

**VILLAGE OF LIBERTYVILLE**  
**Municipal Code Chapter 6**  
**Buildings and Technical Regulations**

**2018 International**  
**Fire Code**  
**as amended**

**Adopted 03/12/2019 as part of Ord. 19-O-17**  
**Revised 04/28/2020 as part of Ord. 20-O-31**

**Effective 05/01/2019**  
**Effective 04/29/2020**

**ARTICLE V. FIRE SAFETY STANDARDS\***

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\*Cross reference(s)--Fire prevention and protection, Ch. 10.

**State law reference(s)**--Five safety regulations authorized, 65 ILCS 5/11-8-1 et seq.; state fire prevention regulations, 425 ILCS.

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**DIVISION 1. GENERALLY**

**Secs. 6-361--6-380. Reserved.**

**DIVISION 2. ICC INTERNATIONAL FIRE CODE\***

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\*Cross reference(s)--Fire prevention and protection, Ch. 10.

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**Sec. 6-381. Adopted.**

That there is hereby adopted, for the purpose of prescribing regulations governing conditions hazardous to life and property from fire or explosion, a certain code known as the 2018 International Fire Code, excluding ICC duplicate sections indicated with [B], [M], [PM], etc., and the whole thereof, subject to the amendments in this division. Three (3) copies of the aforementioned code have been made and are filed in the office of the village clerk as prescribed by law, and the same are adopted and incorporated as fully as if set out at length herein, and from the date on which the ordinance from which this division is derived shall take effect, the provisions thereof as amended in this division shall be controlling within the limits of the Village of Libertyville. If there is any conflict between the language of this division and the language of the aforesaid code, the language of this division shall prevail over the language of the aforementioned code. Here in after, all NFPA standards referenced in chapter 80, and appendices A-J shall be adopted by this code.

(Ord. No. 90-0-27, ' I(A), 7-10-90)

**State law reference(s)**--Adoption by reference, 65 ILCS 5/1-3-1 et seq., 50 ILCS 220/1 et seq.

**Cross reference(s)**--Definitions and rules of construction generally, ' 1-2.

**Sec. 6-382. Bureau of fire prevention.**

- (a) The International Fire Code shall be enforced by the Bureau of Fire Prevention, which is hereby established and which shall be operated under the supervision of the Chief of the Fire Department.

- (b) The Director of Fire Prevention Bureau shall be appointed by the Chief of the Fire Department of the village and shall serve at his pleasure.
- (c) The Chief of the Fire Department may detail such members of the Fire Department as inspectors as shall from time to time be necessary. The Chief of the Fire Department may recommend to the Village the employment of technical inspectors who are not sworn members of the Fire Department. When authorized by the Village Board, such inspectors shall be hired pursuant to established village personnel policies and procedures.

(Ord. No. 90-0-27, ' II, 7-10-90)

**Sec. 6-383. Amendments.**

The International Fire Code, as adopted in section 6-381, referred to in this section as "code," is amended as follows:

**Sec. 101.1 Title.** Substitute “[Name of Jurisdiction] with “Village of Libertyville.”

**Sec. 101.6 Generally.** Change all references of "The International Existing Building Code" to "The Municipal Building Code."

**Sec. 102.3 Change of use of occupancy.** Delete the exception.

**Sec. 104 General Authority and responsibility.** Add the following:

**Sec. 104.6.5 Records.** All records are to be obtained by following the Village of Libertyville Freedom of Information Act Policy.

**Sec. 104.7.1 Material and Equipment Reuse.** Add to the end of the paragraph; Proper documentation of repairs/reconditioning of the equipment shall be given to the Libertyville Fire Department upon request.

**Sec. 104.10.2 Reporting Hazardous Locations.** Any person discovering the evidence of spontaneous heating or other abnormal heating of any kind in any building, marine vessel, appliance, apparatus, tank, or open stack or pile, or any person upon discovering or being apprised of an uncontrolled hazardous gas leak or hazardous material or flammable and/or combustible liquid spill, shall immediately notify the Libertyville Fire Department.

**Sec. 105 Permits.** Add the following:

**Sec. 105.1.2.1 Required Construction Permits and Certificates of Fitness.** Add to the end of the paragraph, AWhen a Certificate of Fitness is required by this jurisdiction for performance of activities related to fire safety, the Director of the Fire Prevention Bureau shall be responsible for its issuance.

- (a) All applications for a Certificate of Fitness shall be filed with the Fire Prevention Bureau

on forms provided by that office.

- (b) Every person applying for a Certificate of Fitness shall furnish satisfactory proof to the Director of Fire Prevention that he/she is familiar with the materials, formulas, tools, techniques, standards, laws, ordinances, recognized good practices, safety precautions, and manufacturers' recommendations pertaining to the particular system, materials, devices, or operations he will be involved with, and for which the Certificate of Fitness is issued. They shall further prove that their company is professionally competent to perform any and all actions necessary and incidental to the operation for which the Certificate of Fitness is issued, and shall provide insurance and any applicable license.
- (c) The Director of the Fire Prevention Bureau shall investigate every application for a Certificate of Fitness. The investigation shall include an examination of the applicant as to his experience and training in the field of the Certificate of Fitness for which he has applied. The examination may include a practical test. When the Director of Fire Prevention determines that the applicant for the Certificate of Fitness conforms to all of the requirements of this Code, he shall issue the Certificate of Fitness.
- (d) When the Director of Fire Prevention determines that an applicant is not fit to receive the Certificate of Fitness because of his inability to comply with the provisions of this Code, he shall refuse to issue the Certificate of Fitness. If the refusal is based upon the applicant's inability to pass a written examination which is given to determine competency, the applicant may not apply again for the Certificate of Fitness within a ninety (90) day period following the examination.
- (e) When the Director of the Fire Prevention Bureau determines that an individual is not fit to hold a Certificate of Fitness because of his inability to comply with the provisions of the Code, he shall inform that individual of his right to a hearing prior to the revocation of his Certificate of Fitness. If the Certificate of Fitness holder desires a hearing, he shall notify the Chief of the Fire Department in writing within ten (10) working days of his receipt of the revocation notice from the Chief. The Hearing Board shall issue a written recommendation to the Chief regarding its findings within fifteen (15) days of the hearing, and the Chief shall issue his decision within a reasonable time thereafter, and the said decision shall be final. Failure to show just cause shall result in the revocation of the Certificate of Fitness by the Chief of the Fire Department. The Hearing Board shall be comprised of the Fire Chief, and the Director of the Fire Prevention Bureau.
- (f) Certificates of Fitness shall not be transferable.
- (g) Certificates of Fitness shall be issued for the period of time shown on the face of the Certificate of Fitness as determined by the Director of Fire Prevention, but such period of time shall not exceed two (2) years.
- (h) Applications for renewal of a Certificate of Fitness shall be filed in the same manner as an application for an original Certificate. Each such application shall be accompanied by applicable fees. The granting of a renewal of a Certificate of Fitness shall be

accomplished in the same manner as for an original Certificate of Fitness.

- (i) The Director of Fire Prevention is authorized upon application therefore, to issue Certificates of Fitness that are restricted to one or more activities, systems, items, devices or to a particular premises.
- (i) Each person holding a Certificate of Fitness shall notify the Director of Fire Prevention in writing of any change in his business, residential, or other notification address within ten (10) days after such change. Failure on the part of a person to give such notification shall constitute grounds for revocation of said Certificate of Fitness.
- (j) A Certificate of Fitness issued by the Director of Fire Prevention shall be in the form of a certificate that can be framed. Said certificate shall contain the following information:
  - (1) Any person to whom a Certificate of Fitness has been granted in conformance with this Code shall upon request, produce and show proper identification and his Certificate of Fitness to anyone for whom he seeks to render his services or to the Director of Fire Prevention.
  - (2) The purpose for which the Certificate of Fitness has been issued.
  - (3) The date the Certificate of Fitness is issued and the date of expiration.
  - (4) Other information as may be necessary to properly identify the person to whom the Certificate of Fitness is issued.
  - (5) The name and signature of the Director of the Fire Prevention who issued the Certificate of Fitness, or his designee=s name and rank or title.
  - (6) Printed thereon, in bold type, shall be the following: “THIS CERTIFICATE OF FITNESS DOES NOT RECOMMEND THE BEARER FOR EMPLOYMENT NOR ASSUME RESPONSIBILITY OR LIABILITY FOR THE BEARERS PERFORMANCE.”
- (k) A Certificate of Fitness or permit shall not be issued until the designated fees have been paid.

**Sec. 105.1.2.3 Certificate of Fitness Fees.** Certificate of Fitness fees are as follows:

The use of any explosive material	\$110.00
Installation, removal, or repair of aboveground or underground storage tanks	\$110.00
Fire alarm or fire communications systems	No Fee
Fire pumps	\$110.00

Fixed fire suppression systems/ hood and duct systems	\$110.00
Portable fire extinguishers	\$110.00
Hazardous materials storage or use	\$110.00

**Sec.105.3.9 Temporary Permits.** When a temporary hazardous situation is anticipated or discovered for conditions not otherwise regulated by this Code, the Fire Code Official is authorized based on applicable data, to issue a temporary permit with appropriate conditions deemed necessary for the safety, health, and welfare of the public.

**Sec.105.3.10 Permits (General).** Any permits issued under this Code, shall not take the place of any other license or permit required by the Code laws or permit required by the Code laws of the jurisdiction.

**Sec. 105.4.7 Plan Review and Inspection Services.** A fee of 10 cents (\$0.10) per square foot shall be charged for reviewing all plans pertaining to tanks, fire alarms, fixed fire suppression systems, and hood and duct fire suppression systems. All 13D residential systems shall be charged \$150.00 for all single family structures. The minimum fee shall be two hundred dollars (\$200.00). Approved plans will not be returned until the fee is paid. All blueprints or plans of any aforementioned systems that are required by the applicable County or local Municipal Fire Code and its amendments, current Building, Plumbing, and/or Mechanical Codes, shall be submitted to the Fire Prevention Bureau for review and approval. Each applicant shall pay the following plan review fees for re-review and site inspection by the Libertyville Fire Prevention Bureau. Plan review fees shall include re-reviews along with the preliminary site visits.

Site Plan - New Development	\$150.00
Life Safety Review -	
New Construction and/or Large Scale Remodel - greater than 15,000 sq. ft.	\$150.00
Small Scale Tenant Finish or Remodel - less than 15,000 sq. ft.	\$100.00

NOTE: In addition to the review fees listed, the applicant shall pay the actual costs and expenses incurred by the Libertyville Fire Prevention Bureau for expenses due to fees charged by consultants or outside contractors.

**Sec. 105.6 Required Operational Permits.** Add the following sentence to the end of the paragraph, ARequired operational permits will be charged a fee of fifty dollars (\$50.00) per year.@

**Sec. 106.4.1 Expired permits:** when an issued permit for fire life safety/life safety systems has expired, the Fire Code Official shall have the authority to extend the permit for two (2) three (3) month periods at no cost to the contractor. Following the first two (2) extensions, a permit renewal shall be granted for a period to last no longer than 12 months. The fee associated with this renewal

shall be a cost not to exceed 25% of the original permit fee.

**Sec. 107 Inspections.** Add the following:

**Sec. 107.5 Inspection and Test Fees.** Fees for occupancy inspections and tests of new fire alarm, fire suppression, and/or tanks installations shall be conducted when the system is completed. No charge shall be imposed for inspections and tests conducted on the first visit. Visits for any required inspections or tests which cannot be conducted due to the failure of the owner or installing contractor to properly and fully install the system to an inspection ready state, shall be subject to the following charges:

First visit	No fee
Second visit	\$75.00
Third visit	\$100.00

**Sec. 107 Board of Appeals.** Remove the section in the Code book and replace with the following:

**Sec. 109.1 Board of Appeals Established.** In order to hear and decide appeals of orders, decisions or determinations made by the Fire Code Official relative to the application and interpretation of this Code, there shall be a board of appeals consisting of members who are qualified by experience and training to pass on matters pertaining to this Code. The Board shall consist of the following members:

- (1) The Chief of the Fire Department.
- (2) The Building Commissioner.
- (3) The Director of the Fire Prevention Bureau.

The Board shall adopt rules of procedures for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the Code Official.

**Sec. 113.3 Work Commencing Before Permit Issuance.** After the words “in addition to,” add the words “and “equal to.”

**Sec. 202 General Definitions.** Remove the definition of the Fire Code Official in the code book and add the following:

*Municipality or (name of jurisdiction)* shall be held to mean the AVillage of Libertyville.@

*Corporation counsel* shall be held to mean the AAttorney@ for the Village of Libertyville.

*Fire Code official or authority having jurisdiction* shall be held to mean the AFire Chief or the Director of the Fire Prevention Bureau@ of the Libertyville Fire Department.

**Sec. 301 General.** Add the following:

**Sec. 301.3 Items Not Specifically Covered.** Whenever or wherever a condition is found in any building, lot, or premises, that in the opinion of the Director of Fire Prevention is not specifically covered by the provisions of this Chapter, but that requires correction or removal for the protection of the occupants or the public, the Director of the Fire Prevention Bureau shall order such conditions be corrected or removed and the owner or occupant of such buildings, lots, or premises shall comply with such orders.

**Sec. 304 Combustible Waste Materials.** Add the following:

**Sec. 304.1.4 Sweeping Compounds.** Only approved water solutions or detergent floor sweeping compounds, and grease absorbents shall be used for cleaning floors. The use of sawdust or similar combustible or flammable liquids spilled from machinery or processed on any floor is prohibited.

**Sec. 305 Ignition Sources.** Add the following:

**Sec. 305. 6 Portable Heaters.** Portable heaters shall be designed and located so that they cannot be easily overturned. The Director of the Fire Prevention Bureau may prohibit the use of portable heaters in occupancies or situations in which such use or operation would present an undue danger to the life or property of others.

**Sec. 305. 7 Heating and Lighting Apparatus.** Proper clearance (a minimum of 36 inches) shall be maintained between lighting and heat producing equipment and combustibles so that continuous operation at full capacity will not increase the temperature of the surrounding combustibles to their flash point or ignition temperature.

**Sec. 307 Open Burning, Recreational Fires, and Portable Outdoor Fireplaces.** Add the following:

**Sec. 307.1.1 Prohibited Open Burning.** Add a second exception to read as follows:

Exception 2. When sustained winds are between 5-15 mph as indicated at the website [www.weather.com](http://www.weather.com) for current weather conditions in the 60048 location code. Other considerations include but are not limited to wind gust speed, outdoor relative humidity and vegetation moisture status.

**Sec. 307.2.1 Authorization.** Add the following to the paragraph “A copy of the State of Illinois EPA permit and map of the prescribed burn area shall be presented when applying for an open burn permit.

**Sec. 307.4 Location.** Add the following to the end of Exception 1: Approved portable fire pits/places or firepits built into the ground shall be considered as approved containers.

**Sec. 307.6 Spread of Fire.** No person shall knowingly permit any fire to spread so as to endanger the life or property of another or use or operate any device which may be a source of ignition,

unless proper removal of flammable material surrounding the operation is accomplished, or such other reasonable precautions are taken to ensure against the starting or spreading of unfriendly fires.

**Sec. 308.3 Group A Occupancies.** In the first sentence of Exception 1, add the following after the word “occupants”: “ the precautions shall be submitted in writing to the Fire Code Official for approval prior to the event.”.

**Sec. 315 Miscellaneous Combustible General Storage.** Revise the following:

**Sec. 315.3 Storage in Buildings.** Add at the end of the paragraph the following: “Minimum clearance from heaters or heating devices shall be 36 inches.”

**Sec. 315.3.3 Electrical Equipment Rooms.** No storage of any type, except that related to the operation of the fire equipment, shall be permitted in the fire command center or rooms containing fire equipment.

**Sec. 315.4 Outside Storage.** Add to the end of the paragraph: ANor shall outdoor storage be closer than fifteen (15) feet to any structure.@

**Sec. 319.4.1 Fire protection for cooking equipment.** Add the following to the end of the paragraph: All automatic fire extinguishing systems shall have been tested and have a current service tag attached to the equipment.

**Sec. 319.4.2 Fire Extinguisher.** Add the following to the end of the paragraph: Fire extinguishers shall have a current service tag attached to the extinguisher.

**Sec. 503.2.1 Dimensions.** In the first sentence change “20 feet” to 24 feet”

**Sec. 503.2.3 Surface.** At the end of the paragraph add the following sentence; The minimum weight the road shall support is 80,000 lbs”

**Sec. 503.2.4 Turning Radius.** At the end of the paragraph add the following sentence; “The minimum turning radius shall be 40’ unless otherwise stated by the Fire Code Official.”

**Sec. 503.2.8 Angles of Approach and Departure.** At the end of the paragraph add the following sentence; The angle shall not exceed 5 degrees.”

**Sec. 506.1 Where Required (Key Boxes).** Add the following to end of the paragraph:

- (1) Approval: The Libertyville Fire Department, Fire Prevention Bureau shall approve all lock boxes and box sizes. A Knox vault box shall be required if there are more than 4 keys for the building.
- (2) Where Required: All occupancies having automatic fire alarm systems

shall have a Knox key lock box installed in a location approved by the Libertyville Fire Department, Fire Prevention Bureau. All occupancies with locked gates shall have a box or a Knox key system for the gate.

(3) Supervision: Where required by the Libertyville Fire Department, the key lock box shall be electronically supervised and connected to the fire alarm system.

(4) Contents: The key lock box shall contain all keys for the locked areas of the building as required by the Libertyville Fire Department. Said keys shall include, but not be limited to, all areas of the building, the automatic fire alarm system, and a manual pull box resetting tool.

**Sec. 507 Fire Protection Water Supplies.** Delete Section 507.5.1.1 in its entirety and replace with the following:

***Sec. 507.5.1.1 Hydrant for Standpipe and Sprinkler Systems.*** Buildings equipped with a standpipe system installed in accordance with Section 905 and/or a sprinkler system installed in accordance with Section 903, shall have a fire hydrant within 150 feet of the Fire Department connections.

**Sec. 509 Fire protection and utility identification and access.**

***Sec 509.1 Identification.*** Add the following to the end of the paragraph: The signs shall be in contrasting color to the door and the letters shall be a minimum of 4" high and a ½" wide. The signs shall read "Sprinkler Riser Room" and/or F.A.C.P.

***Sec. 509.2 Equipment Access.*** Add the following to the end of the paragraph: there shall be no storage within 36" of all sides of the fire protection equipment.

**Sec. 604 Electrical equipment, wiring and hazards.**

***Sec. 604.3 Working space and clearance.*** Change the working space of not less than 30" in width to not less than 36" in width.

***Sec. 604.5.1 Power supply.*** Delete the following: "except for approved multi plug power strip, shall serve only one portable appliance.

***Sec. 604.10 Portable, electric space heaters.*** Add new Section 604.10.6. Add Section 604.10.7 as follows:

***Sec. 604.10.6 Tip over protection.*** All approved portable space heaters shall have built in tip over protection.

***Sec. 604.10.7 Prohibited heaters.*** Portable space heaters that have exposed heating elements shall be prohibited.

**Sec. 606 Elevator Operation, Maintenance, and Fire Service Keys.** Add the following:

**Sec. 606.9 Emergency Telephone Lines.** All emergency telephone lines from the elevator to the Libertyville Dispatch Center shall be transmitted over POTS lines and not VOIP lines.

**Sec. 606.10 Elevator Car Requirements.** Elevator cars are to accommodate the ambulance stretcher. At least one elevator shall be of such a size and arrangement to be accommodate a 24 inch x 84 inch ambulance stretcher in the horizontal, open position and shall be identified by the international symbol for emergency medical services (star of life) The symbol shall not be less than 3 inches high and shall be placed inside of both sides of the hoist way doorframe. The cab size is to be a minimum 5'-5" x 6'-8" clear platform and a minimum 3500 lb capacity with a 42" side slide door.

**Sec. 607 Commercial Kitchen Hoods.** Add the following:

**Sec. 607.2.1 Where Required.** Each existing or new required commercial or other occupancy kitchen exhaust hood and duct system shall be protected with an approved wet chemical fire suppression system installed and maintained per NFPA 17A, and the UL 300 Standard. Every required automatic fire suppression system, when activated, shall transmit a fire alarm signal to the Libertyville Fire Communications Center via an approved fire alarm system, and making use of the Village radio system.

**Sec. 806 Decorative Vegetation in New and Existing Buildings.** Delete the following sections in their entirety: Sec. 806.1 through Sec.806.1.3, and replace with the following:

**Sec. 806.1 Natural Cut Trees.** Natural cut trees shall not be allowed in any occupancy, except single family homes.

**Secs. 806.2 through 806.4** These sections shall remain as is.

**Sec. 901. General.** Add the following:

**Sec. 901.4.6.4 Lighting:** add the following at the end of the paragraph: Each sprinkler riser and/or fire pump room shall be provided with emergency lighting facing the sprinkler risers and fire pump.

**Sec. 901.4.7 Fire Protection Control Rooms.** The Fire Prevention Bureau shall approve the location of the sprinkler riser room and the fire alarm control panel. The fire protection equipment shall be located on a street or parking lot and shall have a separate exterior entrance door to the room. All related fire protection equipment shall be located within this room, unless otherwise approved by the Fire Code Official.

**Sec. 901.4.8 Zoning of Fire Protection Systems.** Each floor shall be zoned separately. If the floor area exceeds 10,000 square feet, then additional zoning may need to be provided. The length of any zone shall not exceed 100 feet in any direction.

Exception 1: When in the opinion of the Fire Prevention Bureau, the building configuration is such that it does not interfere with proper fire suppression intervention, and additional zoning is therefore not necessary, then the Director of the Fire Prevention Bureau may waive the above requirements.

**Sec. 901.6.3.2 Record Maintenance.** Any company performing system inspections, testing or maintenance on required or non-required fire protection systems shall submit the report of said inspection, testing or maintenance to a third party reporting company approved by the Libertyville Fire Department.

**Sec. 903. Automatic Sprinkler Systems.** Revise the following:

**Sec. 903.1 General.** Add the following to the paragraph: Aand the Village of Libertyville Municipal Code Section 6 Automatic Fire Sprinkler Systems. The Village of Libertyville Sprinkler Ordinance shall supersede any conflicting area of Section 903.@

**Sec. 903.2 Where required.** Delete this section and insert the following:

Approved automatic sprinkler systems in new buildings and structures shall be provided in all Use Groups described in this Code. Automatic sprinkler systems must be installed in accordance with applicable NFPA standards, manufacturer's recommendations, UL listings, and good fire safety procedures throughout the entire building. Automatic sprinkler systems must be maintained in full operating condition at all times. Automatic sprinkler systems shall be provided in all new residential Use Groups including town homes/multi-family dwellings and one and two family dwellings which are adopted by this Code. All new single family dwellings shall have automatic fire sprinklers installed throughout per NFPA 13R or 13D. All new town homes shall have automatic fire sprinklers installed throughout per NFPA 13R or 13D. All new attached garages shall have automatic sprinklers installed, where feasible. Dry sidewall or dry pendant sprinklers should be used.

**Sec. 903.2.6 Group I.** Delete exception 2.

**Sec. 903.2.9.2 Bulk Storage of Tires.** In the first sentence, after “20,000 cubic feet (566 m<sup>3</sup>)” add the following phrase, “or where the Fire Code Official deems necessary,”

**Sec. 903.3.1.1.1 Exempt Locations.** Delete item numbers 3 and 4 from this section.

**Sec. 903.3.7 Fire Department Connections.** Add the following to the paragraph, AThe sprinkler system demand may require a 5 inch Storz connection with a removable 2 ½” x 2 ½” x 5” Storz adapter Siamese connection. The requirement shall be if the system demand is 1,000 gpm or more, then the 5” connection shall be required.”

**Sec. 903.4.2 Alarms.** Delete this section and replace with the following:

**Sec 903.4.2 Notification Devices.** Each sprinkler or standpipe riser shall be equipped with a 24-

volt dc (V.D.C.) white strobe light powered from the fire alarm system batteries and shall be activated by the flow switch. Each riser room shall have a 24 V.D.C. interior water flow bell and this bell shall be activated by the water flow switch. There shall also be a 24V.D.C. white strobe light and a 24 V.D.C. bell mounted on the exterior of the building over the fire department connection. These shall activate only upon water flow

**Sec. 903.4.3 Floor control valves.** Delete this section and replace with the following:

**Sec. 903.4.3 Sprinkler Control Valves.** All new and existing sprinkler control valves shall be equipped with electronic supervision (tamper switches) in accordance with NFPA 72. Floor control valves shall be required in buildings that have one or more floors above or below the ground level. All supervisory signals shall be transmitted to the Libertyville Communications Center.

**Sec. 903.4.4 Multiple Occupant Buildings.** A building having multiple occupancies shall have separate zoning for each occupancy space or floor. Each occupant or floor where practical shall have an exterior flashing strobe light red in color in an approved location, the strobe light shall be connected with the fire alarm system and shall be activated by a water flow or smoke condition in the occupant space. If the building or space cannot be separated by a flow switch, then a complete smoke detector system shall be installed and connected to an addressable fire alarm panel. All signals shall be transmitted to the Village of Libertyville Communications Center.

**Sec. 904.13.2 Domestic Cooking System Alarm.** Any and all domestic cooking systems, when activated shall transmit a fire alarm to the Libertyville Dispatch Center and activate audible and visual alarms throughout the facility.

**Sec. 905 Standpipe Systems.** Revise the following:

**Sec. 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 1/2 inch hose drops. The riser system shall be equipped with a separate control valve and flow switch. The standpipe shall be a 2 1/2 inch gated connection with a 1 1/2 inch reducer, and all locations shall be approved by the Fire Prevention Bureau. All standpipe and sprinkler risers shall have separate control valves and flow switches per floor.”

**Sec. 905.3.1 Height.** In the paragraph, change “Class III” to “Class I”; Revise the following: delete condition 1. Revise conditions 2 & 3 to read as follows: “30 feet or more above the lowest level of fire department vehicle access”; and “30 feet or more below the highest level of fire department vehicle access”

**Sec. 906 Portable Fire Extinguishers.** Revise the following:

**Sec. 906.3 Size and Distribution.** Add to the end of the paragraph. The minimum size ABC dry chemical fire extinguisher permitted shall be 10 pound (4A:40B:C) unless approved otherwise by the Code Official. Fire extinguishers shall have 3 dimensional signs mounted above them approximately 80 inches A.F.F. A normal flat wall sign may be substituted for the 3D with the approval of the Fire Code Official. In warehouse settings, the Fire Code Official may require any

columns that contain a fire extinguisher have 24” near the top painted red ~~All new and existing extinguishers shall also have current service tags.~~

**Sec. 907 Fire Alarm and Detection Systems.** Revise the following:

**Sec.907.1.3 Equipment.** Add the following: All fire alarm control panels shall be addressable and shall be capable of having the audio signal silenced without resetting the fire alarm control panel. All fire alarm control panels shall have an approved method of placing the system in a trouble mode at the location of the alarm panel.

**Sec. 907.1.3.1 Equipment.** All conventional fire alarm panels that are upgraded to an addressable panel, and addressable panels replaced with the like shall require the installation of pull stations and A.D.A. compliant audio visual devices throughout the building. The addition of smoke detection throughout the building may be required per the Fire Code Official. These devices shall be installed per NFPA 72 and the State of Illinois Accessibility Code. All battery calculations for alarm panels shall be for 60 hours, not 24 hours.

**Sec. 907.2 Where Required- New and existing buildings and structures.** Add the following to the first paragraph, ~~All buildings that are equipped with a required alarm system shall be provided with a manual fire alarm system, including pull stations, and A.D.A. compliant audio visual devices. These devices shall be installed per N.F.P.A. 72, and the State of Illinois Accessibility Code.~~

**Sec. 907.2.1 through 907.2.9.1** Delete the exceptions for Groups A, B, E, F, I, I-1 I-2, M, R-1, and R-2.

**Sec. 907.2.10 Single and Multiple Station Smoke Alarms.** Add the following wording after (72), “and per the current State of Illinois Smoke Detector Act.”

**Sec. 907.3.1 Duct Smoke Detectors.** After the end of the second sentence, add the following sentence; “All duct smoke detectors shall transmit a full fire alarm upon activation.”

**Sec.907.5.2.3.1.1 Public and common areas.** Add the following: In some cases, the Libertyville Fire Department may require audible alarm notification devices in place of visible notification devices in public or common areas such as rest rooms.

**Sec. 907.6.3 Initiating Device Identification.** Delete the exceptions.

**Sec. 907.6.6 Monitoring.** Delete the wording and replace with, “Where required, all fire alarms shall transmit to the Libertyville Communications Center and all signals shall be transmitted via the Village of Libertyville A.E.S. radio system.”

**Sec. 907.8.5.1 False Alarms.** No person shall deliberately or maliciously turn in an alarm of fire when in fact that person knows that no fire exists. No person shall activate any installed fire warning system or any fixed fire extinguishing system for purposes other than emergency, maintenance, drills, or prescribed testing.

**Sec. 907.8.5.2 Fire Alarm Panel Keys.** Add this section. All fire alarm control panels shall have their keys placed inside the building's Knox Box. At no time, shall the general public have access to silence or reset an activated alarm. Panels shall remain locked at all times. This shall apply to all existing and new fire alarm panels.

**Sec. 912 Fire Department connections.** Add the following Section:

**Sec. 912.2.3 Newly Constructed Buildings.** FDC signs may also be required on newly constructed buildings as required by the code official. The signs shall read "FDC" and have letters that are at least 6" high and words with letters at least 2" high or an arrow to indicate the location. Signs shall be subject to approve of the code official.

**Sec. 913 Fire Pumps.**

**Sec. 913.4 Valve Supervision.** Delete methods 1 through 4, and replace with the following, A Valve supervision will transmit a supervisory alarm to the Libertyville Communications Center by an electronic tamper switch.©

**Sec. 914 Fire protection based on special detailed requirements of use and occupancy.** Revise the subsections as follows:

**Sec. 914.7.1 Automatic sprinkler system.** At the end of the paragraph add the following: temporary shall be 180 days or less. Reference section 3103 of the IBC. Delete the exception in this section.

**Sec. 916 Gas Detection Systems.**

**Sec. 916.9 Signage.** Add the following at the end of the paragraph: upon direction of the Fire Code Official, an approved NFPA 704 placard shall be placed on the building. The placard shall identify all hazards associated with the gas(es) within the building. The placard shall be placed in a location approved by the Fire Code Official.

**Sec. 1008.3 Emergency Power for Illumination:**

**Sec. 108.3.3 Rooms and Spaces.** Add the following to the list of areas. All conference rooms, all public restrooms, all spaces used for public gatherings/meetings with the exception of private offices.

**Sec. 1010 Doors, Gates, Turnstiles**

**Sec. 1010.3.2 Security Access Turnstiles.** Remove the exception in 5.3

**Sec. 1103 Fire safety requirements for existing buildings.** Revise subsections as follows:

**Sec. 1103.7.1 Group E.** Delete the exceptions.

**Sec. 1103.7.2 Group I-1.** Delete the exceptions.

**Sec. 1103.7.5.1 Group R-1 hotel and motel manual fire alarm system.** Delete all of the exceptions in their entirety.

**Sec. 1103.7.5.2 Group R-1 boarding and rooming houses manual fire alarm system.** Delete the exception in its entirety.

**Sec. 1103.7.6 Group R-2.** Delete exception 3.

**Sec 1204 Solar Photovoltaic Power Systems.** Revise the following:

**Sec. 1204.5.3 Rapid Shutdown Switch.** At the end of the paragraph add the following: the rapid shutdown switch shall be one approved by the Fire Code Official. The switch shall either be a shunt trip style type switch or other approved type.

**Sec. 1206 Electrical Energy Storage Systems.** Revise the following:

**Sec. 1206.2.11.1 Fire Extinguishing Systems.** Delete the exception.

**Sec. 2108 Fire Protection.** Revise subsection as follows:

**Sec. 2108.2 Automatic Sprinkler Systems.** Delete the exceptions in their entirety.

**Sec. 2804 Fire Protection.** Revise the following:

**Sec. 2804.2.1 Manual Fire Alarms.** Delete the exception.

**Sec 3103.2 Approval Required.** Add to the end of the paragraph: “approval must be obtained from the fire code official a minimum of five (5) working days prior to the event.”

**Sec. 3103.5 Use Period.** Add the following: for the purpose of this code, the 12 month period will be a calendar year.

**Sec. 3103.8.2 Location.** In the first sentence of Exception 2 and after the word “tents”, add “when not used for cooking.” And after the word “buildings”, add “, lot lines, and parked vehicles or internal combustion engines.”

**Sec. 5005.4.5 Vehicles Transporting Hazards.** Add the following section:

**Sec. 5005.4.5 Vehicles Transporting Hazards.** The routes for vehicles transporting hazardous chemicals and other dangerous articles as described in Chapter 50 of the International Fire Code -2018 edition are hereby established as follows:

(1) The routes for the Interstate or Intrastate shipments not intended for delivery within the corporate limits of the Village of Libertyville are Interstate 94, County Highway 41, St. Mary's Road, Butterfield Road, Route 137, and that portion of Route 21, north of Route 137.

(2) Shipments within the Village of Libertyville shall have the written permission of the Fire Department. Without such approval, no stopping or parking of these vehicles or shipments shall be allowed within the Village limits, except for the purpose of inspection by the Fire Prevention Bureau to ensure compliance with the Code adopted by Section I.

**Sec. 5601.9 Establishment of Limits of Districts in Which Storage of Explosives and Blasting Agents Is to Be Prohibited.** The limits referred to in this section of the International Fire Code 2018 edition in which storage of explosive materials is prohibited are hereby established as follows:

All commercial zones, business zones, and residential zoned property in the Village and District.

**Sec. 5608 Fireworks Displays.** Add the following section:

**Sec. 5608.3.1 Prohibited displays.** The use of Chinese fire lanterns or sky lanterns shall be prohibited within the Village of Libertyville boundaries.

**Sec. 5610** Add the following section:

**Sec. 5610.1.1.1 Establishing Motor Vehicle Routes for Vehicles Transporting Explosives and Blasting Agents.** Transportation Routes: The routes referred to in the International Fire Code 2015 edition for vehicles transporting explosives and blasting agents are hereby established as follows:

(a) The routes of Interstate or Intrastate shipments are Interstate 94, County Highway 41, St. Mary's Road, Butterfield Road, Route 137, and that portion of Route 21, north of Route 137.

(5) Shipments within the Village of Libertyville shall have written approval from the Fire Department. Without such approval, no stopping or parking of these vehicles or shipments shall be allowed within the Village limits, except for the purpose of inspection by the Fire Prevention Bureau to ensure compliance with this Code as Adopted by Chapter I.

**Sec. 6-384. Repeal of Conflicting Ordinances.** All former Ordinances or parts thereof, conflicting or inconsistent with the provisions of this Ordinance or of the Code hereby adopted are hereby repealed.

**Sec. 6-385. Severability.** If any provision of this Code is for any reason held to be invalid or unconstitutional by a Court of competent jurisdiction, it shall not affect the validity of the

remaining provisions of this Code.

**Sec. 6-386. Date of Effect.** This Ordinance shall take effect and be in force from and after its approval and publication in pamphlet form as required by law.

**Secs. 6-387--6-400. Reserved.**

### **DIVISION 3. AUTOMATIC FIRE SPRINKLER SYSTEMS\***

#### **Sec. 6-401. Definitions.**

The following words, terms and phrases, when used in this division, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

*Alternative fire protection* means the use of either or both (i) fire resistive construction and (ii) fire alarm, fire detecting, or fire extinguishing equipment (other than an automatic fire sprinkler system) to reduce the risk of personal injury and property damage from fire and the spread of fire.

*Automatic fire sprinkler system* means an automatic fire sprinkler system meeting the applicable National Fire Protection Association ("NFPA") standard or standards set forth in section 6-403.

*Building*, for purposes of this Division, shall be as defined in the International Building Code (IBC) as adopted by the village in section 6-161. For purposes of this Division, a building shall further be defined as a structure which is situated entirely within a Lot of Record (as defined by the Village of Libertyville Zoning Code) or which traverses one or more Lots of Record under a single ownership.

*Building code* means the International Building Code, as adopted by the village in section 6-161 or any subsequent edition adopted by the village in the future.

*Cosmetic improvement* means any alterations to an existing building that affects only such existing building's appearance. Interior cosmetic improvements shall include, but not be limited to, painting, wallpapering, floor coverings, and nonbearing movable wall partitions. Exterior cosmetic improvements shall include, but not be limited to, new signs, painting, architectural trim, and repair or replacement of facades, windows, doors and roofs coverings. The addition of a rain roof to the structure is not included in the cosmetic improvement and will be treated as an addition to the building.

*Fire area* means the floor area enclosed and bounded by fire walls, fire barriers, or exterior walls of a building to restrict the spread of fire. Fire walls which divide a building (as defined by this Division) shall not be considered as interrupting the square foot measurement of the entire building when calculating the square foot area necessary to require sprinklers.

*Work area* shall be as defined in the International Existing Building Code (IEBC) Sec.202.

(Ord. No. 96-0-01, ?2, 1-10-96)

**Cross reference(s)**--Definitions and rules of construction generally, ?1-2.

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\*Editor's note--Ordinance No. 96-0-01, ?2, adopted January 10, 1996, amended ??6-401--6-407 by adding new ??6-401--6-408. Formerly, such provisions pertained to automatic sprinkler systems and derived from Ord. No. 91-0-53, ??1--7, 10-22-91.

**Sec. 6-402. Conflicts.**

To the greatest extent possible, the provisions of this division shall be construed to be consistent with, and not in conflict with, the provisions of any other law or ordinance, including the provisions of the Building Code, to the end that all such provisions may be given their fullest application. However, in case of any conflict between this division and the provisions of the Building Code, the provisions of this division shall control.

(Ord. No. 96-0-01, ?2, 1-10-96)

**Sec. 6-403. NFPA standards.**

All automatic fire sprinkler systems shall be designed, installed and maintained in compliance with the following referenced standards as determined by the Director of the Fire Prevention Bureau to be applicable:

*NFPA 13.* The 2016 edition of the National Fire Protection Association's (NFPA) *Standard for the Installation of Sprinkler Systems*.

*NFPA 13D.* The 2016 edition of the National Fire Protection Association's (NFPA) *Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*.

*NFPA 13R.* The 2016 edition of the National Fire Protection Association's (NFPA) *Standard for the Installation of Sprinkler systems in Residential Occupancies up to and including Four Stories in Height*.

*NFPA 14.* The 2016 edition of the National Fire Protection Association's (NFPA) *Standard for the Installation of Standpipe and Hose Systems*.

*NFPA 20.* The 2016 edition of the National Fire Protection Association's (NFPA) *Standard for the Installation of Centrifugal Fire Pumps*.

*NFPA 25.* The 2017 edition of the National Fire Protection Association's (NFPA) *Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems*.

*NFPA 72.* The 2016 edition of the National Fire Protection Association's (NFPA) *Standard for the Installation of Fire Systems' National Fire Alarm Code*.

Every reference to a NFPA standard in this division shall be deemed to refer to the edition of such standard set forth in this section 6-403.

(Ord. No. 96-0-01, ?2, 1-10-96)

**Sec. 6-404. New buildings.**

- (a) *When and where required.* Except as provided in subsection 6-404(b) and 6-404(c) and section 6-406, for all new buildings an automatic fire sprinkler system shall be required throughout all areas

New residential buildings, which include townhomes and one-and-two- family dwellings, shall follow sections R313.1 and R313.2 of the 2015 IRC for sprinkler installation. The sprinkler systems shall be designed per the NFPA 13D or 13R.

- (b) *Alternative fire protection for new buildings.* When the Fire Chief, Director of the Fire Prevention Bureau and Building Commissioner make a unanimous written determination, based on factors such as building, size, building construction type, location of the building on the property, and the availability or appropriateness of water as an extinguishing agent, that the public health, safety, welfare, and the lives and property of individuals will be adequately safeguarded by alternative fire protection to be provided pursuant to specific plans approved and incorporated as part of such written determination, then, on condition that such alternative fire protection is provided, an automatic fire sprinkler system shall not be required pursuant to this section 6-404.

- (c) *Exception.* Notwithstanding subsection 6-404(a) and 6-404(b) above, neither an automatic fire sprinkler system nor alternative fire protection shall be required for any detached accessory structure with the exception of a shed or playhouse that is one thousand (1,000) square feet or less in building area and only one story in height and without a basement, and regulated by Section 6-142 of the Building Code. Residential sheds/playhouses do not need sprinklers if they have no more than two hundred thirty (230) square feet of floor area.

(Ord. No. 96-0-01, ?2, 1-10-96)

**Sec. 6-405. Existing buildings.**

- (a) Increases in fire areas of existing buildings.

- (1) *Currently sprinklered buildings.* Except as provided in subsection 6-405(d) and section 6-406, when any existing building that is classified in a use group that would, if newly constructed, be required to have an automatic fire sprinkler system pursuant to section 6-404 and is protected by an automatic fire sprinkler system, is added to, remodeled, or altered in any manner that increases the fire areas of the

building, regardless of the cost or amount of increase in fire areas, the additional fire areas shall also be protected by an automatic fire sprinkler system.

- (1) *Currently non-sprinklered buildings.* Except as provided in subsection 6-405(d) and section 6-406, when any existing building that is not protected by an automatic fire sprinkler system; and that is not regulated by the International Residential Code (IRC) as adopted in Sec. 6-211; and that would, if newly constructed, be required to have an automatic fire sprinkler system pursuant to section 6-404 is added to, remodeled or altered in any manner that increases the fire areas of the building, regardless of the cost, so that the fire areas of the entire building, including the fire areas of the building that were added, remodeled, or altered, then the fire areas of the entire building, including the fire areas of the building that were added, remodeled, or altered, shall be protected by an automatic fire sprinkler system.
- (2) *Currently non-sprinklered residential buildings.* For existing buildings that are regulated by the International Residential Code (IRC), including townhomes, and one-and two-family dwellings, the installation of an approved NFPA 13D or 13R sprinkler system will be required under the following conditions.

The exceptions under sections R313.1 and R313.2 in the (IRC) shall be deleted and replaced with the following:

- a) When an existing structure is demolished and a new structure is built on either the existing or a new foundation.
  - b) When the 100% of the interior of a structure is re-modeled or removed excluding the basement, if any, in the percentage total.
  - c) When an additional floor or level is constructed where no existed, before and 50% of the pre-existing interior excluding the basement, if any, in the percentage total, is altered or reconfigured.
- (b) *Remodeling or alterations to existing buildings.* Except as provided in subsection 6-405(d) and section 6-406, when any existing building that is not regulated by the International Residential Code (IRC) as adopted in Sec. 6-211; and that would, if newly constructed, be required to have an automatic fire sprinkler system pursuant to section 6-404 is remodeled or altered during any 30 month period when i) the work area exceeds fifty (50) percent of the aggregate area of the building or ii) the cost of the project is more than twenty-five (25) percent of the Lake County Supervisor of Assessments' full estimated market value of the building, excluding any cost for the installation of any required automatic fire sprinkler system and any cost for cosmetic improvements, then the fire areas of the entire building shall be protected with an automatic fire sprinkler system, regardless of whether such remodeling or alteration results in an increase in the fire areas of the building.
- (c) *Changes in use group.* Except as provided in subsection 6-405(d) and section 6-406, if the use of any building is changed such that it is classified in a use group requiring sprinklers, such building shall comply with the provisions of section 6-404 as if it were a newly constructed building.

Exception: If the use of any building is changed to a use in an occupancy group classification with an equal or lower relative hazard rating than the previous occupancy group, as determined by Table 1011.4 in the International Existing Building Code; then such building shall not require fire sprinkler protection pursuant to this Section 6-405(c), provided that the building complies with 2018 IBC Chapter 9, Fire Protection and Life Safety Systems as published by the ICC.

- (d) *Alternative fire protection for existing buildings.* When the Fire Chief, Director of the Fire Prevention Bureau and Building Commissioner make a unanimous written determination, based on factors such as building size, building construction type, location of the building on the property, the availability or appropriateness of water as an extinguishing agent, the size of a new addition, percentage of remodeling or alterations, and the change in use group classification, that the public health, safety and welfare and the lives and property of individuals will be adequately safeguarded by alternative fire protection to be provided pursuant to specific plans approved and incorporated as part of such written determination, then, on condition that such alternative fire protection is provided, an automatic fire sprinkler system shall not be required pursuant to this section 6-405.
- (e) *Alternative timing for installation of automatic sprinkler system in existing multi-tenant/condominium buildings.* Whenever the provisions of this section 6-405 requires the installation of an automatic fire-sprinkler system throughout an existing multi-tenant or condominium building, then each currently existing and occupied tenant space or condominium unit within said building and outside of the *work area* of the related building permit may remain unsprinklered for a period not to exceed five (5) years following the issuance of the current permit, subject to the following restrictions and conditions:
- 1) Upon the vacation of an occupied tenant space or condominium unit the vacated space or unit must be sprinklered prior to any further occupancy; and
  - 2) When any future remodeling or alteration takes place within any currently unsprinklered tenant space or condominium unit involving a work area which exceeds fifty percent (50%) of the aggregate area of such space or unit, the tenant space or condominium unit must be sprinklered simultaneously with the completion of the future work; and
  - 3) At the time of the issuance of the current permit the water service and sprinkler system shall be designed for the entire building; and
  - 4) The building water service and sprinkler system shall be installed in the building permit work area(s) and all common areas; and
  - 5) At the time of issuance of the current permit a signed statement must be received from the property owner indicating his/her understanding of and guarantee that the entire building will be sprinklered as required above and no

later than 5 years from the date of the issuance of the current permit.

(Ord. No. 96-0-01, ?2, 1-10-96)

**Sec. 6-406. Public utility electrical rooms, buildings and vaults.**

Any new electrical equipment room, building or vault that is installed, serviced, secured and maintained by a public utility company that is regulated by the Illinois Commerce Commission and that complies with all of the conditions of paragraphs (1) through (6) of this section shall not be required to install an automatic fire sprinkler system pursuant to this division.

- (1) An alternative fire suppression system approved by the Director of the Fire Prevention Bureau shall be installed in the electrical equipment room, building or vault.
- (2) An automatic fire detection system approved by the Director of the Fire Prevention Bureau that meets the requirements of NFPA 72 shall be installed in the electrical equipment room, building or vault; provided, however, that the fire and trouble alarm signal shall be transmitted to the fire alarm control panel.
- (3) The electrical equipment room, building or vault shall be constructed with walls, floors and ceilings that have a minimum of a one-hour fire resistive rating.
- (4) All doors to or within the electrical equipment room, building or vault shall have a minimum of a one-hour fire-rated door assembly with self-closing devices, and any other openings or penetrations into this room, building, or vault shall be protected with a minimum of a one-hour fire rated assembly.
- (5) A portable fire extinguisher, with a minimum rating of 2A40BC, shall be installed inside the electrical room, building, or vault within ten (10) feet of each exit and one shall also be provided on the exterior of the room or vault at the entrance door.

(Ord. No. 96-0-01, ?2, 1-10-96)

**Sec. 6-407. Supervision of systems.**

Every automatic fire sprinkler system, except single family residential systems regulated by the International Residential Code (IRC) as adopted in Sec. 6-211, installed within the Village, whether or not such system is required by this division, shall be electronically supervised by an approved addressable fire alarm-system located in the riser room. If such area is not accessible from the exterior of the building, the fire alarm control panel shall be located in a location approved by the Director of the Fire Prevention Bureau. Every automatic fire sprinkler system installed within the village, whether or not such system is required by this division, shall have a direct connection to the fire department dispatch center meeting the requirements of NFPA 72 for remote stations and shall be transmitted via the Village radio system. A sprinkler system for only local protection and one which does not have electronic supervision, will not be required to transmit a signal to the dispatch center. Notwithstanding the requirements of this section, when the fire marshal makes a written

determination that the public health, safety and welfare and the lives and property of individuals will be adequately safeguarded, based on factors such as number of sprinkler heads or size of the protected area, if no electronically supervised fire alarm control panel system is installed, then no such system shall be required.

(Ord. No. 96-0-01, ?2, 1-10-96)

**Sec. 6-408. Maintenance.**

Every automatic fire sprinkler system installed within the village, whether or not such system is required by this division, shall be maintained according to the requirements of NFPA 25.

(Ord. No. 96-0-01, ?2, 1-10-96)

**Sec. 6-409. Sprinkler Control Rooms.** In all new construction, and in all existing buildings where in the opinion of the Director of Fire Prevention states it may be installed, a sprinkler control room with an exterior entrance shall be installed. The control room shall contain the fire sprinkler risers, and the fire alarm control panel. The room shall face either the main parking lot or shall face the front street and shall have a hard surface to the entrance door. The Knox key box shall also be located at the door to the fire sprinkler control room. If the location of the riser and alarm panel shall be in a different location due to a remodel, then this shall be approved by the Director of Fire Prevention.

**Sec. 6-410. Residential Sprinkler System.**

- (1) *Where Required.* Sprinkler protection will be provided within the garage where the garage is attached to the structure.
- (2) *Monitoring.* A horn/strobe or a bell/strobe will be required on the exterior of the structure at the garage. This will be activated by the sprinkler flow switch. A water flow bell(s) mounted on the return air duct(s), and/or horn/strobe(s) located on a floor approved by the Fire Code Official shall provide notification for the occupants inside the residence. These devices shall also be activated by the flow switch.