

ORDINANCE NO. 2022-04

**AN ORDINANCE AMENDING THE FIRE PREVENTION
CODES OF THE MINOOKA FIRE PROTECTION DISTRICT**

WHEREAS, the Minooka Fire Protection District (hereinafter "the District") is a fire protection district duly organized under the laws of the State of Illinois; and

WHEREAS, the Board of Trustees (hereinafter "the Board") of the District has express power pursuant to 70 ILCS 705/11, to adopt and enforce fire prevention codes and standards parallel to national standards to promote fire prevention; and

WHEREAS, the Board also has full power pursuant to 70 ILCS 705/6, to pass all necessary ordinances, and rules and regulations for the proper management and conduct of the business of the District for carrying into effect the objects for which the District was formed; and

WHEREAS, the Fire Protection District Act, 70 ILCS 705/11, empowers and makes it the legal duty and obligation of this Board of Trustees to provide as nearly adequate protection from fire for all persons and property within the district as possible and to prescribe necessary regulations for the prevention and control of fire therein; and

WHEREAS, the District is empowered by the Act to provide reasonable safeguards through Fire Prevention Codes to protect the Public Health and Safety against the hazards of fire in buildings and structures; and

WHEREAS, the Board has established a Bureau of Fire Prevention (Bureau") to enforce the laws and ordinances governing the safe guarding of life

and property from hazards of the fire and other hazards; and

WHEREAS, the Board of Trustees of the Minooka Fire Protection District has previously adopted a fire prevention code for the District; and

WHEREAS, the Board deems it in the best interests of the residents of the District that the District amends its fire prevention code.

NOW, THEREFORE, be it ordained by the Board of Trustees of the Minooka Fire Protection District, Grundy, Will and Kendall Counties, Illinois, as follows:

SECTION 1: The facts and statements contained in the preamble to this Ordinance are hereby found by the Board of Trustees to be true and correct and are hereby adopted as part of this Ordinance.

SECTION 2: The fire prevention code of the Minooka Fire Protection District (hereinafter referred to as the "District Codes") shall hereafter be amended to include that attached provisions of **Exhibit A** hereto, and said provisions of **Exhibit A** are hereby incorporated herein by reference herein.

SECTION 3: At least three (3) copies of this Ordinance shall be placed on file with the District and shall be available for public inspection at all times during regular business hours as provided by law.

SECTION 4: All persons in violation of the Fire Prevention Code shall be subjected to fines as set forth and established in the Codes and in the District's Fire Code. Any person, business, firm, corporation, entity or property owner with a proven violation of this Code shall be responsible for all fees, costs and

expenses, including but not limited to attorney fees, litigation, adjudication and settlement costs, incurred by the Minooka Fire Protection District in enforcing the provisions of the adopted Code.

SECTION 5: Future versions of the District's Fire Prevention Code shall be revised by Board approval of additional **Exhibits** hereto that amend the current **Exhibit A**. All such revisions shall be dated and shall be effective upon approval by the Board of Trustees.

SECTION 6: The Board of Trustees of the District hereby declares that should any section, paragraph, sentence or word of this Ordinance or of the Code hereby adopted be declared for any reason to be invalid, it is the intent of said Board of Trustees that it would have passed all other portions of this Ordinance independent of the elimination here from of such portion as may be declared invalid.

SECTION 7: Neither the enactment of this Ordinance nor the repeal of any ordinance or parts of ordinances as provided for herein shall be construed to affect or abate any action or cause of action for violation of said prior ordinance or ordinances.

SECTION 8: That this Ordinance shall be in full force and effect from and after its passage, and approval in accordance with Illinois law.

ADOPTED this 10th day of May, 2022 by the following roll call vote:

AYES: Clark, Buren Underhill

NAYS: —

ABSENT: Robinson, Roberts



President, Board of Trustees
Minooka Fire Protection District
Pro-temp

ATTEST:



Secretary, Board of Trustees
Minooka Fire Protection District

STATE OF ILLINOIS)
) SS
GRUNDY COUNTY)

SECRETARY'S CERTIFICATE

I, David Clark, the duly qualified and acting Secretary of the Board of Trustees of the Minooka Fire Protection District, Grundy, Will and Kendall Counties, Illinois, do hereby certify that I am the keeper of its books and records and that the attached hereto is a true and correct copy of an Ordinance entitled:

ORDINANCE NO. 2022-04

**AN ORDINANCE AMENDING THE FIRE PREVENTION AND
CODES OF THE MINOOKA FIRE PROTECTION DISTRICT**

Which Ordinance was duly adopted by said Board of Trustees at a meeting held on the 10th day of May, 2022.

I do further certify that a quorum of said Board of Trustees was present at said meeting and that the Board complied with all requirements of the Illinois Open Meetings Act.

IN WITNESS WHEREOF, I have hereunto set my hand this 10th day of May, 2022.



Secretary, Board of Trustees
Minooka Fire Protection District

EXHIBIT A

Minooka Fire Protection District FIRE PREVENTION CODE

ADOPTION OF THE INTERNATIONAL FIRE CODE 2021 EDITION WITH AMENDMENTS

The regulations of the 2021 edition of the International Fire Code, including appendix B, C, D, F, H, I, K, L, and M as published by the International Code Council is hereby adopted as the Fire Code for which regulates and governs the safeguarding of life and property from the hazards of fire and explosion arising from the storage, handling and use of hazardous substances, materials and devices; and from conditions hazardous to life or property in the use or occupancy of existing or proposed new buildings or premises; providing for the issuance of permits and collection of fees therefore; and each and all of the regulations, provisions, penalties, conditions and terms of said Fire Code on file in the Minooka Fire Protection District 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 as are hereafter set forth.

The adoption of this Fire Prevention Code supersedes all previously adopted ordinances. When a conflict exists between this code and other legally ordained and adopted codes within the jurisdiction in which the Minooka Fire Protection District is the "authority having jurisdiction", the *fire code official* shall review this code against the conflicting code to determine if a conflict exists; if a conflict exists, this Fire Prevention Code shall prevail.

101.1 Title.

Minooka Fire Protection District.

103.1 General

Delete this section and insert the following local jurisdiction:

The Fire Protection District shall be responsible for implementation, administration, education, and enforcement of the provisions of the Fire District Fire Prevention Code.

The Fire District shall adopt from time to time, those policies and procedures, which are deemed appropriate to carry out the terms of local fire code enforcement.

103.2 Appointment.

The Fire Chief, under the authority of the Board of Trustees shall be responsible for appointment of the *fire code official(s)*. The Fire Prevention Bureau inspectors shall be responsible for enforcement of all applicable fire and life safety codes that fall under the authority and responsibility of the Fire District and fire chief

within the District as outlined by the statutes of the State of Illinois.

104.5 Notice and orders

Add as an additional sentence for local jurisdiction:

The *fire code official* is authorized to issue ordinance violation citations exceeding the 55-day violation notice. The Fire District will enforce all violations exceeding the 55-day violation notices.

105.2.4 Review

Add as additional sections for local jurisdiction:

Each applicant shall pay the plan review fee for review of the construction documents and site inspection fees for review and site inspection as established by the Fire District or its third-party review service. Plan review fees shall include re-reviews of original fees, along with preliminary site visits and up to three (3) inspections for each category. Three (3) sets of sprinkler, fire alarm and construction documents/drawings shall be submitted for plan review and shall be submitted in electronic format approved by the *fire code official*.

105.4.2.1 Fire Protection Shop Drawings

Add as additional sections for local jurisdiction

For each hydraulically calculated automatic fire sprinkler system area identified, on submitted shop drawings, provide a copy of the hydraulic name plate.

105.4.2.2 Site Plan and Construction Plan Review:

Add as additional sections for local jurisdiction

Each applicant for a building permit involving new construction, additions, and/or alterations, subdivision improvements, planned unit development (PUD), fire detection/suppression systems, change of occupancy classification, or any other item that will affect the Fire Protection Districts operation, shall submit professional designed plans to the Fire District for review and comment. Applicant shall provide three (3) printed sets and an electronic copy of all required plans, documents and a complete description of the work to be performed.

105.4.2.3 Plan Review and Site Inspection Fee Schedule

Add as additional sections for local jurisdiction

Each applicant shall submit three (3) printed sets and an electronic copy of sprinkler, fire alarm, and construction documents essential for third party review.

111.1 Board of appeals established.

Delete this section and insert the following for local jurisdiction:

In order to hear and decide appeal of orders, decision or determinations made by the *Fire District* relative to the application and interpretation of this code, there shall be and hereby created an appeals process. The applicant must file a notice to appeal to the *fire code official* within ten (10) days from the date of decision. The *fire code official* shall cause the matter to be reviewed by a third-party

reviewer to determine if the code was applied correctly with the applicant of the appeal being responsible for all fees related to third party review of the subject matter of the appeal.

The Fire Chief and *fire code official* shall review the findings of the third-party reviewer and notify the applicant of the Fire District decision. The applicant may appeal the decision of the Fire Chief to the Board of Trustees who shall act as the Board of Appeal. The applicant must file a written request to the President of the Board of Trustees, within ten (10) days of the Fire Chiefs decision, and request to be heard by the *Board of Appeals* on the matter, at which time the Fire Chief and President of the Board of Trustees shall determine the date and time for the applicant to be heard. The decision of the Board of Trustees is final action of the Fire District.

112.4 Violation penalties.

Insert the following local language as required to be specified:

[Fine not less than fifty (\$50.00) dollars, nor more than seven hundred and fifty (\$750.00) dollars for each offense]. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

Final enforcement of the Fire Code violations shall be addressed through the Court System within the appropriate county within which the violation occurred. Owners in violation will also be responsible for all attorney and court fees associated with correction of the violation.

Section 301.3 Protection of Occupants/Public

Add as an additional section

Whenever and wherever, within the jurisdiction of the Fire District a condition is found in any building, lot or premises, that requires correction or removal for the protection of the occupants or the public, the Fire District *fire code official*, shall order such conditions corrected or removed and the owner or occupant of such buildings, lots, or premises shall comply with such order. The appropriate jurisdictions Building Official and Fire Inspector will refer to the most applicable building and fire code sections of the current code.

315.8 Storage of lithium metal or lithium-ion Batteries.

Add as an additional section

Areas associated with the collection or storage of lithium metal or lithium-ion batteries shall comply with this chapter.

Exceptions: The following areas shall be exempt from the requirements of this chapter:

1. Areas within a facility that are operated in accordance with procedures that provide for the state of charge of the lithium metal or lithium-ion batteries to be 30 (40) percent or less. Procedures and test reports

documenting how the 30 (40) percent or less state of charge is established and how fire protection levels are determined shall be provided to the fire code official for review and approval

2. Areas where fire and fault condition testing conducted or witnessed and reported by an approved testing laboratory is provided showing that a fire involving the batteries in storage will be limited to the design area of an automatic sprinkler system installed in accordance with NFPA 13 and will not adversely impact occupant egress from the building or adversely impact adjacent stored materials or the building structure.

3. Batteries in original retail packaging that are rated at 300 watt-hours or less for lithium-ion batteries or contain 25 grams or less of lithium metal for lithium metal batteries.

315.8.1 Collection. All areas located indoors in any occupancy where used lithium metal or lithium-ion batteries are collected from employees or the public shall be provided with open-top noncombustible containers or containers designed to preclude the release of contents resulting from battery thermal runaway or containers approved for battery collection activities.

1. Containers shall not exceed 1 ft³ (0.03 m³) in size. (Or 55 gallons (113.6 L))
2. Containers shall have a minimum of 3 ft (0.9 m) of open space from other battery collection containers and combustible materials and shall be located a minimum of 5 ft (1.5 m) from exits from the room, space, or building.
3. Where combustible materials are located within the space between collection containers, the containers shall be spaced a minimum 10 ft (3 m) apart.

315.8.2 Collection and Storage Locations.

Batteries collected or stored other than those in collection containers complying with Section 315.8.1 shall be stored in accordance with one or more of the following methods provided for in accordance with one or more of the following methods. Battery terminals shall be protected either through battery design methods or a protective packaging method to prevent short circuit of the battery.

1. In rooms or spaces separated from the remainder of the building areas by fire barriers with a 3-hour fire resistance rating and with horizontal assemblies with a 3-hour fire resistance rating constructed in accordance with the local building code. The room or space shall be protected by a radiant energy detection system installed in accordance with NFPA 72 and

shall be protected by an automatic sprinkler system designed and installed in accordance with NFPA 13.

2. Batteries shall be permitted to be stored in approved prefabricated portable buildings or containers that are constructed with 3-hour fire resistance ratings and provided with radiant-energy detection system installed in accordance with NFPA 72 and an approved automatic fire suppression system installed in accordance with NFPA 13.

3. In metal drums storage containers with batteries separated from each other by vermiculite or other approved material packaged to prevent damage that could lead to a thermal event or in containers approved for battery collection and storage activities.

3.1. Each area containing such metal drums or approved containers shall not exceed 900 ft² (83.61 m²) in area and shall be separated from other battery storage areas by a minimum of 10 ft (3 m).

3.2. The collection and storage area shall be protected by a radiant-energy detection system installed in accordance with NFPA 72 and an approved automatic fire suppression system installed in accordance with NFPA 13.

4. In containers approved for use in transportation or approved by the *fire code official* that will prevent an event from propagating beyond the container.

4.1. Each area containing the approved transportation containers shall not exceed 900 ft² (83.61 m²) in area and shall be separated from other battery storage areas by a minimum of 10 ft (3 m).

4.2. The storage area shall be protected by a radiant energy detection system installed in accordance with NFPA 72 and an approved automatic fire suppression system installed in accordance with NFPA 13.

315.8.3 Prevention and Mitigation A plan that provides for the prevention of fire incidents and includes early detection mitigation measures shall be provided to the *fire code official* for review and approval. The owner is required to file the plan annually.

315.8.4 Explosion Control.

The potential for a deflagration involving the off gassing of flammable gases during a thermal runaway shall be analyzed and explosion protection shall be installed in accordance with Section 911 if the potential exists. A written hazard analysis prepared by a fire protection engineer shall be submitted to the *fire code official* for review and approval.

315.8.5 Outdoor Storage Location.

Outdoor storage locations for lithium metal or lithium-ion batteries shall comply with the following:

1. Individual pile sizes shall be limited to 900 ft² (83.61 m²) in area separated from other piles by 10 ft (3 m).
2. Batteries shall be stored in non-combustible containers or approved containers designed for storage of the batteries.
3. Piles located outdoors shall be separated by a minimum 20 ft (6.1 m) from the following exposures:
 - 3.1. Lot lines
 - 3.2. Public ways
 - 3.3. Buildings
 - 3.4. Other storage
 - 3.5. Hazardous materials
 - 3.6. Other exposure hazards

Exception: Clearances shall be permitted to be reduced to 3 ft (0.9 m) when a 3-hour freestanding fire barrier, suitable for exterior use, and extending 15 ft (4.57 m) 5 ft (1.5m) above and extending 15 ft (4.57 m) 5 ft (1.5m) beyond the physical boundary of the pile is provided to protect the exposure.

315.8.5.1 Weather protection.

Where weather protection is provided for sheltering outdoor battery storage areas, such areas shall be considered outdoor storage where the weather protection structure complies with 1 through 3.

1. Walls shall not obstruct more than one side of the structure.

Exception: Walls shall be permitted to obstruct portions of multiple sides of the structure, provided that the obstructed area is not greater than 25 percent of the structure's perimeter.

2. The distance from the structure to buildings, lot lines, public ways or means of egress to a public way shall be not less than the distance required for an outside hazardous material storage or use area without weather protection.
3. The overhead structure shall be of approved noncombustible construction with a maximum area of 1,600 square feet (148.6 m²).

SECTION 316 HAZARDS TO FIREFIGHTERS

316.7 Add as an additional section to the chapter

The owner of any commercial or industrial structure, or any multiunit residential structure of three (3) units or more, that uses light-frame truss-type construction shall properly mark the building as required by the *fire code official* with a truss construction emblem so as to provide warning to persons conducting fire control and other emergency operations of the existence of light-frame truss-type construction in the structure. The truss construction emblem shall be provided by the *fire code official* and shall be permanently affixed to the building as directed by the *fire code official*.

503.1.4 Fire Apparatus Access and Review

Add as additional paragraph to the section:

All fire apparatus access road and fire lanes shall be reviewed and recommendations made by the Fire Protection District. Any engineering review costs shall be paid by the developer of the property.

503.2.1 Dimensions

Add as an additional sentence to the paragraph

Unless otherwise increased by the *fire code official* due to apparatus size and access concerns.

503.2.3 Surfaces

Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all weather driving capabilities.

Add as an additional sentence to the paragraph:

It is the responsibility of the property owner to maintain the surface of the fire access road/lanes at all times, including the maintenance of a clear path for fire apparatus staging and/or parking.

503.2.9 Private Drive Identification

Add as an additional paragraph:

It is the responsibility of residents or in the case of Homeowners Association to provide *approved* address markings at the intersection of a private drive and the public right of way so that the fire district and police department can identify the addresses down extended private lanes. In the event there are multiple buildings or residences that branch from the private drive, the address must be placed on the building or residence which is visible upon approach.

505.1 Address identification.

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 with address numbers not less than 6-inch height. Address numbers shall be maintained by the property owner or authority.

506.1 Where required.

Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the *fire code official* is authorized to require a key box to be installed in an *approved* location. The key box shall be of an *approved* type listed in accordance with UL 1037, and shall contain keys to gain necessary access as required by the *fire code official*.

All access roads protected by an automatic gate shall be provided with an access system *approved* by the *fire code official* allowing the fire district rapid access to the property in the event of a fire, alarm, or other emergency.

Add as an additional sentence to the paragraph:

All buildings/units with automatic fire alarm systems, automatic fire suppression systems, and/or medical alert systems shall have installed a key lock box in a location(s) approved by the Fire Protection District, for access during an activation of an alarm and/or emergency. Permanently mounted key lock box shall be equipped with a tamper switch device that indicates when access is made and when the box is removed from its mounted location. Tamper switches shall be wired to the burglar alarm if one is available, otherwise to the fire alarm and provided a dedicated zone.

507.2.3 Dimension of Water Supply Mains

Add as an additional paragraph

Water mains supplying water to required hydrant system shall not be less than eight (8) inches in diameter.

507.2.4 Dead end mains

Add as an additional section

One or two-family residential developments may have hydrants supplied by a dead-end water line where there are 30 or fewer dwelling units protected by the supply. Dead end water mains shall not exceed six hundred (600) feet of eight (8) inch pipe. Hydrants located on dead end water mains shall have "dead end" disk attached to the steamer outlet of the hydrant.

507.2.5 Looped water supply line requirement

Add as an additional section:

Fire hydrants in areas zoned multi-family, commercial, industrial or mixed occupancy shall be on a looped (receiving water from more than one direction)

water supply line of an *approved* size for the development when determined acceptable by the Fire District engineer.

507.5.1- Where required (Fire Hydrants).

Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400 feet (122m) from a hydrant on a fire apparatus access road, as measured by an *approved* route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the *fire code official*.

Insert the following to the paragraph:

The maximum hydrant spacing shall be no more than four hundred (400) feet apart. Hydrants in areas zoned multi-family, commercial, industrial or mixed occupancy shall be spaced no farther than three hundred (300) feet apart except as provided in Appendix C that may require spacing between hydrants to be less than three hundred (300) feet based on fire flow requirement. Spacing shall be measured as normal roadway travel between hydrants on an adjacent, all weather, and public road as hose can be laid from a fire district apparatus and in accordance. All hydrants shall be located within sixteen (16) inches of the paved portion of an all-weather public roadway with a minimum setback from curbs or edges of pavement. Variances may be required by the local authority. Hydrants shall be marked by hydrant locators so they may be seen even when concealed (507.5.8). No hydrant should be located closer than 50 feet from any existing or anticipated exposing structure in commercial and manufacturing areas. Where streets are provided with median dividers that cannot be crossed by fire apparatus laying hose lines, hydrant spacing shall be on each side of the street arranged on an alternating basis. All hydrants added after adoption of this ordinance shall be provided with Stortz fitting on the 5" outlet.

507.5.1.2 Hydrant for FDC

Add as an additional section

Additional fire hydrants shall be located in an *approved* location within a minimum of seventy-five (75) feet of the Fire District Connection (FDC).

507.5.7 Hydrant Street Locators

Add as additional paragraph to this section:

Fire hydrant locations shall be visually indicated in accordance with Fire District direction, and may be amended from time to time. All fire hydrants installed after the effective date of this chapter shall be required to have fire hydrant marker(s) installed before acceptance. Hydrant markers are to be installed by the developer, owner, or contractor as follows:

1. As may comply with the department of transportation regulations.
2. Areas such as, but not limited to parking lots, loading areas, or storage yards shall have marker location designated by the *fire code official*.

3. Any hydrant marker damaged or removed during the course of street construction or repair shall be immediately replaced by the contractor, developer, or person responsible for removal or damage.

604.8 – Elevator size specifications

Add as additional paragraph to this section:

Elevator cars or lifts that are designed within a building so as to deliver people to an upper floor to conduct work under compliance with American's with Disabilities Act (ADA) shall be of size and dimensions to accommodate the ambulance stretcher used by the Fire Protection District. In the buildings two stories in height or more, and required to have an elevator, at least one elevator shall be of such size and arrangement to accommodate a twenty-four (24) inch by eighty-four (84) inch ambulance stretcher in the horizontal, open position. The diagonal inside measurements of the elevator car shall not be less than ninety-six (96) inches. When two elevators are provided in the building and only one is "stretcher" compliant the "stretcher" compliant elevator shall be identified by the international symbol for emergency medical services (Star of Life) that is not less than three (3) inches high and shall be placed on the elevator door frame on each floor. The inside hand rail shall be set at a the maximum thirty-six (36) inch height allowed under the American with Disabilities Act (ADA) standards to better accommodate the stretcher. The cab size is to be a minimum five (5) foot by seven (7) foot platform and minimum two thousand five hundred (2,500) lb. capacity with a forty-two (42) inch slide door.

604.9 – Elevator Communications

All required emergency elevator phones shall directly dial the Fire Protection District's Communications Center via the phone number designated by the *fire code official*

SECTION 901- FIRE PROTECTION SYSTEMS GENERAL

Section 901.4.7- Pump and riser room size.

Where provided, fire pump rooms and automatic sprinkler system riser rooms shall be designed with adequate space for the equipment necessary for the installation, as defined by the manufacturer, with sufficient working space around the stationary equipment. Clearances around equipment to elements of permanent construction, including other installed equipment and appliances, shall be sufficient to allow inspection, service, repair or replacement without removing such elements of permanent construction or disabling the function of a required fire-resistance rated assembly. Fire pump and automatic sprinkler system riser rooms shall be provided with a door(s) and an unobstructed passageway large enough to allow removal of the largest piece of equipment.

Insert the following as additional sentence:

All fire sprinkler control rooms and fire pump rooms shall be accessible by a direct outside access door and accessible from inside the building. The doors

shall be marked with 6-inch lettering identifying the rooms. The fire sprinkler control room shall be provided with a one-hour separation from the remaining building.

901.11 Multi Tenant Occupancy

When an automatic suppression system is installed in a multi tenant building, each tenant shall have its own sprinkler supply line off the main or riser with its own water flow switch and control valve. A strobe light shall be mounted on the exterior front of that tenant. The strobe light shall activate upon water flow and/or fire alarm activation within the individual unit.

Section 902.1 Definitions

The following terms are defined in Chapter 2:

Insert the following as additional:

Fire Area. The aggregate floor area bounded by the exterior walls of a building; regardless of fire walls, fire barriers, or fire resistance-rated horizontal assemblies.

Fire Area is defined as the entire building that cannot be subdivided into multiple fire areas to permit the omission of automatic fire sprinklers.

Section 903.2 Where required.

Approved automatic sprinkler systems in new buildings and structures shall be provided in locations described in Sections 903.2.1 through 903.2.12.

Amend as follows:

*Approved automatic sprinkler systems shall be provided in all use groups, and every fire area shall be provided with an automatic fire sprinkler system installed in accordance with the requirements of the applicable standards; NFPA 13, NFPA 13R, NFPA 13D. The *fire code official* shall approve any exempt locations for fire sprinkler coverage. Provide in all use groups S and F with a ceiling roof height of twenty-five (25) feet or greater with an Early Suppression Fast Response (ESFR) fire sprinkler system or a hydraulically calculated system for Class IV commodities with rack storage calculated to the greatest storage height. All fire sprinkler systems shall be supervised by an approved automatic fire alarm system directly connected to the Fire Districts dispatch center.*

The exception as specified in IFC 2021 Section 903.2 shall apply in addition to the following:

Exceptions:

1. Mobile portable storage buildings as determined by *fire code official*.
2. Group R3 homes of less than 5,000 square feet living space.
3. Mobile retail estate sales and constructions trailers utilized during the development of property when approved by the *fire code official*.

4. Occupancy Group S where fire area is less than 12,000 square feet, and ceiling roof height is less than twenty-five (25) feet. This exception shall not apply to Group S buildings that include bulk storage cloth, burlap and paper, books and paper in rolls or packs; cardboard and cardboard boxes; flammable/combustible liquids, furniture, tires, upholstery, mattresses which for the purpose of this ordinance is classified as Group H.
 - A. Further, this exception shall not apply to Group S when contents include the provision outlined in Chapter 12 of this Code as it pertains to Energy Systems, components associated with or storage of batteries as determined by the fire code official
5. Occupancy Group U buildings as an accessory building to other occupancy classifications and is under 12,000 square feet.

903.3.5.3 Age of Hydraulic Data

Insert as additional to the section:

Hydrant water flow data used for design of any sprinkler system shall be no more than one (1) year old.

903.3.8.6 Hydraulic Calculations Nameplate

Insert as additional to the section:

A hydraulic nameplate shall be attached to the riser for each hydraulically calculated area.

903.4 Sprinkler system supervision and alarms

All valves controlling the water supply for *automatic sprinkler systems*, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a *listed* fire alarm control unit.

Delete this section and insert the following for local jurisdiction:

Alarm, supervisory and trouble signals shall be distinctly different and shall be electrically supervised by a fire alarm system.

903.4.1 Monitoring

Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an *approved* supervising station or, where *approved by the fire code official*, shall sound an audible signal at a constantly attended location.

Includes exceptions, not be amended.

Add as additional section:

903.4.1.1 Reporting directly to the Fire District Communication Center

The *approved* method is defined as all fire alarms shall connect directly to the Fire Protection District Dispatch Center via a radio alarm monitoring system. The

method of connection shall be of a type compatible with monitoring system available at the Dispatch center and approved by the *fire code official*.

903.4.1.2 Method

Alarm, supervisory, and trouble signals shall be distinctly different and shall be automatically transmitted to Central Station or Remote Supervisory Stations by a two-way private radio alarm system complying with NFPA 72, which automatically retransmits trouble, supervisory and full fire alarm signals to the Fire District Dispatch center.

Section 903.4.2 Alarms

An approved device shall be a clear strobe located on the exterior of the building in an *approved* location, shall be connected to each *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. When the fire alarm system is installed, actuation of the *automatic sprinkler system* shall actuate the building fire alarm system.

Delete this section and insert the following for local jurisdiction:

Approved audible and visible appliances shall be connected to each automatic sprinkler system in accordance with this section. Sprinkler system 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.

Insert as additional section:

903.4.2.1 Exterior appliances. Visible appliances.

A red 75 cd, weather-proof strobe light and 10" bell shall be provided above the fire department connection. The strobe light shall be supervised by the fire alarm system and shall only operate upon water flow activation.

903.4.2.1.1 Audible appliances

An audible appliance supervised by the fire alarm system, 10 inch, 120VDC alarm bell, horn/strobe (clear) shall be provided above the fire department connection.

903.4.2.1.2 Interior appliances

Interior audible and visible alarms supervised by a fire alarm system shall be provided in accordance with Section 907.5 and subsections.

Insert as additional section:

903.4.2.2 Interior appliances

Interior and visible alarms supervised by a fire alarm system shall be provided in accordance with Section 907.5 and subsections.

Insert as additional section:

903.4.2.3 Inspector test valve accessibility

Fire sprinkler inspectors test valves shall be accessible at all times and located no more than 6 feet above the finished floor. On multiple riser systems test valves shall be marked as to which riser area it tests.

903.4.3 Floor control valves.

Approved supervised indicating control valves shall be provided at the point of connection to the riser on each floor in high-rise buildings.

Delete this section and insert the following for local jurisdiction:

Indicating control valves and water flow switches shall be provided at the point of connection to the riser on each floor in multiple story buildings.

903.4.3.1 Sprinkler control valves

Add as additional section:

All new and existing sprinkler control valves shall be equipped with electronic supervision (tamper switches) in accordance with NFPA 72. All new tamper switches installed shall have the capability to self-restore. All supervisory signals shall be transmitted directly to the Fire Protection District main dispatch Communication Center.

903.4.4 Additional Detection Features

Add as an additional section:

Where automatic sprinkler provide protection to an area with an approved flow switch interconnected to the fire alarm system, and is easily identifiable as to the location, additional automatic detectors are not required. When a building has numerous rooms protected by the zone sprinkler system, the *fire code official* may require additional smoke detectors for a more rapid means to identify the location of smoke or fire.

903.6.1 Interior alterations or remodeling

Add as an additional section:

Existing buildings or structures that are remodeled, and that meet any of the criteria listed below, shall provide fire protection as detailed in 903.2:

1. If alteration costs 50% or more of the reproduction cost of the building or structure, the entire building or structure shall comply with the requirements of the construction as defined in this code. The reproduction cost shall be determined by using the recognized standards of an authoritative technical organization. For the purposes of calculating percentages of reproduction cost, the cost of alteration shall be construed as the total actual combined cost of all alterations within any period of 30 months.
2. A 2-hour fire separation wall will be installed for a project that

results in an increase or decrease in the total number of tenant spaces within the building or structure.

3. A project that entails a change in Use Group for any part of the building.

903.6.2 Increasing existing gross floor area by 25% or more up to 50%

Add as an additional section

Fire protection for additions that increase the existing gross floor area of a building or structure by 25% shall provide fire protection for the entire building or structure as detailed in 903.2 or provide an Underwriter Laboratory (UL) listed two hour *approved fire wall* separation assembly that extends continuously from the foundation through the roof as defined in section 202 of the IFC, between the existing building and the new addition.

Insert as additional section:

903.7 Exterior Control Valve Room Access

Provide an outside access door to the sprinkler riser valve room and fire pump room.

903.8 Hydraulic Nameplate

Add as an additional section:

By each hydraulically calculated area, on each drawing, provide a copy of the hydraulic nameplate.

903.9 Fire pump test header

Add as an additional section:

Provide an outside test header on all fire pump installations. An OS&Y control valve shall be provided on all fire pump test headers.

903.10 Fire hose valves – Warehouse and/or storage Fire Areas

Add as an additional section:

In all warehouse storage areas exceeding 50,000 square feet, and where storage exceeds twelve (12) feet high, provide inside 2 ½" fire hose. Locate the valves at each door entrance to the warehouse and/or storage area. Provide additional 2 ½" fire hose valves so that no portion of the warehouse and/or storage area is more than 120' maximum travel distance to a fire hose valve. Show the location of all obstructions and/or racks on the drawing.

Fire hose valves system piping shall be:

1. A separate riser piping system.
2. The 2 ½" valves shall be supplied by a minimum of 4" with 2 ½" drops to each valve.

903.11 Hydraulic calculations

Add as an additional section:

Provide a minimum 5-psi minimum safety factor in the fire protection system hydraulic calculation. The system demand shall be 5-psi minimum below the seasonal low water flow test supply. The safety factor will allow for low pressures in the water supply. By each hydraulic calculated area, on each drawing, provide a copy of the hydraulic nameplate. This will make it easier to check the hydraulics of the sprinkler system for future building or storage changes.

904.13.2.1– Kitchen Exhaust Hood & Duct

Add as additional section

All new automatic fire extinguishing systems for commercial cooking systems installed after the effective date of this ordinance shall automatically transmit activation fire alarm signal to the Fire Protection District dispatch center over an approved fire alarm system.

904.13.2.2 – Hood and duct systems

All hood and duct extinguishing systems for commercial kitchen areas requiring such a system, shall be approved UL 300 system for the following:

1. New Construction
2. Remodeling rehab of existing systems
3. Appliance line changes including the installation of high efficiency/high recovery fryers

904.13.2.3 – Hood extinguishing agent

All existing commercial kitchen systems requiring a hood and duct system shall be required to have at least one, 1.5 gallon, type K extinguisher.

Section 905.2.1 General

Add as an additional section:

Standpipes for fire hose connections shall be supplied from a separate riser. Two and one half (2 ½) inch valves shall be supplied by a four (4) inch riser with two and one half (2 ½) inch drops to each valve.

Section 905.3 Required installations

Add the following paragraph to section 905.3:

All required standpipe systems shall be supplied by a separate riser. The supply riser shall be hydraulically designed to supply 2 ½" hose drops. The riser system shall be equipped with a separate control valve and flow switch. The standpipe shall be a 2 ½" and all locations shall be approved by the Code Official. All standpipe and sprinkler risers shall have separate control valves and flow switches per floor.

Section 905.3.1 Height.

Delete this section, excluding the exceptions, and insert the following:

Class III standpipe systems shall be installed throughout new constructed buildings more than two (2) stories in height or more than two (2) stories below the level of the fire district vehicle access so that all areas on those floors are within 120 feet of a standpipe. There shall be an approved fire district connection at grade and hose connections located at each floor level.

Exceptions 1 through 5 shall remain

Add as additional sections: 905.12 through 905.14

905.3.9 Fire Hose Valve Locations – Warehouse Storage

Add as an additional section:

In all warehouse storage areas exceeding 50,000 square feet, and where storage exceeds 12' high, provide inside 2½" fire hose valves. Locate the valves at each service door entrance to the warehouse and/or storage area. Provide additional 2½" fire hose valves so that no portion of the warehouse and/or storage area is more than 120' maximum travel distance to a fire hose valve. Show the location of all obstructions and/or racks on the drawing. The fire hose valves system piping shall be:

1. A separate riser piping system.
2. The 2½ " valves shall be supplied by a minimum of 4" with 2½ " drops to each valve.

905.9 Valve Supervision

Add as an additional sentence:

Valves controlling fire hose connections shall be the field adjustable type approved by the authority having jurisdiction.

905.13 Piping design

Add as an additional section:

The riser piping, supply piping and the water service piping shall be sized to maintain a residual pressure of at least 65 psi (448kPa) at the topmost outlet of each riser. The piping size shall be based on the capacity of the automatic water supply system or, where as automatic water supply is neither required nor provided to maintain the residual pressure of 65 psi, the pipe size shall be on a pressure of 150 psi available at the fire district connection.

Exception: One – and two – family dwellings

905.14 Riser sizing

Add as an additional section:

The riser size shall be based on the hydraulic calculations for a minimum flow of 500 gallons per (gpm) (378 L/min.).

Exceptions:

1. In buildings where limited area sprinkler systems are supplied with water from a common standpipe riser, the riser shall be sized to satisfy total demand.
2. For occupancies Use Group B, I, R1, or R2 in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3, each riser shall be sized for a minimum flow of 250 gpm (945 L/min.).
3. Risers that are sized in accordance with the pipe schedule requirements of NFPA 14 listed in Chapter 35 are not subject to this requirement.

905.15 System pipe sizing

Add as an additional section:

The system piping, including the horizontal or common feeder lines, shall be sized for a minimum flow of 500 gpm (1892 L/min.). Where more than one standpipe riser is required or provided, all common system piping shall be sized for a minimum flow of 500 gpm (1892 L/min.) for the first riser plus 250 gpm (945 L/min.) for each additional riser, and the total shall not be required to exceed 1,250 gpm (4731 L/min.).

Exceptions:

1. In buildings where limited area sprinkler systems are supplied with water from a common standpipe riser, the supply piping shall be sized for a minimum flow of 500 gpm (1892 L/min.) plus the sprinkler demand for first riser, plus 250 gpm (945 L/min.) for each additional riser, and the total shall be required to exceed 1,250 gpm (4731 L/min.).
2. For occupancies in Use Group B, I, R-1, or R2 in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3, all common supply piping shall be sized for a minimum flow of 250 gpm (945 L/min.) for the first riser plus 250 gpm (945 L/min.) for each additional riser, and the total shall not be required to exceed 750 gpm (2838 L/min.).

907.1.4 Exceptions for Small Fire Alarm Systems

Add as an additional section:

All fire alarm systems shall be of the addressable type.

Section 907.2 Where required-new buildings and structures.

An approved fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.23 and provide occupant notification in accordance with Section 907.5 unless other requirements are provided by another section of this code.

Not fewer than one manual fire alarm box shall be provided in an *approved* location to initiate fire alarm signal or fire alarm system employing automatic fire detectors or water flow detection devices. Where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed.

Amend as follows:

An approved fire alarm system shall be installed in accordance with the provisions of this code and NFPA 72 in all new occupancy classifications. The fire alarm shall be installed in accordance with the provisions of this code and NFPA 72 and shall be provided as follows:

1. A complete fire alarm system consisting of smoke detection, heat detection, pull stations and audio/visual notification devices shall be installed in all use groups.
2. All fire alarm systems shall be directly connected to the fire district dispatch center by system that is compatible to be received in the center in accordance with this ordinance.
3. Fire alarm control panels shall be located in the fire sprinkler control room, where applicable, or where approved by the *fire code official*.
4. Fire alarm control panels shall be of the addressable type.
5. All new nonresidential multiple tenant buildings shall be "ring by tenant" activated by the fire, a fire sprinkler system flow switch for the tenant space or automatic fire detection and shall include a weatherproof clear outside strobe over the entrance to each tenant space as approved by the fire code official. All outside strobes shall be seventy-five (75) candela minimum.
6. Exception:
 - a. Group R –single and multi-family dwellings less than 5,000 square feet of living space; attached & detached, shall not be fire suppressed if three stories or less; or structures covered under the IBC.
 - b. Occupancy Group U buildings as an accessory building to other occupancy classifications and is under 12,000 square feet.

907.2 Where required-new buildings and structures

Add as an additional paragraph:

Buildings and structures not provided throughout with an automatic sprinkler

system. A fire alarm system utilizing automatic fire detectors and manual fire alarm devices shall be provided throughout all buildings not provided with an automatic sprinkler system complying with NFPA 13 or NFPA 13R.

907.2.11 Single and multiple-station smoke alarms

Add as an additional paragraph:

Heat detectors shall be added in attached garages and shall be interconnected by hardwire to single and multiple-station smoke alarms.

907.2.9 Group R-2

Add as an additional paragraph:

Heat detectors shall be added in attached garages and shall be interconnected by hardwire to smoke detectors.

907.4.2.5 Protective covers

Revise this section as follows:

Listed manual fire alarm box protective covers *shall be provided for all installed manual fire alarm boxes* to prevent malicious false alarms or to provide the manual fire alarm box with protection from physical damage.

907.5 Occupant notification systems

Revise this section as follows:

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. *The activation of any of the following devices shall result in occupant notification:*

1. Automatic fire detectors.
2. Automatic sprinkler system waterflow devices.
3. Manual fire alarm boxes.
4. Automatic fire-extinguishing systems *when installed in buildings or structures that are provided with occupant notification.*

907.5.2.3.4 Multi-tenant Group M.

Add as an additional section:

In single story, multi-tenant Group M buildings shall be "ring by tenant" activated by **a fire sprinkler system flow switch for each space, or manual and automatic fire detection** and shall include a weatherproof clear outside strobe over the entrance to each tenant space as directed by the fire department. All outside strobes shall be 75 candelas minimum.

Section 912.2.1 Visible location

Insert the following:

An approved sign mounted in a location specified by the *fire code official* shall be installed and maintained near the fire district connection. Such sign shall have the letters "FDC" at least 6 inches high to indicate the location. All such signs shall be subject to the approval of the *fire code official*

912.3 Fire hose threads

Revise this section as follows:

All fire department connections shall be as specified by the responsible fire protection district.

SECTION 913- FIRE PUMPS

Section 913.4.1 Test outlet valve supervision

Fire pump test outlet valve shall be supervised in the closed position

Insert the following:

1. Provide an OS&Y control valve on all fire pump test headers.
2. Provide an outside test header on all fire pump installations.

913.4.2 Fire pump test header

Add as an additional section:

1. Add-provide an OS&Y control valve on all fire pump test headers.
2. Provide an outside test header on fire pump installations.

1008.3.3 Rooms and Spaces

Add as a new number 6:

All rooms containing the building fire sprinkler and standpipe riser(s) and fire alarm control panel(s).

Add as additional sections:

1207.6.6 Thermal Runaway Detection System.

1207.6.6.1 When required. A thermal runaway detection system shall be provided for lithium-ion battery storage systems with an energy capacity greater than 20 kWh.

1207.6.6.2 Approvals. Devices designed to detect the thermal runaway of a lithium-ion cell containing a flammable or combustible liquid shall be listed in accordance with UL 2075, Gas and Vapor Detectors and Sensors.

1207.6.6.3 Performance. The thermal runaway detector shall activate upon detection of gas vapors produced by flammable or combustible liquid in a lithium-ion cell at the start of a thermal runaway event. Upon detection of a thermal runaway event the detection system shall shutdown the ESS rack releasing flammable or combustible gas vapors and transmit a supervisory fire alarm signal. Detection of a thermal runaway event shall activate the mechanical ventilation when it is provided as method of explosion control.

Thermal runaway detectors shall operate independently of the ESS Energy Storage Management System.

1207.6.6.4 Annunciation. The thermal runaway detector shall be capable of identifying the ESS rack where thermal runaway occurred.

Chapter 80

Revise all listed NFPA standards in IBC Chapter 35 and IFC Chapter 80 to include the latest edition available as of the effective date of the adoption of the 2021 IBC and IFC.

