15,000 square feet (1393m ²)	10 feet (3048mm)
5,000 square feet (465 square meters) to 15,000 square feet (1393m ²)	8 feet (2438mm)
Less than 5,000 square feet (465 m ²)	6 feet (1829mm)

4004.3.3 Obstructions. Aisles shall be kept clear of all obstructions, including but not limited to, fixtures and displays of goods for sale, chairs, tables, product, displays, vehicles, and trailer tongues.

4004.3.4 Exit signs. Exit signs shall be visible from all locations in the occupancy.

4004.4 Exhibit construction and materials. The materials used for an exhibit shall comply with Section 4004.4 and Chapter 8

4004.4.1 Materials. Shall be one of the following:

1. Noncombustible or limited-combustible materials.
2. Wood that is greater than ¼-inch (6mm) nominal thickness
3. Wood ¼-inch (6mm) nominal thickness or less that is pressure-treated fire-retardant wood meeting the requirements of NFPA 703, Standard for Fire Retardant Impregnated Wood and Fire-Retardant Coatings for Building Materials. The product shall be marked or labeled by the manufacturer. The product shall not be painted or similarly modified until the material has been inspected and the marking or labeling verified or provide documentation acceptable to the fire code official.

4004.4.1.1 Flame retardant materials. Materials shall comply with Chapter 8.

4004.4.1.2 Wall and ceiling coverings. Textile wall coverings, such as carpeting and similar products used as wall or ceiling finishes shall comply with Chapter 8.

4004.4.1.3 Plastics. Plastics shall be limited to those that comply with Chapter 8. Plastics used in trade shows and exhibitions with an occupant load of 300 or more shall be Class A or Class B. Plastics used in trade shows and exhibitions with an occupant load of less than 300, shall be Class A, Class B or Class C.

4004.5 Combustible materials storage.

4004.5.1 Quantity. Combustible materials shall be limited to a one-day supply

4004.5.2 Location. Storage of combustible materials behind exhibits, booths, or tents is prohibited. Combustible materials, including but not limited to wood crates, paper and cardboard boxes, shall

be stored outside the building in an approved area or in a storeroom having a fire-resistance rating of at least one hour and protected by an approved automatic fire-extinguishing system

4004.6 Covered exhibits and booths.

4004.6.1 Fire Protection.

4004.6.1.1 Automatic sprinkler systems. An approved sprinkler system shall be provided in covered exhibits and booths exceeding 300 square feet (2787 m²). Each level of multi-level exhibit booths shall be protected throughout, including the uppermost level where the uppermost level is covered with a ceiling.

4004.7 Multi-level booths. Construction documents for all multi-level exhibits shall be approved and stamped by a licensed structural engineer or architect and shall be submitted with the permit application. This includes any exhibit where a live load is proposed above the exhibit area floor level, regardless of the accessibility of the area to the public. Upper levels of multi-level booths with an occupant load greater than 10 persons shall have at least 2 remote exits.

4004.8 Hazardous Materials. Hazardous materials shall comply with this section and Chapters 50 through 67.

4004.8.1 Specific prohibitions. The following hazardous materials shall not be stored, handled or used in trade shows and exhibitions:

1. Division 1.1, 1.2, 1.3, and 1.5 explosives as classified by the U.S. Department of Transportation.
2. Detonable, Class I and Class II organic peroxides.
3. Class I-A flammable liquids.
4. Class 4 and Class 3 oxidizers.
5. Class 4 and Class 3 (unstable) reactive materials.
6. Class 3 water-reactive materials.
7. Pyrophoric materials.
8. Highly toxic materials

9. Toxic gases.
10. Fueling or defueling of flammable or combustible that are stored or used as liquids, cryogenics or compressed gases.

4004.9 Demonstration cooking and warming equipment or devices.

4004.9.1 General. Cooking and warming devices for demonstration purposes only shall be in accordance with Section 4004.9.

4004.9.2 Public Isolation. Equipment and devices shall be isolated from the public by not less than 4 feet (1219 mm) or by a noncombustible 3-sided barrier between the equipment and devices and the public.

4004.9.3 Protection. Single-well cooking equipment using combustible oils or solids shall meet the following:

1. A noncombustible lid shall be immediately available. The lid shall be of sufficient size to cover the cooking well completely.
2. The cooking surface shall not exceed 288 square inches (1858 cm²).
3. The equipment shall be placed on a noncombustible surface.
4. The equipment shall be separated from each other by a horizontal distance of not less than 2 feet (609mm).

4004.9.4 Cooking equipment shall be separated from combustible materials by a horizontal distance of at least 2 feet (609mm).

4004.9.5 Butane. Butane for cooking equipment shall be limited to one 10 oz cylinder and one spare in storage, of the same size, per appliance. Storage location shall be approved by the fire code official.

4004.9.5.1 Portable butane-fueled appliances. Portable butane-fueled appliances are allowed in restaurants and in attended commercial food catering operations where fueled by not more than two 10 oz (284g) LP-gas capacity, nonrefillable butane containers that have a water capacity not exceeding 1.08 lb. (0.5 kg) per container. The containers shall be directly connected to the appliance and manifolding of containers is not permitted. Storage of cylinders is limited to 24 containers, with an additional 24 permitted where protected by a 2-hour fire-resistance-rated barrier.

SECTION 4005

OUTDOOR ASSEMBLY EVENTS

4005.1 General. Outdoor assembly events shall be in accordance with this Section 4005 and Chapter 10.

4005.2 Occupant load. The fire code official shall establish an occupant load for the event site.

4005.3 Exits. Exits shall comply with Chapter 10 and be as remote from each other as practical and shall be provided as follows:

Occupant Load	Minimum Number of Exits
1 to 500	2
501 to 1,000	3
1,001 or 1,500	4
each additional 500 persons	36 additional inches of exit width

4005.3.1 Width. The aggregate clear width of exits shall be a minimum of 36 inches wide (914mm) for each 500 persons to be accommodated.

4005.3.2 Signs. Exits shall be identified with signs that read "EXIT". The signs shall be weather-resistant with lettering on a contrasting background. The lettering shall be of sufficient height and brush stroke to be immediately visible from 75 feet (22,860mm). Placement of the exit signs shall be approved by the fire code official.

4005.4 Concession stands, food booths, and retail booths.

4005.4.1 General. Concession stands, food booths and retail booths shall be in accordance with Section 4005.4.

4005.4.1.1 Distances. A minimum of 20 feet (6096mm) shall be provided between every 150 linear feet (45,720mm) of booth space. A minimum of 30 feet (9144mm) shall be provided between booths used for cooking and the vehicles, generators, or any other internal combustion engines. A minimum of 30 feet (9144 mm) shall be provided between booths used for cooking and amusement rides or devices.

4005.4.2 Cooking appliances or devices.

4005.4.2.1 Public isolation. Cooking appliances or devices shall be isolated from the public by not less than 4 feet (1219 mm) or by a non-combustible 3-sided barrier between the equipment and devices and the public.

4005.4.2.2 Protection. Single-well cooking equipment using combustible oils or solids shall meet the following:

1. A noncombustible lid shall be immediately available. The lid shall be of sufficient size to cover the cooking well completely.
2. The cooking surface shall not exceed 288 square inches (18,580mm).
3. The equipment shall be placed on a noncombustible surface.
4. The equipment shall be separated from each other by a horizontal distance of not less than 2 feet (609mm).

4005.4.2.3 Liquefied petroleum gas (LP-gas). LP-gas shall be in accordance with Chapter 61 and NFPA 58.

4005.4.2.3.1 Maximum number and quantity. A maximum of a total aggregate water capacity of 50 gallons (95L) of LP-gas is permitted at one concession stand or booth used for cooking.

4005.4.2.3.2 LP-gas high-pressure cylinder hoses. Hoses shall be designed for a working pressure of 350 PSIG (2413 kPa) with a safety factor of 5 to 1 and shall be continuously marked with LP-GAS, PROPANE, 350 PSI (2413 kPa) WORKING PRESSURE, and the manufacturer's name or trademark. Hose assemblies, after the application of couplings, shall have a design capability of 700 PSIG (4826 kPa). Hose shall not exceed 12 feet (3638 mm) unless approved by the fire code official.

4005.4.2.3.3 LP-gas low-pressure cylinder hoses. Hoses with a working pressure of 5 psig shall be allowed when a fix regulator is set a 5 psi and is connected directly to the LP GAS cylinder. The hose shall not exceed 12 feet (3658 mm) unless approved by the fire code official.

4005.4.3.3 Storage of containers. Containers shall be stored in accordance with Chapter 61.

4005.4.4 Generators / electrical.

The generators shall be installed at least 10 feet (3048mm) from combustible materials and shall be isolated from the public by physical guard, fence, or enclosure installed at least 3 feet (914mm) away from the internal combustion power source and be provided with a compliant portable fire extinguisher per Section 906 and NFPA 10.

4005.4.5 Temporary water stations.

When outdoor temperatures are expected to exceed 90°F (35°C), the event sponsor shall provide and maintain a minimum of one water station for each 5,000-projected attendance. The water station shall include adequate water supply, cups, and a means for rapid replenishing of exhausted water. Each water station shall be located as far apart as practicable to allow ease of access for event attendees.

SECTION 4006

MOBILE FOOD VEHICLES

4006.1 General. Mobile food vehicles which are temporarily or permanently stored on a property where food items are processed or prepared and sold to the public shall comply with this section.

Exception: Food peddlers operating a retail food establishment from a vehicle designated to be readily movable in which food is; sold or given away but not composed, compounded, thawed, reheated, cut, cooked, processed or prepared.

4006.2 A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors. Commercial kitchen exhaust hoods shall comply with the requirements of the *International Mechanical Code*.

4006.2.1 Maintenance. Hoods shall be inspected, tested, and maintained in accordance with this code and the *International Mechanical Code*.

4006.2.2 Inspections and tests. Kitchen hood extinguishing systems shall be inspected and tested every six months by a state of Iowa licensed fire protection contractor.

4006.3 Fire extinguishers. Portable fire extinguishers shall be provided within a 30-foot (9144 mm) travel distance of commercial-type cooking equipment. An approved 2A:20B:C rated dry chemical fire extinguisher shall be provided within 30 feet (9144 mm) of any commercial cooking equipment. Additionally, cooking equipment involving solid fuels or vegetable or animal oils and fats shall be protected by a Class K rated portable extinguisher in accordance with Section 904.12.5.1 or 904.12.5.2, as applicable.

4006.4 Liquefied petroleum gas (LP-gas). LP-gas shall be in accordance with Chapter 61 and NFPA 58.

4006.4.1 Maximum number and quantity. A maximum of two LP-gas containers with a total aggregate propane capacity of 50 gallons (190 L) is permitted at one mobile food vehicle.

4006.4.2 LP-gas cylinder hoses. Hoses shall be designed for a working pressure of 350 psig (2413 kPa) with a safety factor of 5 to 1 and shall be continuously marked with LP-GAS, PROPANE, 350 PSI WORKING PRESSURE, and the manufacturer's name or trademark. Hose assemblies, after the application of couplings, shall have a design capability of 700 psig (4826 kPa). Hose assemblies shall be leak tested at the time of installation at not less the operating pressure of the system in which they are installed.

4006.5 Location. Mobile food vehicles shall not be located within 20 feet (6096 mm) of buildings, tents, canopies or membrane structures.

SECTION 4007

SPECIAL AMUSEMENT BUILDINGS

4007.1 General. [B] Special amusement buildings shall be in accordance with this section and Section 411 of the International Building Code.

Exception: Amusement buildings or portions thereof, which are without walls or a roof and are constructed to prevent the accumulation of smoke.

4007.2 Use of combustible decorative materials. Use of combustible decorative materials shall be in accordance with Chapter 8.

4007.3 Assistance. Adult monitors with flashlights shall be available to provide assistance in the event someone becomes lost or disoriented. One adult monitor shall be provided for every 60 persons.

4007.4 Automatic sprinkler system. Special amusement buildings shall be equipped throughout with an automatic sprinkler system in accordance with Chapter 9.

4007.4.1 Temporary special amusement buildings. Where the special amusement building is temporary, the sprinkler water supply shall be of an approved temporary means. The sprinkler piping shall be connected to a temporary water supply having sufficient capacity (flow and pressure) to supply residential or standard quick spray response sprinkler heads at a minimum design density of 0.15 gpm (.57 LPM) per square foot of protected floor area. The design shall be based on flowing the six most hydraulically remote sprinkler heads. Should the temporary amusement building contain less than six heads, the design shall assume that all heads are flowing simultaneously.

The temporary water supply may be connected to a domestic water line, a fire line, or temporary on-site storage tank as long as the minimum design densities are met. An indicating type control valve shall be installed in an accessible location between the sprinkler system and the connection to the water supply.

SECTION 4008

MAZES

4008.1 General. Mazes including, but not limited to corn stalk or hedge mazes, shall be in accordance with Section 3808.

4008.1.2 Safe refuge areas. Safe refuge areas shall be established outside of the maze or building and structure and shall not be closer than 50 feet (15240mm).

4008.1.3 Paths. Paths throughout the maze shall be a minimum of 36 inches (914mm) in width and shall be clear and unobstructed width.

4008.1.4 Separation. A minimum of 20 feet (6096mm) shall be provided between mazes and buildings and structures. The 20-foot (6096mm) clearance shall be free from vegetation and obstructions.

4008.1.5 Means of egress. Each exit shall be a minimum of 6 feet (1828mm) wide.

4008.1.5.1 Travel distance. The maximum travel distance to reach an exit access shall not exceed 75 feet (22,860mm). The travel distance shall be determined by using the maze path.

4008.1.5.2 Number. The travel distance required to reach an exit access shall determine the number of exits required. Locking devices shall remain unlocked on exits when the maze is occupied.

4008.1.5.3 Exit signs. Exit signs shall be provided next to or above each exit. The lettering shall be a minimum of 12 inches (305mm) high with 2-inch (51mm) brushstroke. The signs shall read EXIT with lettering in a color contrasting to the sign's background.

4008.2 Event plans. The following plans shall be submitted to the fire code official.

4008.2.1 General fire safety plan. The plan shall include, but not be limited to procedures that shall be used to prevent over-drying of vegetation throughout the site, documentation of decorative materials flame-retardancy, the maximum number of attendees.

4008.2.2 Security plan. The plan shall document who shall provide security (e.g., off-duty police officers, sheriff's posse, employees). All security personnel shall be provided with a 2-way radio and flashlight.

4008.2.3 Evacuation plans. The plan shall document the responsibilities of all on-site employees. The plan shall also document how attendees will be evacuated, and where they will be evacuated.

4008.2.4 Maze rules. Maze rules shall be posted at maze entrance.

4008.3 Employee responsibilities. Each employee shall be familiar with the evacuation plan and with fire extinguisher locations. Documentation of training shall be provided to the fire code official.

4008.3.1 Guides. An employee shall be responsible for guiding a group of not more than 14 attendees through the maze. Each employee shall be provided with a minimum of one flashlight and two-way radio. The employees shall be responsible for detecting and reporting fire or smoke to a competent person posted at the maze main entrance and begin evacuation procedures.

4008.3.2 Main entrance employee. Each maze shall be manned by an employee at the entrance. The employee shall be capable of communicating with the employees and shall be provided with a cellular telephone. When the main entrance employee receives a report of smoke, fire or injury, the employee shall immediately call 9-1-1.

4008.4 Watering. Corn stalk and hedge mazes shall be provided with sufficient water and at a frequency that prevents the vegetation from becoming dry or brittle. Failure to comply with this provision is an imminent hazard and the fire code official shall issue a stop order.

4008.5 Buildings and structures. When buildings and structures are intended to be occupied by attendees, the building and structure shall comply with Section 3807.

SECTION 4009

COVERED MALL BUILDINGS

4009.1 General. Temporary use of the common pedestrian area within a covered mall building for promotional, Group A, Group E, Group M or similar activities shall be in accordance with Section 4009.

4009.2 General requirements.

4009.2.1 Main aisle width. Main aisles shall be a minimum of 10 feet (3048mm) in width or the minimum required means of egress width, whichever is greater, and shall be maintained in accordance with Chapter 10. Main aisles shall not be obstructed.

4009.2.2 Cross aisle width. Cross aisles shall be a minimum of 15 feet (4572mm) in width or the required means of egress width, whichever is greater, and shall be maintained in accordance with Chapter 10.

4009.2.3 Fueled equipment. Liquid- or gas-fueled, or electric appliances, tools, apparatus, craft or vehicles shall be displayed in a mall in accordance with Section 314. LP-gas powered floor maintenance machines may be used when in accordance with Chapter 61.

4009.3 Combustible decorative materials. Combustible decorative materials shall be in accordance with Chapter 8.

Add Exception to Code Section: IFC 5601.4

Add the following language (Exception):

Exception: Persons in charge of fireworks display or pyrotechnic special effect operations may be less than 21 years of age if they possess a valid PGI display fireworks operator certification or equivalent certification approved by the fire code official.

Delete Code Section: IFC Section 6104.2

Replace with the following language:

6104.2 Maximum capacity within established limits. Within the limits established by law restricting the storage of liquefied petroleum gas for the protection of heavily populated or congested areas, the installation of liquefied petroleum gas shall be prohibited unless specifically approved by the fire code official, and in that case the aggregate capacity of any one installation shall not exceed a water capacity of 1,000 gallons (3785 L) (see Section 3 of the Sample Legislation for Adoption of the *International Fire Code* on page xxi).

Exception: Containers shall not exceed a water capacity of 20 gallons, must be located outside of the building, and used for cooking purposes only.

Insert Code Section: IFC 6104.3.3

Insert the following language:

6104.3.3 LP Gas Containers in Group R Occupancies. LP Gas shall not be stored or used inside of a building.

Add Code Section: IFC D104.4

Add the following language:

D104.4 Public Streets. Where two fire apparatus access roads are required, they both shall be public streets. Where public streets are not feasible the streets shall be designed, constructed and maintained as public streets.

Add Code Section: IFC D104.5

Add the following language:

D104.5 Fire Department Access Points

A minimum of two means of *Approved* fire apparatus access points shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. Access points shall have a minimum clear width of 20 feet and shall support an imposed load of 75,000 lbs.

Exceptions:

1. When alternative fire and life safety measures have been implemented, the number of required access points may be reduced to one.

Add Code Section: IFC D104.5.1

Add the following language:

D104.5.1 Remoteness.

Where two fire apparatus access points are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses.

Exceptions:

1. When alternative fire and life safety measures have been implemented, the distance between required access points may be reduced to a distance not less than one quarter of the length of the maximum overall diagonal dimension.

Delete Code Section: IFC D105.3

Replace with the following language:

D105.3 Proximity to building.

At least one of the required access routes meeting this condition shall be positioned along a total of ¼ of the building perimeter and located within the minimum and a maximum dictated by the table below, Table D105.3. The arrangement of the aerial fire apparatus access road shall be approved by the fire code official and may be discontinuous with approval.

Building Height (ft)		Distance from Building (ft)	
Minimum	Maximum	Minimum	Maximum
30	40	15	50
40	50	15	40
50	N/A	15	30

Add Code Section: IFC D106.4

Add the following language:

D106.4 Public Streets. Where two fire apparatus access roads are required, they both shall be public streets. Where public streets are not feasible the streets shall be designed, constructed and maintained as public streets.

Delete Code Section: IFC D107.1 Exception #2

Replace with the following language:

2. The number of *dwelling units* on a single fire apparatus access road shall not be increased unless alternative fire and life safety measures have been provided, as determined by the *fire code official*. When alternative fire and life safety measures have been implemented, at no time shall the number of dwelling units on a single fire apparatus access road exceed 60 units.

Add Code Section: IFC D107.3

Add the following language:

D107.3 Public Streets. Where two fire apparatus access roads are required, they both shall be public streets.

