

A SUPPLEMENTAL DOCUMENT AMENDING:

- 1. THE SOUTHERN NEVADA FIRE CODE AMENDMENTS, WHICH AMEND THE INTERNATIONAL FIRE CODE, 2012 EDITION, AND**
- 2. THE INTERNATIONAL FIRE CODE, 2012 EDITION**

For local purposes, certain chapters, parts, sections, subsections and other subdivisions of the International Fire Code, 2012 Edition (hereafter referred to as IFC) have been amended, modified, deleted or added to by the Southern Nevada Fire Code Committee Amendments (here after referred to as SN-IFC).

For City purposes:

Certain provisions of the SN-IFC are deleted or amended as provided for in this Supplemental Document; and

Certain provisions of the IFC are deleted, modified or added to as is provided for in this Supplemental Document.

Except as otherwise indicated, City amendments to the SN-IFC or the IFC are shown below by the use of strikethrough for matter deleted, and underlining for matter being added.

If a conflict exists between any provisions of this Supplemental Document and any provisions of the SN-IFC or the IFC, the provisions of this Supplemental Document shall prevail.

The following provisions of the SN-IFC are deleted in their entirety:

Annual Renewable Permits:

Section 105.6.47 Emergency responder radio coverage system

Section 105.6.49 Fire Pumps

Section 105.6.50 Fire Suppression and Extinguishing Systems

Section 105.6.54 Monitoring facilities

Section 105.6.55 Proprietary/self-monitoring

Section 105.6.56 Smoke Control System

Section 105.6.57 Smoke Removal Systems

Section 105.7.3 Compressed gases *of the SN-IFC is deleted and revert to original IFC language.*

New Construction Permits:

Section 105.7.18 Fire apparatus access road plan

Section 105.7.20 Proprietary (self) monitoring facilities

Section 105.7.21 Heliports, Helistops, and Emergency Landing pads

Section 105.7.22 Refrigeration systems

Section 105.7.25 Two-way communication

Other code sections:

Section 903.3.8 Cross connections and backflow, minimum types of protection.

Sections 903.7 through 903.7.3.2 Automatic sprinkler in existing buildings.

Section 1101.1 Scope, of the SN-IFC is deleted and revert to original IFC language.

Section 5306.5 Medical gas system plan submittal

Section 5306.6 Medical gas systems, testing

Section 101.2.1 of the SN-IFC is amended to read as follows:

101.2.1 Appendices. Provisions in the appendices shall not apply unless specifically adopted.

The following appendices are hereby adopted and are a part of this code:

Appendix B – Fire Flow requirements for buildings, as amended

Appendix C – Fire hydrant locations and distribution, as amended

Appendix H – Hazardous Materials Management Plan (HMMP) and Hazardous Materials Inventory Statement (HMIS) instructions.

~~Appendix K – Propriety Supervising Station Facilities, as amended~~

~~Appendix L – Impairment Procedures, as amended~~

Appendix M – Emergency Access Gates and Barriers, as added.

Section 105.6.61 is added to the IFC to read as follows:

105.6.61 Battery Systems. An operational permit is required for stationary lead-acid battery systems having a liquid capacity of more than 100 gallons in sprinklered buildings, or 50 gallons in nonsprinklered buildings. See Section 608.

Section 105.6.62 is added to the IFC to read as follows:

105.6.62 Commercial Barbecue. An operational permit is required for a commercial barbecue in a fixed outdoor location, as referred to in Section 307.4.4 of the Southern Nevada Amendments.

Section 105.7.11 of the IFC is amended to read as follows:

105.7.11 LP-Gas. A construction permit is required for the installation of or modification to an LP-Gas system.

Exception: Installations with an aggregate water capacity of less than 288 gallons (1090L) serving one- and two-family dwellings.

Section 503.1.1 of the IFC is amended by deleting the exception and adding sections 503.1.1.1 and 503.1.1.2 to read as follows:

503.1.1 Buildings and facilities. *Approved* fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 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 150 feet (45,720mm) where:~~

- ~~1. The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.1.1, 903.1.2 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.~~
- ~~3. There are not more than two Group R-3 or Group U occupancies.~~

503.1.1.1 Increased Distances. The fire code official is authorized to increase the dimension of 150 feet (45 720 mm) where the circumstances described in both Paragraphs 1 and 2 below are satisfied:

1. Fire Access Fire apparatus access roads that cannot be installed because of location on property, topography, waterways, nonnegotiable grades, buildings constructed in accordance with the high-rise provisions or other similar conditions, and an approved alternative means of fire protection is provided. Such approved alternatives may include standpipes or secondary water supplies.
2. The building, except for a Group H and/or high-pile storage occupancy, is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.
 - 2.1. Where the building is protected with an approved automatic sprinkler system in accordance with minimum requirements, the fire apparatus roads shall extend to within 250 feet (76 420 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building. For R-3 Occupancies, see Section 903.2.8.2.3.
 - 2.2. Where the building is protected with an approved upgraded automatic sprinkler system in accordance with the minimum requirements for the upgraded sprinkler system design, the fire apparatus roads shall extend to within 350 feet (106 680 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building. For the purposes of this subparagraph, an upgraded sprinkler system shall be in accordance with Table 503.1.1.

**TABLE 503.1.1
UPGRADED SPRINKLER SYSTEM
FOR INCREASED FIRE LANE DISTANCE.**

Minimum Code Required System	Upgraded System for 350 feet from fire apparatus lanes
NFPA 13D	NFPA 13R (See Section 903.2.8.2.3)
NFPA 13R (Group R-1, R-2 Occupancies)	NFPA 13, Light Hazard
NFPA 13, Light Hazard	NFPA 13, Ordinary Hazard Group 1, with quick-response sprinklers
NFPA 13, Ordinary Hazard Group 1	NFPA 13, Ordinary Hazard Group 2
NFPA 13, Ordinary Hazard Group 2	NFPA 13, Extra Hazard Group 1
NFPA 13, Extra Hazard Group 1	NFPA 13, Extra Hazard Group 2
NFPA 13, Extra Hazard Group 2	As approved by the <i>fire code official</i>

503.1.1.2 Exempt Structures. The 150 foot requirement of this Section does not apply to the following structures:

1. Detached gazebos for residential and public uses.
2. Independent buildings, such as restrooms or snack shops that are associated with golf courses, parks and similar uses and that do not exceed 400 square feet (37 m²) in size
3. Detached equipment or storage buildings for commercial use that do not exceed 400 square feet (37 m²) in size.

Section 503.1.2 of the IFC is amended to read as follows:

503.1.2 Additional secondary access. ~~The fire code official is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.~~ Approved secondary access meeting the requirements of Section 503.2 shall be provided for any of the following conditions:

1. One- or two-family developments with more than 100 dwelling units.
Exception: When all dwelling units are protected by an automatic sprinkler system in accordance with Section 909.3.1.1, 903.3.1.2, or 903.3.1.3, a secondary access is required for more than 200 dwelling units.
2. Multi-family residential developments having more than 100 dwelling units, or more than 2 stories or 30 feet in height.
3. Road(s) with dead ends or with a single point of access in excess of 600 ft.
4. Commercial and industrial developments where buildings exceed 2 stories or 30 feet in height, or exceeding 62,000 square feet (5760 m²) in area.

Section 503.2.1.1 is added to the IFC to read as follows:

503.2.1.1 Dimensions for Parking. Where parking is permitted along fire apparatus access roads, the minimum street widths are as follows:

1. Not less than 40 ft (12.19 m) wide, flow-line to flow-line, where parallel parking is permitted on both sides of fire apparatus access road.
2. Not less than 32 ft (9.75 m) wide, flow-line to flow-line, where parking is permitted only on one side of the fire apparatus access road.
3. Not less than 24 ft (7.32 m) wide, flow-line to flow-line, where no parking is permitted on either side.
4. Not less than 24 ft (7.32 m), for designated fire apparatus access roads through parking lots.

Section 503.2.5 of the IFC is amended to read as follows:

503.2.5 Dead Ends. Dead end fire apparatus access roads in excess of 150 feet (45 720mm) in length shall be provided with an approved area for turning around fire apparatus. turn around having a minimum diameter of 81 feet (24 690 mm) flow line to flow line.

Section 611 is added to the IFC to read as follows:

SECTION 611
AUTOMATIC EXTERNAL DEFIBRILLATORS

611.1 Where required. Automatic External Defibrillators (AED's) shall be provided in the following new and existing locations:

1. Assembly occupancies that can accommodate more than 1,000 occupants.

Exception: Assembly occupancies used primarily for worship.

2. Government-owned or government employee-occupied buildings that can accommodate more than 100 occupants.
3. All high-rise buildings.

611.2 Distribution of AED's. AED's shall be provided and distributed so that an AED will be within a three minute travel distance to any location on the property (approximately 300 ft).

611.3 Other requirements. AED's shall be conspicuously located where they will be readily accessible and immediately available when needed, both for site employees and the general public.

611.4 Owner/occupant responsibility. It shall be the responsibility of the owner/occupant of the facility to provide and maintain AED's as required by Section 611.1 and to provide training to designated employees on the proper use of the AED's.

Section 903.2 of the SN-IFC is modified by inserting Exception 1 to read as follows:

903.2 Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided throughout all buildings, regardless of occupancy type, including buildings built under the IRC, exceeding 5,000 sq ft (464 m²) in building area, and additionally in locations described in Section 903.2.1 through 903.2.12. For the application of IBC Table 601 Footnote d, a required system shall be a sprinkler system that is required due to the occupancy-specific requirements of Section 903.2.1 through 903.2.12.

Exceptions:

1. R-3 Occupancies under 10,000 square feet (See Section 903.2.8)
2. Open parking garages with no other occupancy above the open parking garage structure are not required to be protected with automatic sprinklers.
3. Normally unoccupied Group U occupancies used for agricultural or livestock purposes.
4. Buildings, structures, or service equipment and installations directly used in utility generation or distribution which are installed on properly recorded easements belonging to water, gas, power, telephone, or other utility companies that are preemptively regulated by the Nevada Public Service Commission, a State of Nevada charter, or other public franchise. This exception does not apply to non-exempted buildings or structures containing occupiable spaces such as offices, meeting rooms, service counters, public restrooms, or other normally occupied spaces.

If any fire area in a building or structure is provided with fire sprinklers, whether required or not, all fire areas in the building or structure shall be provided with fire sprinklers.

Exceptions:

1. Where a building is subdivided into separate buildings, each having a total building area of less than 5,000 sq ft (464 m²), by 4-hour rated fire walls with no openings constructed in accordance with the IBC.
2. Special hazard areas that require sprinklers for certain uses, such as medical gas rooms, may be fire sprinklered without requiring additional fire sprinklers, when approved by the *code official*.

Section 903.2.8 of the SN-IFC is modified by adding Sections 903.2.8.1 through 903.2.8.3.3 to read as follows:

903.2.8.1 Congregate Residences in Group R-3 or R-4. An automatic sprinkler system installed in accordance with Section 903.3.1.2 shall be permitted in Group R-3 or R-4 congregate living facilities with 16 or fewer residents.

903.2.8.2 Care facilities. An automatic sprinkler system installed in accordance with Section 903.3.1.2 shall be permitted in care facilities with 5 or fewer individuals in a single-family dwelling.

903.2.8.3 Group R-3 Occupancies. Automatic sprinkler systems shall be provided for Group R-3 occupancies in accordance with Sections 903.2.8.3.1 and 903.2.8.3.2.

903.2.8.3.1 Group R-3 Occupancies - International Building Code. Buildings constructed under the International Building Code shall be protected throughout by an automatic sprinkler system in accordance with NFPA 13, 13R, or 13D, as permitted by the International Building Code. The automatic sprinkler system shall also meet the requirements of Section 903.2.8.2.3.

903.2.8.3.2 Group R-3 Occupancies - International Residential Code. Buildings constructed under the International Residential Code shall be protected throughout by an automatic sprinkler system when required by the International Residential Code or under either of the following circumstances:

1. When required by Sections 503 or 507, in which case automatic fire sprinklers shall be installed in accordance with Section 903.2.8.3.3.
2. When the total area of the building exceeds 10,000 ft² (929 m²) or is more than two stories in height, including any height added by usable floor space, in which case an automatic sprinkler system meeting the minimum requirements of NFPA 13D and Section 903.2.8.2.3 shall be installed.

903.2.8.3.3 Mitigation Matrix. When an automatic sprinkler system is being installed, or the type of system is upgraded to mitigate the minimum requirements for fire department access or water supply as required by Sections 503 or 507, the automatic sprinkler system design requirements in Table 903.2.8.3.3 shall apply.

Table 903.2.8.3.3
MITIGATION MATRIX FOR GROUP R-3 OCCUPANCIES ⁴

BUILDING AREA SIZE RANGE IN SQUARE FEET ⁶	MITIGATION RESIDENTIAL SYSTEM TYPE ^{1,3}	SEPARATE SPRINKLER LEAD-IN REQUIRED ⁵	MINIMUM UNDERGROUND PIPE SIZE ⁵	MINIMUM WATER METER SIZE ⁵	SPRINKLERS REQUIRED IN AREAS SUBJECT TO FREEZING
< 3,600 sf	Standard NFPA 13D ¹	No	1"	3/4"	No
>3,600 sf and < 10,000 sf	Enhanced NFPA 13D ^{1,2}	No	1"	3/4"	No
>10,000 sf and <15,000 sf	Enhanced NFPA 13R ¹	Yes	N/A	N/A	Yes
>15,000 sf	Modified NFPA 13 ¹	Yes	N/A	N/A	Yes

N/A = Not Applicable

1. This mitigation constitutes a building completely protected with an approved fire sprinkler system.
2. Domestic demand of 5 gpm is required to be added to the sprinkler demand in the hydraulic calculations.
3. Free-standing detached buildings with one or more sleeping rooms shall be protected by an Enhanced NFPA 13D system.
4. Excluding occupancies used as Group Care Homes.
5. U.G. lead-in shall be the minimum size required hydraulically as proven by the sprinkler contractor and shall be hydrostatically tested and flushed, witnessed by the fire department.
6. Building area is defined as all areas under roof except for porches, patios, balconies, carports and porte-cocheres.

Section 903.2.9 of the IFC is amended by adding conditional Item 6 to read as follows:

6. A Group S-1 fire area used for self-storage where the fire area exceeds 2,500 square feet (279 m²).

Section 903.6 of the IFC is amended, and Sections 903.6.1 to 903.6.5 are added to read as follows:

903.6 Where required in existing buildings and structures. *An automatic sprinkler system shall be provided in existing buildings and structures where required in Chapter 11 and in accordance with Sections 903.6.1 through 903.6.5*

903.6.1 Additions. *An automatic sprinkler system shall be provided in buildings when one of the following conditions exists:*

1. *For new construction expanding existing buildings, where an addition to any existing non-sprinklered building or structure expands the total area to greater than 5,000 square feet (464 m²).*

Exception: *Group R-3 occupancies and single-family dwellings built under the IRC meeting the minimum fire flow in accordance with Appendix B, and the total area does not exceed 10,000 square feet.*

2. *Where the building addition causes occupancy specific requirements contained in Sections 903.2.1 through 903.2.11.6 to require an automatic fire sprinkler system.*
3. *Where required by the International Building Code.*

903.6.1.1 Sprinklered Addition. *In nonsprinklered buildings where sprinklers are provided for a building addition, whether required by code or not, the entire building shall be sprinklered.*

Exception: *Buildings meeting the requirement of Section 903.6.4 and 903.6.5*

903.6.2 Alterations. *An automatic sprinkler system shall be provided in buildings undergoing alterations when one of the following conditions exists:*

1. The building is greater than 10,000 square feet in total area, where the alteration work contains or creates fire area greater than 5,000 square feet (464 m²) that is not separated by a 1-hr fire barrier, shall require the installation of an automatic fire sprinkler system within the entire building.
2. Where the alteration causes occupancy specific requirements contained in Sections 903.2.1 through 903.2.11.6 to require an automatic fire sprinkler system.
3. Where required by the *International Building Code*.

903.6.2.1 Sprinklered Alteration. In a nonsprinklered building where sprinklers are provided for the tenant space undergoing alterations, whether required by code or not, the entire building shall be sprinklered.

Exception: Buildings meeting the requirements of Section 903.6.4 and 903.6.5

903.6.3 Change of Occupancy. When there is a change in the occupancy type, an automatic sprinkler system shall be installed throughout the building when required by the occupancy specific requirements contained in Sections 903.2.1 through 903.2.11.6; or where required by the *International Building Code*.

903.6.3.1 Sprinklered Change of Occupancy. In an existing nonsprinklered building where sprinklers are provided for the tenant space changing occupancy, whether required or not, the entire building shall be sprinklered.

Exception: Buildings meeting the requirement of Section 903.6.4 and 903.6.5.

903.6.4 Partially sprinklered buildings. Partially sprinklered structures are permitted where one of the following conditions exists:

1. In other than occupancies of Group E Daycare, Group H, Group I, or Group R, sprinklers are not required to be provided beyond the entire tenant area being modified when in compliance with the following requirements:
 - 1.1. The tenant space is separated from the remainder of the building by a 2-hour fire barrier, without openings, constructed in accordance with Section 707 of the International Building Code.
 - 1.2. The property owner has signed an agreement approved by the fire code official to sprinkler the remainder to the building within 18 months from the time of Building Permit issuance.
2. In all occupancies, sprinklers are not required to be provided beyond the fire area when the fire area is separated from the remainder of the building by 4-hour rated fire walls constructed in accordance with Section 706 of the International Building Code, and without openings.
3. When approved by the *fire code official*, special hazard areas that are required to be sprinklered for specific uses, such as medical gas rooms, do not require the remainder of the building to be sprinklered.

903.6.5 Fire sprinkler system design in partially sprinklered buildings. The fire sprinkler system for partially sprinklered buildings shall meet the following design requirements:

1. The sprinkler system shall be installed throughout the entire tenant space and accompanying adjacent combustibile concealed spaces such as attics, soffits, mansards, etc, in accordance with Section 903.3.1.1.
2. The automatic fire sprinkler system, underground fire service main, water meter and backflow prevention devices shall be sized to meet the necessary demand of NFPA 13 - Ordinary Hazard Group II sprinkler design for future expansion of the fire sprinkler system to cover all other portions of the building.

3. A durable weatherproof signage shall be provided at the Fire Department Connection(s) clearly indicating that the building is partially protected with fire sprinklers and clearly identifying the portion(s) of the building covered by the fire sprinkler system.

Section 907.5 of the IFC is amended to add a paragraph to read as follows:

907.5 Occupant notification systems. A fire alarm system shall annunciate at the fire alarm control unit and shall initiate occupant notification upon activation, in accordance with Sections 907.5.1 through 907.5.2.3.4. Where a fire alarm system is required by another section of this code, it shall be activated by:

1. Automatic fire detectors.
2. Sprinkler waterflow devices.
3. Manual fire alarm boxes.
4. Automatic fire-extinguishing systems.

Exception. Where notification systems are allowed elsewhere in Section 907 to annunciate at a constantly attended location.

Where applicable, the activation of the fire alarm system shall stop any conflicting or confusing sounds and visual distractions; and where house lights are dimmed, cause illumination of the means of egress with light not less than 1 foot-candle (11 lux) at the waking surface level.

Section 907.6.3.1 of the SN-IFC is amended to read as follows:

907.6.3.1 Alarm Annunciator and Fire Alarm Control Unit. Alarm annunciators and fire alarm control units shall comply with all of the following:

1. ~~If a building has a main entrance/foyer and has more than one story, a read-only remote annunciator shall be provided inside the building at the main entrance/foyer.~~

Exceptions:—

1. ~~High-rise buildings provided with a fire command center.~~
2. ~~Alternate location as approved by the fire code official.~~

2. ~~If a building has a fire riser room with an exterior door, the fire alarm control unit shall be provided within the fire riser room.~~

Exceptions:—

1. ~~High-rise buildings provided with a fire command center.~~
2. ~~Alternate location as approved by the fire code official.~~

3. ~~The location of an operated initiating device shall be displayed by alphanumeric display at the annunciator.~~
4. ~~The alphanumeric display shall state the device type, the floor level (if applicable), the device address and a descriptive location for the operated device(s).~~
5. ~~The visible annunciation of the location of operated initiating devices shall not be canceled by the means used to deactivate alarm notification appliances.~~

907.6.3.1.1 Main entrance / foyer. If a building has a main entrance/foyer, a remote

annunciator shall be provided inside the building at the main entrance/foyer.

Exceptions:

1. High-rise buildings provided with a fire command center.
2. Alternate location as approved by the fire code official.
3. When the fire alarm control unit is located at the main entrance/foyer or within a facility that has a fire command or secondary response point, a remote annunciator is not required at the main entrance/foyer.

907.6.3.1.2 Fire riser room. If a building has a fire riser room with an exterior door, a remote annunciator shall be provided within the fire riser room.

Exception: When the fire alarm control unit is located within the fire riser room or within a facility that has a fire command or secondary response point, a remote annunciator is not required within the fire riser room.

907.6.3.1.3 Alphanumeric display. The location of an operated initiating device shall be displayed by alphanumeric display at the annunciator. The alphanumeric display shall state the device type, the floor level (if applicable), the device address and a descriptive location for the operated device(s).

907.6.3.1.4 Canceled Display. The visible annunciation of the location of operated initiating devices shall not be canceled by the means used to deactivate alarm notification appliances.

Section 907.6.5 of the SN-IFC is amended to read as follows:

907.6.5 Monitoring. Fire alarm systems required by this chapter or by the IBC shall be monitored by an approved supervising station in accordance with NFPA 72 and with the *fire code official* guidelines. Home care facilities that are licensed by the State of Nevada are also required to be monitored per this section. ~~Proprietary Supervising Station Systems (also called self monitoring systems), when allowed by the fire code official, shall be in accordance with the IFC, with NFPA 72, and with the fire code official guidelines.~~

Exception: Monitoring by a supervising station is not permitted unless specifically approved by the *fire code official* for:

1. Single- and multiple station smoke alarms required by Section 907.2.11.
2. Automatic sprinkler systems in one- and two-family dwellings.
3. ~~Manual fire alarm systems, when provided with approved signs in the following locations: directly below the horn and strobe located on the exterior of the building and adjacent to each manual pull station. The signs shall read as follows: WHEN ALARM SOUNDS—CALL 911. The signs below the horns and strobes shall be of durable material with permanent lettering having a 2" minimum height and minimum 1/2" stroke on a contrasting background. The sign adjacent to each pull station shall be of durable material with permanent lettering having a 1/4" minimum height on a contrasting background.~~
3. Monitoring systems utilizing point-by-point monitoring.

In occupancies provided with a fire alarm system, the following four distinctly different alarm signals shall be transmitted to an approved supervising station with the following priority levels:

1. Water Flow Alarm, if provided with a fire sprinkler system.
2. Fire Alarm.

3. ~~System Trouble~~ Supervisory, when applicable.

4. ~~Supervisory~~ System Trouble when applicable.

The supervising station shall only retransmit Water Flow Alarm signals to the Fire Department, unless otherwise required by the *fire code official*.

Section 914.7.1 of the IFC is modified to delete the exception to read as follows:

914.7.1 Automatic sprinkler system. Special amusement buildings shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1. Where the special amusement building is temporary, the sprinkler water supply shall be of an *approved* temporary means.

~~**Exception:** Automatic sprinklers are not required where the total floor area of a temporary special amusement building is less than 1,000 square feet (93 m²) and the travel distance from any point to an exit is less than 50 feet (15.24 m).~~

Section 1103.5.2 of the IFC is amended to read as follows:

~~**1103.5.2 Group I-2.** An automatic sprinkler system shall be provided throughout existing Group I-2 fire areas. The sprinkler system shall be provided throughout the floor where the Group I-2 occupancy is located, and in all floors between the Group I-2 occupancy and the level of exit discharge.~~

1103.5.2 Group I. An automatic sprinkler system shall be provided throughout all existing Group I Fire areas.

Section 1103.5.3 is added to the IFC to read as follows:

1103.5.3 Group R 4 residential care/assisted living facilities. Each existing residential care/assisted living facility that is required to be licensed by the State of Nevada shall be provided with an automatic sprinkler system in accordance with NFPA 13R. Each existing facility shall be brought into compliance within the time frame established for that facility by the fire code official.

Section 1103.7 of the IFC is amended to read as follows:

1103.7 Fire alarm systems. An approved fire alarm system shall be installed in existing buildings and structures in accordance with Sections 4603.6.1 through 4603.6.7 and provide occupant notification in accordance with Section 907.6 unless other requirements are provided by other sections of this code.

~~**Exception:** Occupancies with an existing previously approved fire alarm system.~~

When required by the fire code official, when a fire alarm control unit is upgraded; or when a fire alarm control unit is replaced by a different model; or is no longer listed or supported, and reasons defined in NFPA 72, the fire alarm system shall be upgraded in accordance with Sections 1103.7.1 through 1103.7.7 and provide occupant notification in accordance with Section 907.5 unless other requirements are provided by other sections of this code.

Section 1104.24 of the IFC is deleted in its entirety.

Section 2306.2.3 of the IFC is amended so that the material before Paragraphs 1 through 5 reads

as follows, with Paragraphs 1 through 5 of this remain unchanged:

2306.2.3 Above-ground tanks located outside, above grade. Above-ground tanks shall not be used for the storage of Class I, II, or IIIA liquid motor fuels except ~~as provided by this section.~~ when the tank is located within a parcel that is zoned for industrial use (M Zoning District) in accordance with Title 19 of the Las Vegas Municipal Code. Fuel tanks shall be installed in accordance with the following:

Paragraphs 1 thru 5 remain unchanged

Section 5704.2.9.6.1 of the IFC is amended to read as follows:

5704.2.9.6.1 Locations where above-ground tanks are prohibited. Storage of Class I, and II liquids in above-ground tanks outside of buildings is prohibited ~~within the limits established by law as the limits of districts in which such storage is prohibited (see Section 3 of the Sample Legislation for Adoption of the *International Fire Code* of page xxi).~~ when the tank is located within a parcel that is not zoned for industrial use (M Zoning District) in accordance with Title 19 of the Las Vegas Municipal Code.

Section 6101.2.1 is added to the IFC to read as follows:

6101.2.1 Special use permit. A special use permit must be obtained in accordance with Title 19 of the Las Vegas Municipal Code for liquefied petroleum gas storage containers with an aggregate water capacity exceeding 288 gallons (1090 L).

Section 6104.2 of the SN-IFC is completely replaced to read as follows.

6104.2 Maximum capacity within established limits. The aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons (7570 L).

Exception: Installations located within a parcel that is zoned for industrial use (M Zoning District) in accordance with the Title 19 of the Las Vegas Municipal Code. Additionally, when required by the *fire code official*, additional fire protection shall be provided for such installations in accordance with NFPA 58, Section 6.25.

Section B104.2 of Appendix B of the IFC is amended to read as follows:

B104.2 Area separation. Portions of buildings which are separated by 4 hour fire walls without openings, constructed in accordance with the *International Building Code*, are allowed to be considered as separate fire-flow calculation areas.

Section B105.1 of Appendix B of the IFC is amended to read as follows:

B105.1 One- and two-family dwellings. The minimum fire flow and flow duration requirements for one- and two-family *dwellings* having a fire-flow calculation area which does not exceed 3,600 square feet (344.5 m²) shall be ~~1000~~ 1500 gallons per minute (~~3785.4~~ 5678 L/min) for 1 hour. Fire-flow and flow duration for *dwellings* having a fire-flow calculation area in excess of 3,600 square feet (344.5 m²) shall not be less than that specified in Table B105.1.

Exception: A reduction in required fire flow of 50 percent, ~~as approved~~ but not less

than 1500 gallons per minute (5678 L/min), is allowed when the building is provided with an approved automatic sprinkler system in accordance with Section 903.2.8.3.3

Section B105.2 of Appendix B of the SN-IFC is amended to read as follows:

B105.2 Buildings other than one- and two-family dwellings. ~~The minimum fire flow and flow duration for buildings other than one- and two-family dwellings shall be as specified in Table B105.1.~~

A reduction in the required fire flow of 50 percent, but not less than 1500 gallons per minute (5678 L/min), is allowed when the building is equipped with an approved automatic sprinkler system in accordance with Section 903.3.1.1.

Exceptions: ~~For buildings other than high-rise buildings, a reduction in required fire flow of up to 50 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2. A reduction in the required fire flow of up to 25 percent is permitted in high-rise buildings. The resulting fire flow shall not be less than 1,500 gallons per minute (5678 L/min) for the prescribed duration as specified in table B105.1.~~

1. Buildings containing high-piled combustible storage, a reduction in the required fire flow of only 25 percent is allowed. When the high-piled combustible storage is protected with an ESFR fire sprinkler system, a reduction in the required fire flow of 50 percent is allowed when approved by the fire code official.
2. Buildings containing flammable/combustible liquids or hazardous materials in excess of the maximum allowable quantity, a reduction in the required fire flow of only 25 percent is allowed.

Section C105.3 of Appendix C is added to the SN-IFC to read as follows:

C105.3 Hydrants across major streets and highways. Where streets are provided with median dividers, or have four or more travel lanes and a traffic count of more than 30,000 vehicles per day, all hydrants being utilized to deliver fire flow to the proposed development shall be located on the same side of the street as the proposed development.

Appendix M is added to the IFC to read as follows:

APPENDIX M EMERGENCY ACCESS GATES AND BARRIERS

Unless otherwise noted, the provisions contained in this appendix are mandatory.

M102.1 Definitions. For the purposes of Appendix L, certain terms are defined as follows:

Gates and Barriers – shall mean a gate, crossbar, door or other obstructive device which is utilized for the purpose of restricting, controlling or obstructing entry or exit by motor vehicles or pedestrians to or from a private roadway and which is not manned on a twenty-four hour, seven day per week basis by a person capable of providing immediate access to a police or fire safety vehicle or person.

Private Street or Roadway – shall mean any roadway (not dedicated as public right-of-way) that is owned and maintained by abutting property owners, or association of property owners that is utilized for the purpose of providing vehicular or pedestrian access to a subdivision, apartment complex, condominiums or other residential development or wild land, excluding off-street parking areas, driveways, and driveways to off-street parking areas.

Private Driveway – is a private way for vehicular travel that provides access from an off-street parking area to a public or private drive.

Ultimate Edge Of Right-Of-Way - is the line furthest from the centerline of the street that has been approved by the County of Clark, Nevada and recorded on the parcel map for existing or future street improvements.

M103.1 Permit. Construction permits in accordance with Section 105 shall be obtained for the applicable scope of work. A general building permit will be required, electrical and a permit will be required for electrically operated gates.

M104.1 Submittals. Three sets of plans and specifications for fire apparatus access road gates shall be submitted for review and approval prior to construction. The plans and specification shall indicate or showing the following information where applicable:

1. Civil plans shall be included in the submittal. The civil plans shall be approved by the Fire Department, Planning, and Engineering, and shall have been approved through the civil plan review process.
2. Installing contractor(s) shall stamp their respective plans for the installation of the gate(s).
3. All structural plans and calculations for gates over 6 ft. (1.83 m.) in height shall bear the stamp of a structural engineer.
4. Contractor's business name, address, phone number and contact person.
5. Assessor's Parcel Number (located on the property owners tax bill);
6. Proposed fence, pedestrian gates, vehicle gates;
7. Existing vehicular access;
8. Proposed location of Knox key switch/Knox box(s); (if applicable)
9. The exact physical street address of the gated entry, or property, as assigned by the Planning Dept.
10. Location of pavement loops

M105.1 Product specifications. Specifications shall be provided that include:

1. Method of operation;
2. UL listing numbers of equipment used and;
3. Manufacturers specifications sheets for all equipment.

M106.1 Plan review and Inspection fees. Applicable fees will be collected per each agency's approved fee schedule.

M107.1 Minimum Design Requirements

1. Gates shall not be installed within a required turning radius of a fire access roadway;
2. Access for single- and bi-direction traffic shall be unobstructed 20 ft. (6.1 m.) wide and 13.5 ft. (4.1 m.) high.
3. Swinging gates for single direction traffic shall swing in the direction of vehicle travel.
4. Swing gates for bi-directional traffic shall swing into the property being entered;
5. Gated entry designs shall be in accordance with *Clark County Area Standard Drawing #222A*.
6. All gates shall be accessible from the driving lane nearest the edge of the street by turning radii of at least 28ft. (18.5 m.) inside and 52 ft. (15.85 m.) outside.

7. After passing through a gate, the nearest curb of any cross street shall be no less than 40 feet;
8. Private driveways serving one single-family residence on moderate and heavily traveled streets shall:
 - 8.1. Meet the setback requirements of this appendix. If existing conditions prevent gate installation with 40 ft. (12.2 ft.) of clearance to the face of the gate, a letter documenting an acceptable alternative that would facilitate emergency ingress without endangering emergency response personnel and apparatus will be required for review and approval by the Chief;
 - 8.2. Meet the operational requirements of electrically operated gates.

M108.1 Operation of Gates

1. All gates shall be electrically operated for entry and exit by an approved fire department method;
 - 1.1 Key override switch (Knox); and
 - 1.2 Ground loop gate operator or
 - 1.3 Radio operated controller (Click 2 Enter or other approved equipment).

***Exception:** Radio controlled exit may be waived by installation of a "Free exit" loop.*
2. Gates installed utilizing a radio-controlled exit shall be provided with an approved 2 in. (50.8 mm) by 2 in. (50.8 mm), blue, reflective marker visible to the exiting traffic. It shall be located in the center of the exit gate.
3. Where applicable, Knox Company authorization forms are required for orders of key switches, boxes and padlocks. The forms may be obtained by calling the LVF&R or items can be ordered via the Internet at www.knoxbox.com.
4. Electrically operated gates shall fail to the full open position upon the loss of power. They shall remain fully open until such time the power is restored.
5. Gates shall reverse direction to full open position upon contact with an obstruction.

M109.1 Manual gates, barriers, or Crash-Gates. Such may be approved on a case-by-case basis for nighttime security of business property, or gated communities.

1. They shall be constructed in a manner that reflects good construction practices acceptable to the Fire Department.
2. They shall be accessible by means of an approved fire department padlock where applicable (Knox) or by the installation of an approved key box (Knox).
3. Approved manual gates or barriers across emergency access roadways shall be provided with an 18-gauge metal sign in the center of and on both sides of the gate that shall read, "FIRE LANE – NO PARKING". Letters shall be red on a white background and be a minimum of 4 in. (76 mm) high with a ½ in. (12.7 mm) stroke.
4. Gates to close off a fire lane behind strip malls/stores in order to minimize dumping and vandalism shall be approved with (Knox) padlock access.

M110.1 Prohibitions

1. No gate shall be installed where access requires the use of a proximity reader or card, unless a "turn-out" is provided for its use;
2. Direction-limiting devices, such as fixed tire spikes, are prohibited;
3. The total number of vehicle access control devices or systems, through which emergency vehicles must pass to reach any address shall **not** exceed one.

4. No commercial property owner shall install fences and gates where more than one gate must be opened in order to reach within 150 ft. (46 m.) of the rear portion of any building.

M111.1 Pedestrian Gates. All vehicle gates obstructing pedestrian access to a public way (street) shall have an approved pedestrian gate installed within 10 ft. (3.05 m.) of the vehicle gate.

1. Gates shall be handicap accessible and comply with exit door requirements of the building code as adopted by the City of Las Vegas.
2. An approved key box (Knox) shall be installed at least 4 ft. (1.22 m.) above grade on the outside of the gate. It shall be provided with a key to open the pedestrian gate.
3. No pedestrian gate shall be located in the median between two vehicle gates.

***Exception:** Private driveways serving one single-family residence are exempt from this requirement.*

M112.1 Maintenance. Emergency access gates and barriers shall be maintained and may include:

1. Batteries required for operation of the system during power failure;
2. Lubrication of moving parts and hinges per manufacturer's specifications, and;
3. Any subsequent attention required to maintain the original list of frequencies for emergency operation of the gate in the controller, if applicable.

M113.1 Installation Approval. The Fire Code Official shall conduct inspections on all gates and barriers for proper installation and operation prior to activation or use.

M114.1 Additional Requirements

1. Because of the delays caused by vehicle access control devices or systems, additional fire protection requirements may be applied based on other access limitations, such as narrow or winding streets or dead-end streets without an approved turnaround available for fire apparatus.
2. Other than the obstruction and the reduced width controlled within this standard, no other requirement of the fire authority having jurisdiction shall be adversely affected by the placement of any vehicle access control device or system in any required fire apparatus access road.
3. Fire department approval does not waive any requirement by other authorities having jurisdiction

NFPA AMENDMENTS

NFPA 13

Section 6.3.1.1.2 of NFPA 13 as referenced in the SN-IFC: *Editorial correction – the correct code section is 6.2.1.2.1*

Sections 3.3.25 thru 3.3.27 are added to NFPA 13 - General Definitions, to read as follows:

3.3.25 Accessible (as applied to equipment). Admitting close approach; not guarded by locked doors, elevation, or other effective means.

3.3.26 Accessible, Readily (Readily Accessible). Capable of being reached quickly for operation, renewal, or inspections without requiring those to whom ready access is requisite to climb over or remove obstacles or to resort to portable ladders, and so forth.

3.3.27 Accessible Spaces. Spaces or concealed areas of construction that can be entered via openable panels, doors hatches, or other readily movable elements (e.g., ceiling tiles).

Section 8015.7.2 of NFPA 13 as added by the SN-IFC is amended to read as follows:

8.15.7.2 Sprinklers shall be permitted to be omitted where the exterior projections are constructed entirely with materials that are noncombustible, ~~and where the exterior projections do not support occupancy above.~~

Section 8.15.7.4 of NFPA 13 is amended to read as follows:

8.15.7.4 ~~When permitted by Section 1018.1 of the *International Building Code*, sprinklers~~ sprinklers shall be permitted to be omitted from exterior exit corridors when the exterior walls of the corridor are at least 50 percent open and when the corridor is entirely of noncombustible construction.

Section 8.17.4.2.4 of NFPA 13 is amended to read as follows:

8.17.4.2.4 ~~The alarm test connection shall be permitted to be installed in any location on the fire sprinkler system down stream of the waterflow alarm. The alarm test connection valve shall be piped from the most hydraulically demanding area and shall be readily accessible.~~

Section 8.17.4.2.5 is added to NFPA 13 to read as follows:

8.17.4.2.5 Buildings three or more stories in height do not require the inspector test valve to be piped from the most hydraulically demanding area.

Section 22.38 of NFPA 13, as added by the SN-IFC is amended to read as follows:

22.38 Protection Mitigation Matrix for Group R Division 3 Occupancies. and buildings built under the IRC.

21.38.1 General. ~~When a sprinkler system is being installed to mitigate the minimum Fire Code requirements for fire flow, number of fire hydrants, or fire department access, for a Group R Division 3 Occupancy, the design requirements in Table 21.37.1 shall be applied.~~ upgraded to mitigate the minimum Fire Code requirements for fire flow, number of fire hydrants, or fire department access, the sprinkler system shall be designed in accordance with Section 22.38.2.

Table 22.38.1
Protection Mitigation Matrix for Group R Division 3 Occupancies
and buildings built under the IRC ⁴

Building Area Size Range ⁶	Protection <u>Mitigation</u> Residential System Type ^{1,3}	Separate Sprinkler Lead-in Required ⁵	Minimum Underground Pipe Size ⁵	Minimum Water Meter Size ⁷	Sprinklers Required in Areas Subject to Freezing
< 3,600 sq.ft.	Standard NFPA 13D ²	See NFPA 13D for design requirements			
≥ 3,600 sq.ft. and < 10,000 sq.ft.	Enhanced NFPA 13D ^{1,2}	See NFPA 13D for design requirements			
≥ 10,000 sq.ft. and < 15,000 sq.ft.	Enhanced NFPA 13R ¹	See NFPA 13R for design requirements			
≥ 15,000 sq.ft.	Modified NFPA 13 ¹	Yes	N/A	N/A	Yes

N/A = Not Applicable

- ¹ This mitigation constitutes a building Acompletely protected with an approved fire sprinkler system@ per the IFC.
- ² Domestic demand of 5 gpm is required to be added to the sprinkler demand in the hydraulic calculations.
- ³ Free-standing detached guest houses or garages shall be protected by an Enhanced NFPA 13D system.
- ⁴ Excluding Group R Division 3 occupancies used as Group Care Homes.
- ⁵ U.G. lead-in shall be the minimum size required hydraulically as proven by the sprinkler contractor and shall be hydrostatically tested and flushed, witnessed by the fire dept.
- ⁶ Building area is defined as all areas under roof except for porches, patios, balconies, carports and porte-cocheres.
- ⁷ Water meters used for residential sprinkler systems shall be residential fire service meters or other meters approved by the water purveyor.

22.38.2 Modified 13 Design Criteria. When Table 21.38.1 requires a Modified 13 Design, the sprinkler system shall be installed to meet the requirements of this code, with the exception of the following items:

1. Fire Department Connections (FDC): A 2 2-inch fire department connection is required. A single snoot connection will be accepted. The FDC shall be located on the garage wall facing the street except for special circumstances where the FDC may be freestanding and located adjacent to the street or private drive. A freestanding FDC in these circumstances may be designed into the mailbox column.
2. Riser Room: Risers shall be located in either the garage or within a dedicated room with an exterior door. Provided the garage/room is fully insulated the requirement for maintaining 40EF will not require a source of heat.

3. Inspectors Test Connection: The inspectors test location may be piped off the system riser.
4. Piping in locations less than 40EF: Dry pipe systems are not permitted for the protection of living spaces, anti-freeze systems shall be used. The protection of non-living spaces such as attics may be protected by dry-pipe systems.
5. Anti-Freeze Loops: The capacity shall not exceed 80 gallons.
6. Separate Water Supply: A separate water lead-in for the fire sprinkler system along with an approved (by the local water authority) back-flow prevention device is required. The back-flow prevention device shall be located at the street with in an approved insulated enclosure. The lead-in shall be sized using the minimum pipe size available that provides the calculated flow.
7. Control Valves: All valves used to control the sprinkler system are required to be indicating. A Post Indicator Valve (PIV) is not permitted.
8. Electrical Supervision: When required by the fire code official, the main control valves shall be electrically supervised. The back-flow valves are not required to be electrically supervised.
9. Fire Pumps: Electric fire pumps normally accepted in NFPA 13D systems for residential use (UL listed jockey pump) are acceptable.
10. Notification Devices: Interior B One (1) interior horn/strobe shall be installed in a location specified by the homeowner. Exterior B One (1) exterior horn/strobe shall be located above the FDC or other acceptable location. The sprinkler flow switch shall activate both of the required devices.
11. Residential Sprinkler Heads: Residential sprinkler heads shall be utilized and the design allowances specified in section 11.2.3.2.3.1 (reduction to design area) may be applied.
12. Hangers and Earthquake Bracing: The hanging of sprinkler pipe shall be in accordance Chapter 9. Earthquake bracing is not required.
13. Garages: Garages shall be classified as Ordinary Hazard Group I. Commercial style QR sprinkler heads are required.
14. ~~Location of Sprinklers: Sprinklers shall be installed in all areas except where emissions are permitted as follows:~~
 - a. ~~Inaccessible attic spaces, of less than 15,000 sq. ft.~~
 - b. ~~Exterior overhangs, porches, and carports.~~
 - c. ~~Rooms not provided with environmental control.~~

NFPA 13D AMENDMENTS

Section 8.4 of NFPA 13D, as added by the SN-IFC, is amended to read as follows:

8.4 Protection Mitigation Matrix for Group R Division 3 Occupancies. and buildings built under the IRC.

8.4.1 General. When a sprinkler system is being installed to mitigate the minimum Fire Code requirements for fire flow, number of fire hydrants, or fire department access, the design requirements in Table 8.4 shall be applied.

Table 8.4
Protection Mitigation Matrix for Group R-3 Occupancies⁴ and buildings built under the IRC.

Building Area Size Range ⁶	Mitigation Residential System Type ^{1,3}	Separate Sprinkler Lead-in Required ⁵	Minimum Underground Pipe Size ⁷	Minimum Water Meter Size ⁵	Sprinklers Required in Areas Subject to Freezing
< 3,600 sq.ft.	Standard NFPA 13D ²	No	1"	¾"	No
≥ 3,600 sq.ft. and < 10,000 sq.ft.	Enhanced NFPA 13D ^{1,2}	No	1"	¾"	No
≥ 10,000 sq.ft. and < 15,000 sf	Enhanced NFPA 13R ¹	See NFPA 13R for design requirements			
≥ 15,000 sf	Modified NFPA 13 ¹	See NFPA 13 for design requirements			

N/A = Not Applicable

- ¹ This mitigation constitutes a building Acompletely protected with an approved fire sprinkler system@ per the IFC.
- ² Domestic demand of 5 gpm is required to be added to the sprinkler demand in the hydraulic calculations.
- ³ Freestanding detached guest houses or garages shall be protected by an Enhanced NFPA 13D system.
- ⁴ Excluding Group R Division 3 occupancies and buildings built under the IRC used as Group Care Homes.
- ⁵ U.G. lead-in shall be the minimum size required hydraulically as proven by the sprinkler contractor and shall be hydrostatically tested and flushed, witnessed by the fire dept.
- ⁶ Building area is defined as all areas under roof except for porches, patios, balconies, carports and porte-cocheres.
- ⁷ Water meters used for residential sprinkler systems shall be residential fire service meters or other meters approved by the water purveyor.

NFPA 13R AMENDMENTS

Section 1.1 as by the SN-IFC, is amended to read as follows:

1.1 Scope

This standard covers the design and installation of automatic sprinkler systems for protection against fire hazards in residential occupancies up to and including two four stories in height. Residential occupancies three or more stories in height shall be protected throughout in accordance with NFPA 13.

When sprinkler protection is being provided to mitigate the minimum Fire Code requirements for fire flow, number of fire hydrants, or fire department access for single-family residential occupancies, the minimum design criteria shall be as outlined in ~~Section 6.8.5 Protection Matrix for Group R Division 3 Occupancies and buildings built under the IRC.~~ 7.6 Mitigation Matrix for Group R Division 3 Occupancies.

Section 7.6 of NFPA 13R, as added by the Southern Nevada Amendments, is amended to read as follows:

7.6 ~~Protection~~ Mitigation Matrix for Group R Division 3 Occupancies. When a sprinkler system is being installed to mitigate the minimum Fire Code requirements for fire flow, number of fire hydrants, or fire department access, the design requirements in Table 7.6 shall be applied.

Table 7.6
Protection Mitigation Matrix for Group R-3 Occupancies⁴ and buildings built under the IRC

Building Area Size Range ⁶	Mitigation Residential System Type ^{1,3}	Separate Sprinkler Lead-in Required ⁵	Minimum Underground Pipe Size ⁵	Minimum Water Meter Size ⁵	Sprinklers Required in Areas Subject to Freezing
< 3,600 sq.ft.	Standard NFPA 13D ²	See NFPA 13D for design requirements			
≥ 3,600 sq.ft. and < 10,000 sq.ft.	Enhanced NFPA 13D ^{1,2}	See NFPA 13D for design requirements			
≥ 10,000 sq.ft. and < 15,000 sq.ft.	Enhanced NFPA 13R ¹	Yes	N/A	N/A	Yes
≥ 15,000 sq.ft.	Modified NFPA 13 ¹	See NFPA 13 for design requirements			

N/A = Not Applicable

¹ This mitigation constitutes a building A completely protected with an approved fire sprinkler system per the IFC.

² Domestic demand of 5 gpm is required to be added to the sprinkler demand in the hydraulic calculations.

³ Free-standing detached guest houses or garages shall be protected by an Enhanced NFPA 13D system.

⁴ Excluding Group R Division 3 occupancies used as Group Care Homes.

⁵ U.G. lead-in shall be the minimum size required hydraulically as proven by the sprinkler contractor and shall be hydrostatically tested and flushed, witnessed by the fire dept.

⁶ Building area is defined as all areas under roof except for porches, patios, balconies, carports and porte-cocheres.

NFPA 14

The following sections are deleted from the SN-IFC amendments to NFPA 14

Section 5.2.1.2.1 and revert back to original NFPA 14 code.
Section 5.2.1.2.2 and revert back to original NFPA 14 code.
Section 6.4.5.2.2 and revert back to original NFPA 14 code.

Section 7.2.4 of NFPA 14, as modified by the SN-IFC, is amended to read as follows:

7.2.4 The fire code official shall be consulted regarding the use and configuration of system pressure regulating devices. Where more than two hose connections are used downstream of a pressure-regulating device, the following conditions shall apply:

- (1) In systems with multiple zones, pressure-regulating device(s) shall be permitted to be used in lieu of providing separate pumps to control pressure in the lower zone(s) as long as the devices comply with all requirements in 7.2.4. When the system configuration is such that a pressure-regulating device is the single source of water to a structure or pressure zone, For each pressure-regulating device provided, a secondary pressure-regulating device matching the primary device shall be provided in parallel configuration.
- (2) A method to isolate each of the pressure-regulating device(s) shall be provided for maintenance and repair by providing control valves on the supply and discharge side of each pressure-regulating device, in a manner where only the device being maintained and repaired is out of service.
- ~~(3) Regulating devices shall be arranged so that the failure of any single device does not allow pressure in excess of 200 psi (13.9 bar) to any of the multiple hose connections downstream.~~
- (4) An equally sized bypass around the pressure regulating device(s), with a normally closed valve, shall be installed.
- (5) Pressure-regulating device(s) and the bypass valve shall be installed not more than 7ft 6in (2.31 m) above the floor.
- (6) The pressure-regulating device shall be provided with inlet and outlet pressure gauges.
- (7) The fire department connection(s) shall be connected between the system fire pump(s) and the pressure-regulating device(s) and shall be sized and designed to allow the fire department connection to match the pressure and flow from the fire pump.
- (8) The pressure-regulating device shall be provided with a pressure relief valve sized for the full anticipated system flow and capable of maintaining downstream system pressures below the maximum pressure ratings for all system components.
- (9) Remote monitoring and supervision for detecting high pressure failure of the pressure of the pressure-regulating device shall be provided in accordance with *NFPA 72, National Fire Alarm Code*. Such failure shall be detected by providing a supervisory flow switch downstream on the pressure relief valve.
- (10) A drain sufficient to allow flow of the full anticipated system flow shall be provided adjacent to the pressure-regulating devices. Use of this drain line for discharge from the pressure relief valve shall be permitted.

NFPA 72 AMENDMENTS

Section 18.5.5.8 of NFPA 72, as modified by the SN-IFC, is amended to read as follows:

18.5.5.8 Ceiling mounted visual appliances shall be provided in rooms and areas used for exhibition purposes, or in rooms and areas where racks or shelving that exceed 5' in height are expected to be installed, or in rooms and areas where wall-mounted devices may become obstructed.

Exceptions:

1. When approved by the Authority Having Jurisdiction, wall mounted appliances may be installed above the visible obstruction height.
2. When approved by the Authority Having Jurisdiction, visible notification appliances may be installed in accordance with the requirements of the approved design documents (Fire Protection report) and the manufacturer's instructions in order to achieve the required performance objective.