TITLE 15

FIRE PREVENTION

CHAPTER 15-4

BUREAU OF FIRE PREVENTION

ARTICLE I. FIRE PREVENTION* (15-4-010 et seq.)

*** Editor's note** – Coun. J. 5-18-16, p. 24131, § 55, amended the title of Article 1, which formerly read “Bureau of Fire Prevention”.

15-4-005 Definitions.

As used in this Title 15:

“Fire commissioner” shall mean the commissioner of the fire department of the City of Chicago or the commissioner's departmental designee.

(Added Coun. J. 5-18-16, p. 24131, § 56)

15-4-010 Fire regulations.

This chapter, Article II of Chapter 15-16, and Chapters 15-20, 15-24, 15-26 and 15-28 of this Code shall be known as the fire regulations of this Code.

(Prior code § 90-1; Amend Coun. J. 2-7-96, p. 15616)

15-4-020 Department powers, duties and responsibilities – Permit fees.

For additional provisions covering the establishment, powers, duties and responsibilities of the Fire Department and Fire Commissioner, see Chapter 2-36 of this Code. For permit fees, see Chapter 14A-4.

(Prior code § 90-2; Amend Coun. J. 12-15-92, p. 27387; Amend Coun. J. 12-12-07, p. 17167, § 50; Amend Coun. J. 5-18-16, p. 24131, § 57; Amend Coun. J. 4-10-19, p. 100029, Art. VIII, § 7; Amend Coun. J. 7-24-19, p. 3646, § 43)

15-4-030 Annual inspections.

The fire commissioner shall cause the following buildings or structures to be inspected annually: (1) all theaters, churches, schools, public assembly units, and open air assembly units; and (2) all buildings over one story in height, except (i) single dwellings, (ii) multiple- use buildings, consisting of business and dwelling units two stories or less in height, and (iii) multiple dwellings three stories or less in height, unless such multiple dwellings are lodginghouses or roominghouses with sleeping accommodations for 20 or more persons. Such annual inspections shall be conducted by the fire commissioner. It shall be the duty of every owner, agent, lessee or occupant of any such building and of the person in charge or control of the same to permit the making of such annual inspection by the fire commissioner or by a duly authorized member of the fire department at any time upon demand being duly made.

(Prior code § 90-2.1; Amend Coun. J. 5-18-16, p. 24131, § 58)

15-4-035 Authority of fire commissioner.

The fire commissioner or his designee shall be authorized to enter and inspect every building, structure or portion thereof containing equipment or apparatus used for the generation, transmission or distribution of electricity by a public utility in order to identify and assess all risks or dangers of fire or explosion presented by the occupation and use of the building, structure or applicable portion.

(Added Coun. J. 6-28-91, p. 2758)

15-4-040 Notice of noncompliance.

If an inspection conducted by the fire commissioner shows that the inspected building fails in any respect to comply with the building provisions of this Code, it shall be the duty of the fire commissioner to notify the owner, agent, lessee, or occupant of such building of this fact and to specify wherein such building fails to comply with the requirements of the building provisions of this Code; and it shall

thereupon become the joint and several duty of such owner, agent, lessee, or occupant to proceed forthwith to make whatever changes or alterations may be necessary to make such building comply with applicable provisions of this Code, and to complete such changes and alterations within 15 days after the receipt of such notice. The fire commissioner may cause an additional inspection or inspections to be made in order to determine whether the owner, agent, lessee or occupant has completed the necessary work. The fee for each such additional inspection shall be $50.00.

(Prior code § 90-2.2; Amend Coun. J. 6-28-91, p. 2758; Amend Coun. J. 12-15-92, p. 27387; Amend Coun. J. 5-18-16, p. 24131, § 59)

15-4-050 Interpretation of terms.

Where the meaning of any term of expression used in the fire regulations of this Code is disputed and is not defined therein, such definitions thereof as appear in the building regulations of this Code shall prevail and be conclusive.

(Prior code § 90-3)

ARTICLE II. GENERAL PROVISIONS (15-4-060 et seq.)

15-4-060 Transportation exemption.

Nothing contained in this chapter, Article II of Chapter 15-16, Chapters 15-20, 15-24, 15-26 and 15-28 shall be construed as applying to the transportation of any article or thing shipped in conformity with regulations prescribed by the Department of Transportation, nor as applying to the military or naval forces of the United States.

(Prior code § 90-4; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 11-7-18, p. 88803, § 34)

15-4-070 Classification of buildings.

All buildings and structures now existing or hereafter erected, altered or enlarged, shall be classified for the purposes of the fire regulations of this Code according to occupancy, use and type of construction in accordance with Chapters 13-56 and 13-60 of this Code.

(Prior code § 90-5)

15-4-080 Use or habitation of fire hazards.

It shall be unlawful to continue the use of or occupy any building, structure or place which does not comply with those provisions of this Code which are intended to prevent a disastrous fire or loss of life in case of fire, until the changes, alterations, repairs or requirements found necessary to place the building in a safe condition shall have been made.

(Prior code § 90-6)

15-4-090 Dangerous buildings a nuisance.

Any building, structure, enclosure, place or premises, perilous to life or property by reason of the construction of such building or structure or by reason of the condition or quantity of its contents, or the use of the building or its contents, or the use of the enclosure or the overcrowding at any time of persons therein, or by reason of deficiencies in such fire alarm or fire prevention equipment, as may be required by the fire regulations of this Code, or where conditions exist which would hamper or impede the fire department in combating a fire in or on the building, is hereby declared to be a nuisance and the fire commissioner is empowered and directed to cause any such nuisance to be abated.

(Prior code § 90-7; Amend Coun. J. 5-18-16, p. 24131, § 60)

15-4-100 Right to survey.

(a) *Right to Demand Survey.* The owner, lessee or occupant of any building, structure, enclosure, place or premises affected by any order or notice of the fire commissioner may make written demand upon the fire commissioner for a survey of such building, structure, enclosure, place or premises, to determine whether or not such order is valid and reasonable. Such demand for a survey shall be served upon the fire commissioner by leaving a copy thereof at the fire prevention bureau office within seven days, Sunday and holidays excepted, after the service of the order or notice referred to in such demand. Said demand for a survey shall contain the name of the person to act as a surveyor on behalf of the one making the demand.

(b) *Duty of Fire Commissioner.* Upon receipt of a demand for survey, the fire commissioner shall immediately issue an order for the same, naming therein the person to act as surveyor on behalf of the fire department. Such person shall be an officer or employee of the fire department, and said order shall state the name of the person selected by the fire commissioner to conduct the survey.

(c) *Survey Procedure.* In the event that the two persons thus named are unable to agree concerning the survey and their report thereon, they shall select a third person to act with them on such survey, and a report signed by any two of the three surveyors thus selected shall be conclusive. In the event that the two surveyors selected as above set forth cannot agree concerning the survey and their report thereon and cannot agree upon the selection of a third person to act with them in connection with such survey, said third person shall be selected and appointed by the chief justice of the circuit court on application made in writing by the fire commissioner, of which application the said fire commissioner shall give at least 24-hours notice, in writing, to the applicant for such survey, and a report signed by any two of the three surveyors thus selected shall be conclusive. The date and hour when the survey shall be made shall be stated in the order therefor, and no change shall be made in such date and hour, except by written stipulation duly signed by said fire commissioner and the applicant for such survey. A copy of such order shall be served upon the person demanding the survey by personal delivery to him at least 24 hours previous to the hour fixed in the order for the holding of such survey, and he shall have the right to be present and to be heard at such survey in person or by agent or attorney. The surveyors shall meet at the time and place described in the order of their appointment, and shall survey the building, structure, enclosure, place or premises referred to in said order, and to consider

the merits of the order of the fire commissioner in respect to which the survey has been demanded.

(d) *Report of Survey.* After such survey and consideration, the surveyors shall prepare and sign a report of their proceedings and determination which shall be filed with the fire commissioner, and a copy thereof shall be given the person demanding such survey upon his application therefor. The determination of the surveyors in any such case shall be final and conclusive.

(e) *Surveyor's Fees.* Each person, other than an officer or employee of the fire department, designated to act as a surveyor pursuant to the provisions of this section shall be paid the sum of $25.00 for such survey in which he participates upon the filing of the report thereof with the fire commissioner.

(f) *Payment of Expenses.* As a condition precedent to the ordering of a survey, the person demanding the same shall deposit with the fire commissioner the sum of $100.00 to indemnify the city for the expense of the survey, in the event that the surveyors confirm the order of the fire commissioner. Such sum shall be returned to the depositor, in the event that the surveyors shall report such order as invalid or unreasonable. In case the report of the surveyors is to the effect that the order of the fire commissioner, which was the subject of such survey, was in all respects valid and reasonable, all the expenses of the survey shall be paid out of the fund herein required to be deposited with the fire commissioner by the person demanding such survey, and the balance remaining, if any, shall be returned to such person.

(g) *Closing Buildings.* If the order or notice subject to survey requires any building or premises to be closed on account of its dangerous condition, such order or notice shall not be stayed pending the determination of the reasonableness and validity thereof.

(Prior code § 90-8; Amend Coun. J. 5-18-16, p. 24131, § 61)

15-4-101 Fire emergency plan required when.

The owner or operator of equipment or apparatus used for the generation, transmission or distribution of electricity by a public utility shall develop a fire emergency plan for each building, structure or portion thereof enclosing such equipment or apparatus. The fire emergency plan shall include the following: the location and type of equipment or apparatus; identification of supervisory personnel to be notified in the event of a fire affecting the equipment or apparatus, and the means of notification; a plan for evacuation of employees not involved in firefighting from the area of the fire; assignment of responsibilities for coordination with designated personnel for admission of fire department personnel and control of traffic on the premises in the event of a fire; a list of toxic, combustible or explosive materials stored or used on the premises; a schedule of drills to verify the viability of the plan; and such other related information as the fire commissioner may require. The fire emergency plan shall be in writing and shall be filed in the office of the fire commissioner or his designee. A copy of the plan shall be maintained on the premises where the electrical equipment is located. The owner or operator of the equipment or apparatus shall notify the commissioner in writing of any changes in any component of the plan within seven days after the change occurs.

Any person who violates any provision of this section shall be subject to a fine of $500.00 for each offense. Each day a violation continues shall constitute a separate and distinct offense.

(Added Coun. J. 6-28-91, p. 2758)

15-4-102 Safety warden.

The owner or manager of every facility classified as a Group A occupancy with an occupant load greater than 300, as determined in accordance with Title 14B, shall appoint a person employed in the facility as safety warden, and an alternate safety warden. The safety warden and alternate safety warden shall be in addition to any fireguard or fireguards required under this chapter.

The safety warden shall conduct a safety review of the premises on a weekly basis to identify safety hazards that are readily recognizable and easily corrected, such as nonfunctioning lights; improper use or storage of cleaning materials and combustible materials; obstruction of stairwells, corridors and exits; accumulation of dirt and debris; and use of fire closets, elevators, and mechanical or electrical areas for storage space. The safety warden shall record the results of the weekly safety review in a ledger, which shall be available for inspection by personnel of the fire department and department of buildings at all reasonable times. No later than April 30th, August 31st and December 31st of each year, the safety warden shall certify to the fire commissioner, on forms supplied by the fire commissioner, compliance with the review and recording requirements of this section since the last periodic report. The owner or manager of the assembly unit shall notify the fire department and department of buildings of the names of the safety warden and alternate safety warden. Any person who violates any provision of this section or who falsifies an entry in a ledger or certification required under this section, shall be subject to a fine of not less than $200.00.

The fire commissioner and the buildings commissioner may jointly issue regulations for the administration and implementation of this section.

(Added Coun. J. 7-14-93, p. 35320; Amend Coun. J. 5-18-16, p. 24131, § 62; Amend Coun. J. 4-10-19, p. 100029, Art. VIII, § 8)

ARTICLE III. LICENSES (15-4-110 et seq.)

15-4-110 Hazardous use units.

Every license required to engage in any business, occupy or use any premises, structure or building for any purpose classified as a hazardous use unit in Chapter 13-112 of this Code or a Group H occupancy under Chapter 14B-3 of this Code, and every extension or renewal thereof, shall require the approval of the fire commissioner, as a condition precedent to the issuance of every such license and to every extension or renewal thereof. The fire commissioner shall make, or cause to be made, an inspection of every hazardous use unit for which an application for license, or for an extension or renewal thereof, has been made. If such inspection shall prove the entire compliance of such hazardous use unit with the applicable requirements of this Code, the fire commissioner shall issue, or cause to be

issued, a certificate of compliance and approval. Such certificate shall be subject to revocation for cause by the fire commissioner at any time and, upon notification of the revocation of such certificate, the mayor shall revoke any license conditioned upon said certificate. The provisions of this section shall be construed as remedial and retroactive as well as prospective.

(Prior code § 90-9; Amend Coun. J. 5-18-16, p. 24131, § 63; Amend Coun. J. 4-10-19, p. 100029, Art. VIII, § 9)

15-4-130 Amounts of hazardous material.

A hazardous materials license, as specified in Section 4-6-210, shall be required under any of the following conditions:

(a) Where the combined capacity of all containers used to store or handle corrosive liquids exceeds 55 gallons;

(b) Where the combined capacity of all tanks or containers used to store or handle oxidizing materials exceeds 500 pounds;

(c) Where the combined capacity of all tanks or containers used to store or handle organic peroxides exceeds ten pounds;

(d) Where the combined capacity of all tanks or containers used to store or handle nitromethane exceeds 500 pounds;

(e) Where the combined capacity of all tanks or containers used to store or handle ammonium nitrate exceeds 1,000 pounds;

(f) Where any amounts of highly toxic materials are used, stored or handled other than in connection with retail trade in original, sealed containers;

(g) Where any amounts of fume hazard gas is stored, used or handled;

(h) Where the total amount of highly flammable materials, as defined in Section 15-28-500, stored exceeds 100 cubic feet.

(Prior code § 90-11; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 6-6-12, p. 28356, § 33)

15-4-160 Amounts of acetylene gas and calcium carbide.

A hazardous materials license, as specified in Section 4-6-210, shall be required when:

(a) Generation of acetylene gas in any form of generator holder, container or associated apparatus at a pressure not to exceed 15 pounds per square inch.

(b) Collecting or compressing acetylene gas at any pressure in excess of 15 pounds per square inch or selling or distributing acetylene gas at any pressure in excess of 15 pounds to the square inch, or of selling or distributing acetylene gas under pressure.

(c) Calcium carbide is stored or kept in excess of 600 pounds within the city without first obtaining license so to do, for each location where such quantity of calcium carbide is to be kept or stored.

(Prior code § 90-14; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 6-6-12, p. 28356, § 34)

15-4-210 Flammable liquids.

A hazardous materials license, as specified in Section 4-6-210, shall be required to keep on hand or store for use in any business 30 gallons or more of any flammable liquid having a flashpoint below 200 degrees Fahrenheit or 93 degrees Centigrade (closed cup tester). Provided, however, that nothing herein contained shall require any filling station duly licensed under any other provision of this Code, to obtain a license hereunder.

(Prior code § 90-19; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 4-16-97, p. 42588; Amend Coun. J. 6-6-12, p. 28356, § 35)

15-4-230 Liquefied fume hazard gases.

A hazardous materials license, as specified in Section 4-6-210, shall be required to keep on hand or store for use in any business liquefied fume, hazard gases in single unit tank cars.

(Prior code § 90-21; Amend Coun. J. 11-30-88, p. 19547; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 6-6-12, p. 28356, § 36)

15-4-240 Oxygen and hydrogen.

A hazardous materials license, as specified in Section 4-6-210, shall be required to generate or compress oxygen or hydrogen in any form of generator, holder, container or associated apparatus.

(Prior code § 90-22; Amend Coun. J. 11-30-88, p. 19547; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 6-6-12, p. 28356, § 37)

15-4-250 Nitrocellulose products.

A hazardous materials license, as specified in Section 4-6-210, shall be required to keep any nitrocellulose products in excess of 25 pounds.

(Prior code § 90-22; Amend Coun. J. 11-30-88, p. 19547; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 6-6-12, p. 28356, § 38)

15-4-252 Lumberyards and lumber storehouses.

(a) A hazardous materials license, as specified in Section 4-6-210, shall be required to conduct or operate a lumberyard or lumber storehouse.

Included hereunder, but not limited hereby, shall be all lumberyards, lumber storehouses and other places where new, used, finished or unfinished lumber, timber, wood (except firewood), wooden boxes, wooden barrels, veneers, plywoods, flex woods and the like, in

excess of 5,000 feet, are kept, placed, stored or piled for sale or use, other than lumber for use in the repair, erection or construction of buildings or improvements incident to the land on the premises where so kept, placed, stored or piled on the premises immediately adjacent thereto.

(b) It shall be unlawful to conduct or operate any lumberyard or lumber storehouse, or to pile or store lumber or any of the aforementioned wooden articles in any lot or plot of ground, without first obtaining the written consents of property owners representing the majority of the total frontage of any lot or plat of ground lying wholly or in part within limits 150 feet distant from and parallel to the boundary of the lot or plot of ground upon which said yard or storehouse is to be established or maintained; provided, however, that for the purpose of this section, only the frontage of any such lot or plot of ground as comes within the 150 foot limits herein prescribed shall be considered; and provided further, that any and all petitions containing such consents of property owners shall be based on and contain the legal description of the property affected and the date of signature. Whenever the lot or plot of ground in which said yard or storehouse is to be established is in any shape other than a rectangle, the 150 foot limiting line aforementioned shall not exceed in distance 150 feet from any point in the boundaries of such lot or plot of ground. Such written consents shall be obtained and filed with the building commissioner before a license is issued hereunder.

(c) It shall be unlawful for any person to establish within 200 feet of a school, church or institutional building, a lumberyard where lumber, either new or old, is sold, or is stored for seasoning or drying; or a box yard where wooden boxes either new or old are stored, sold, manufactured or repaired; or a barrel yard where wooden barrels, either new or old, are stored, sold, manufactured or repaired.

(d) It shall be unlawful for any person to pile or to maintain a pile of lumber, either new or old; wooden boxes, either new or old; wooden barrels, either new or old; and other materials of like combustible nature for the purpose of selling, storing, manufacturing, drying or seasoning, within 50 feet of any building or within 25 feet of any fireproof or brick building, unless the roof of the brick building shall be of fireproof construction, and all exposed windows, doors and other openings in both brick or fireproof buildings are fitted and protected with approved fire-resisting wired glass and metal sash and frames, or all windows and other openings are equipped with metal-clad shutters or doors.

No lumber, boxes or barrels shall be piled in excess of 20 feet in height. If the area covered be in excess of 1,000 square feet, it shall be divided into areas of 1,000 square feet or less by aisles or passageways at least 48 inches wide.

(Added Coun. J. 2-7-96, p. 15616; Amend Coun. J. 3-5-03, p. 104990, § 419; Amend Coun. J. 11-13-07, p. 14999, Art. II, § 1; Amend Coun. J. 4-22-09, p. 58303; Amend Coun. J. 6-6-12, p. 28356, § 39)

15-4-254 Sawdust, shavings and excelsior.

A hazardous materials license, as specified in Section 4-6-210, shall be required to keep or store for the purpose of selling at wholesale or retail, sawdust, shavings, excelsior or other similar flammable materials.

(Added Coun. J. 2-7-96, p. 15616; Amend Coun. J. 6-6-12, p. 28356, § 40)

15-4-256 Sale of solid fuel and firewood.

(a) It shall be unlawful for any person to engage in the business of a dealer in solid fuel, within the fire limits of the city, without first having obtained a hazardous materials license, as specified in Section 4-6-210, therefor; provided, that no license shall be required of any dealer in solid fuel for any place of business operated or conducted by such dealer in solid fuel and licensed as such by any municipality which has adopted an ordinance granting privileges similar to those contained in this section.

(b) Whenever used in this section, Section 15-4-257, Section 15-4-258, and Section 15-4-259, the term “solid fuel” shall mean any anthracite, semianthracite, bituminous, semibituminous or lignite coal, briquettes, boulets, coke, gashouse coke, petroleum coke, petroleum carbon, firewood or any other manufactured or patented fuel not sold by liquid or metered measure; the term “hundredweight” shall mean 100 pounds avoirdupois; the word “ton” shall mean 20 hundredweight; the term “dealer in solid fuel” shall mean any person, as defined in this section, offering for sale, selling, delivering or selling and delivering any solid fuel; and the term “fuel oil dealer” shall mean any person who stores fuel oil for the purpose of sale, or conveys fuel oil in any vehicle for the purpose of sale. The term “storer of solid fuel” shall mean any person who stores solid fuel for use in any business but not for resale. The term “fuel oil storer” shall mean any person who keeps on hand or stores fuel oil for use in any business but not for resale.

(c) It shall be unlawful to conduct or operate any yard for the storage of solid fuel in any lot or plot of ground without first obtaining the written consents of the property owners representing the majority of the total frontage in feet of any lot or plot of ground lying wholly or in part within lines 150 feet distant from and parallel to the boundaries of the lot or plot of ground upon which said yard is to be installed; provided, however, that for the purpose of this section only the frontage of any such lot or plot of ground as comes within the 150 foot limit herein prescribed shall be considered; and provided, further, that any and all petitions containing such consents of property owners shall be based on and contain the legal description of the property affected and the date of signature. Whenever the lot or plot of ground in which said yard is to be installed is in any shape other than a rectangle, the 150 foot limiting line aforementioned shall not exceed in distance 150 feet from any point in the boundaries of such lot or plot of ground.

(d) Every dealer in solid fuel shall conform to the provisions of this Code regulating weights and measures, including the requirements as to certificates of weight, which are applicable thereto.

(e) It is hereby declared unlawful for any person to sell or offer for sale any two or more different kinds, grades or sizes of solid fuel which have been mixed in such manner as to prevent purchasers, or intended purchasers, or the inspector of weights and measures of the city or one of his deputies, from reweighing separately each kind, size and grade to determine the weight of each kind, size and grade.

If two or more different kinds, grades or sizes of solid fuel are loaded on the same wagon, truck or other conveyance, each kind, grade and size of solid fuel shall be weighed and loaded separately, and shall be placed either in bags, separated by partitions, or in closed containers, which closed containers shall have legibly stamped upon their sides the actual net weight and the kind, grade and size of each

type of solid fuel contained therein; such loading shall be in a manner sufficient that any time during the selling or delivering of such solid fuel, each kind, grade and size of solid fuel may be weighed separately; and the said person selling or delivering said solid fuel shall provide the driver of the wagon, truck or other conveyance in which the same is transported, with a delivery ticket or tickets made out in conformity with the provisions of Sections 4-276-360 to 4-276-400, stating the weight of each kind, grade or size of solid fuel so delivered.

(f) No person shall display, advertise or describe solid fuel in any false or misleading manner, or use any deceptive description of size or kind of solid fuel other than specified in Section 4-276-370. The term “coarse” shall not be used to describe a size or grade and is hereby declared to be deceptive. Figures and percentages of different sizes shall be considered misleading when used to describe solid fuel.

No person shall deliver or attempt to deliver solid fuel containing more than 26 percent volatile matter, if such solid fuel has been advertised by the seller, ordered by the purchaser, or described by the public weighmaster's certificate as “Smokeless”, “Low Volatile”, “Pocahontas” or “New River”.

(g) No solid fuel shall be stored for sale in the same building with fuel oil, gasoline or other flammable liquids unless separated therefrom by a fireproof wall.

It shall be unlawful for any person to deliver or attempt to deliver to a purchaser any kind, grade or size of solid fuel other than that advertised by the seller, ordered by the purchaser, or specified on the delivery ticket or weighmaster's certificate.

It shall be the duty of every person conducting or operating a coal yard within the fire limits of the city to store all soft coal away from the brickwork of boilers and furnaces. Whenever coal in storage shows indication of spontaneous ignition or gives off gases, it shall be the duty of the licensee, agent or person in charge or control of the premises to turn over and overhaul such coal pile and remove all portions of coal showing indication of ignition or coking. The floor or ground surface of all coal yards shall at all times be kept free from flammable waste material and accumulations of combustible waste materials.

(Added Coun. J. 2-7-96, p. 15616; Amend Coun. J. 6-6-12, p. 28356, § 41)

15-4-257 Storage of solid fuel not for retail.

(a) It shall be unlawful for any person to keep, pile or store on any lot, plot of ground, railroad siding, switch track or other place within the fire limits of the city, any solid fuel in quantities greater than 1,000 tons without first having obtained a hazardous materials license, as specified in Section 4-6-210. Provided, however, that this requirement shall not apply to any person conducting or operating a coal yard licensed under this chapter.

(b) It shall be the duty of every person establishing and maintaining such lot, plot of ground, railroad siding, switch track or other place within the fire limits of the city to store all soft coal away from the brickwork of boilers and furnaces. Whenever solid fuel in storage shows indication of spontaneous ignition or gives off gases, it shall be the duty of the licensee, agent or person in charge or control of the premises to turn over or overhaul such solid fuel and remove all portions of the same showing indication of ignition or coking. Such work shall be done under the supervision of the fire commissioner. The floor or ground surface of the premises shall at all times be kept free from flammable waste material and accumulations of combustible waste materials. Gasoline, fuel oil or other flammable liquids shall not be placed or stored upon the licensed premises unless separated from such solid fuel by fireproof walls.

(Added Coun. J. 2-7-96, p. 15616; Amend Coun. J. 6-6-12, p. 28356, § 42; Amend Coun. J. 5-18-16, p. 24131, § 64)

15-4-258 Fuel oil dealers.

(a) It shall be unlawful for any person to engage in the business of fuel oil dealer without first having obtained a hazardous materials license, as specified in Section 4-6-210.

This section shall not be construed to include or apply to dealers in fuel oil who are licensed at the same place, location or premises under the provisions of this Code licensing “filling stations”, in such a way as to require an additional license fee from persons so licensed who pay an annual license fee that is equal to or greater than the annual license fee required of a fuel oil dealer hereunder who uses or proposes to use storage facilities in connection with his business.

(b) The fire commissioner shall investigate such application and the matters and things therein stated.

(c) All places of business of fuel oil dealers shall be kept in a clean condition, free from accumulations of rags, wastepaper and other combustible waste materials. Smoking shall be prohibited thereon. Adequate toilet facilities shall be provided. All such premises and all vehicles used in connection with the business of fuel oil dealers shall be conducted and operated in accordance with the provisions of this Code in Chapters 15-26 and 13-84 and shall be inspected by the fire commissioner at least once every year.

It shall be unlawful for any fuel oil dealer to refill any fuel oil storage container or tank used in connection with an oil-burning heater, boiler or furnace, unless such storage container or tank is equipped with an automatic or return vent pipe, or unless the fill pipe of such storage container or tank is equipped with a screw or automatic cap. It shall be the duty of every such dealer after filling or refilling any fuel oil storage container or tank to replace the screw cap on such fill pipe, or if equipped with an automatic cap, to see to it that said fill cap pipe is properly closed.

(d) [*Reserved.*]

(Added Coun. J. 2-7-96, p. 15616; Amend Coun. J. 12-14-05, p. 66732, § 2; Amend Coun. J. 6-6-12, p. 28356, § 43; Amend Coun. J. 5-18-16, p. 24131, § 65)

15-4-259 Fuel oil storers.

(a) It shall be unlawful for any person to keep on hand or store fuel oil for use in any business, other than the business of dealer in such oil, without first procuring a hazardous materials license, as specified in Section 4-6-210, for each location, place or premises where such person keeps on hand or stores for use any such oil. Provided, however, that no license shall be required of any person who keeps on hand or stores fuel oil in a quantity less than 2,150 gallons for use exclusively in the heating of any building.

(b) The fire commissioner, upon receipt of such application, shall investigate or cause to be investigated the place of business described in such application and the methods and equipment intended to be used by such applicant in the storage and handling of fuel oil.

(c) All containers or tanks used for the storage of fuel oil and all buildings and premises wherein fuel oil is stored shall be constructed and maintained in accordance with the provisions of the building and fire prevention chapters of this Code.

All containers or tanks used for the storage of fuel oil, either above or below ground or within a building, and the premises used for the storage of such oil, shall be inspected by the fire commissioner at least once each year.

Rags, soiled waste and wastepaper shall be kept in metal containers pending removal from the premises.

No person shall smoke in that part of any premises where such oil is stored.

It shall be unlawful for any fuel oil storer to refill any fuel oil storage container or tank used in connection with an oil-burning heater, boiler or furnace, unless such storage container or tank is equipped with an automatic or return vent pipe, or unless the fill pipe of such storage container or tank is equipped with a screw or automatic cap. It shall be the duty of every such storer after filling or refilling any fuel oil storage container or tank to replace the screw cap on such fill pipe, or if equipped with an automatic cap, to see to it that said fill pipe cap is properly closed.

(Added Coun. J. 2-7-96, p. 15616; Amend Coun. J. 6-6-12, p. 28356, § 44; Amend Coun. J. 5-18-16, p. 24131, § 66)

ARTICLE IV. CERTIFICATES OF FITNESS (15-4-260 et seq.)

15-4-260 General requirements.

Where a certificate of fitness is required in connection with licenses covered in Sections 15-4-210 to 15-4-240, and in connection with Section 15-4-290, the licensee shall obtain the certificate of fitness. He shall file with the fire commissioner, in writing, the name of the person or persons in charge of the operation and shall certify that each person complies with the requirements outlined below and with any special requirements outlined in Sections 15-4-210 to 15-4-240, inclusive, and Section 15-4-290:

1. At least 21 years of age;
2. Able to understand and speak the English language;
3. Of temperate habits;
4. Familiar with the provisions of the law and the regulations governing the use and handling of the material involved;
5. Is familiar with the risks incident to the service performed by him and capable of taking all necessary precautions.

The licensee shall notify the fire commissioner in case of change of personnel among those designated to have direct charge of the operation. When new names are submitted for such persons, similar certificates shall be made by the licensee as to the above mentioned and special qualifications for such person or persons so substituted.

(Prior code § 90-24; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 5-18-16, p. 24131, § 67)

15-4-270 Acetylene gas.

A certificate of fitness shall be required before any operation shall begin under a license for the collecting or compressing of acetylene gas at any pressure in excess of 15 pounds per square inch.

(Prior code § 90-25)

15-4-280 Liquefied fume hazard gases.

No liquefied fume hazard gas in single-unit tank cars shall be used, stored or handled unless in the direct charge of a person possessing a certificate of fitness. The annual fee for such certificate shall be $15.00.

The licensee shall also certify that the person or persons are:

1. Familiar with and capable of applying and using emergency repair devices to control any leakage which may develop;
2. Familiar with and capable of applying and using gas masks and air or oxygen containers necessary to operate said masks.

(Prior code § 90-26)

15-4-290 Flammable liquid tank truck drivers.

Every driver of a motor tank vehicle conveying Class I flammable liquids, as defined in Section 15-24-020 of this Code, including those drivers of vehicles with loads originating outside the City limits for deliveries in the City, but not drivers of carriers holding certificates of public convenience and necessity, or permits as a contract carrier, issued by the Department of Transportation under federal Motor Carrier Act of 1935 as amended, shall be required to receive a certificate of fitness from the Fire Commissioner. The annual fee for such certificate of fitness shall be: originals – $5.00; renewals – $2.00, to be paid to the Comptroller.

In addition to the requirements outlined in Section 15-4-260 the applicant shall pass an examination conducted by the issuing officer upon the law and ordinance regulations governing the transportation, storage, and use of the flammable liquid to which his employment and services relates.

(Prior code § 90-27; Amend Coun. J. 11-16-11, p. 13798, Art. I, § 11; Amend Coun. J. 5-18-16, p. 24131, § 68; Amend Coun. J. 11-7-18, p. 88803, § 35)

ARTICLE V. BLASTING AND EXPLOSIVES (15-4-300 et seq.)

15-4-300 General requirements.

No person shall engage in blasting operations or in any other activity using explosives, or shall have, keep, sell, use, give away, or handle in transit any black powder in excess of five pounds, guncotton, blasting powder, giant powder, dynamite, nitroglycerine, fulminate of mercury or any other explosives, or any substances, compound, mixture or article having properties of such a character that alone, or in combination or contiguity with other substances or compounds, may decompose suddenly and generate sufficient heat, gas or pressure, or all of them, to produce rapid flaming combustion or administer a destructive blow to persons or property; nor shall any person keep, sell, give away, offer for sale or transport, any loaded paper shells, metallic shot, loaded cartridges, blank cartridges, percussion caps, primers, or detonators, nor keep or store flashlight powder in excess of five pounds within the corporate limits of the city or on or in the waters of Lake Michigan, including all breakwaters, piers and permanent and temporary structures therein for a distance of four miles from the shore between the north and south lines of the city extended except in the manner and upon the conditions hereinafter provided in Chapter 15-20 and without first obtaining a license therefor.

(Prior code § 90-28)

15-4-310 License application and certificate of fitness.

(a) *License application.* A written application for a license under this chapter shall be made to the commissioner of business affairs and consumer protection in conformity with the general requirements of this Code relating to applications for licenses. In addition, the applicant shall set forth the location at which it is desired or intended to keep such explosives, or any other substance mentioned in the preceding section, the maximum amount of such explosives, or any of them intended to be kept on hand at any one time at such place, and shall state whether such explosives are to be kept in bulk or in barrels, canisters, or other containers, and the number of loaded shells, loaded cartridges, blank cartridges, percussion caps, primers or detonators, or the number of pounds of flashlight powder, intended to be kept on hand at any one time in such place. Any applicant engaging in blasting operations or in any other activity using explosives shall further state in his application the nature of the work to be performed, the site of the proposed work, the location of the magazine in which it is intended to keep such explosives, and the quantity and kind of explosives to be kept therein.

Upon request from the commissioner of business affairs and consumer protection, the fire commissioner shall make, or cause to be made, an investigation for the purpose of ascertaining whether the place at which it is desired or intended to keep, sell, offer for sale, use or give away such explosives or other aforementioned substances is so situated that a license to keep such loaded paper shells, metallic shot, loaded cartridges, blank cartridges, percussion caps, primers, detonators or flashlight powder in the quantity desired would not be so dangerous as to constitute a nuisance or be a menace to the safety of the public or of adjoining property, and also whether the conditions under which such explosives, cartridges, percussion caps, flashlight powder, or any of them, are to be kept or handled shall be such as to provide the maximum of safety.

Licenses issued pursuant to this chapter shall have a term of two years.

(b) *Certificate of fitness.* Before any operation shall begin under a license for the transportation of any explosives, or for the use of explosives in any manner, or for blasting, the licensee shall file with the fire commissioner, in writing, the name or names of the person or persons designated by the fire commissioner to handle said explosives or to load holes or discharge explosives, to prepare charges and load the holes, to transport by vehicle or otherwise, or to have the care of magazines.

Any such person, before being permitted to exercise any of such functions, shall file a written application with the fire commissioner for a “certificate of fitness”, and before the issuance of any such certificate the fire commissioner shall examine such applicant as to his qualifications to fill such position or positions, under the conditions herein described. No person shall be permitted to have the actual care and handling of such explosives without first having obtained a certificate of fitness as herein provided. Such certificate of fitness shall be subject to inspection by any member of the fire and police departments at all times.

To receive a certificate of fitness the person must:

(1) Be at least 21 years of age;

(2) Be able to understand and speak the English language;

(3) Have letters of recommendation from his last two employers (if any), and, if he has not been in the service of his last employer for at least three years, a letter testifying to his good character and capacity from his last employer;

(4) Be familiar with the laws and the provisions of this Code governing the transportation, storage and use of explosives, particularly the part relating to the service to be performed by the applicant; and

(5) Be familiar with the risks incident to the service to be performed by him, and capable of taking all necessary precautions.

Nothing herein contained shall prevent a licensee from applying for and obtaining a certificate of fitness if entitled to the same under the provisions of this section. The actual work done must at all times be conducted by a person holding a certificate of fitness.

(Prior code § 90-29; Amend Coun. J. 7-27-05, p. 53211, § 1; Amend Coun. J. 11-19-08, p. 47220, Art. V, § 5; Amend Coun. J. 5-18-16,

p. 24131, § 69; Amend Coun. J. 2-22-17, p. 43916, Art. IV, § 1)

15-4-320 License fee.

The fee for each license and certificate of fitness issued pursuant to the provisions of this chapter shall be as set forth in Section 4-5-010.

(Prior code § 90-30; Amend Coun. J. 2-22-17, p. 43916, Art. IV, § 2)

15-4-330 Bonds.

Each applicant for a license under this chapter shall furnish and file with the fire commissioner a proof of general liability and property damage insurance issued by an insurer authorized to underwrite risks in this state, and with a Best's rating of A-11 or better. The insurance policy shall be maintained in full force and effect at all times throughout the duration of the license period, provide for notice to the city comptroller 30 days prior to cancellation of the policy, and shall provide for the payment of any loss, damage or injury resulting to persons or property by reason of the use, sale or keeping of such explosives, and for the strict observance of the provisions of this Code relating to explosives and substances referred to in Section 15-4-300. The insurance shall be subject to the approval of the city comptroller and shall be filed in the office of the comptroller. Any violation of the insurance requirements of this section shall subject the violator to suspension or revocation of the license. Insurance shall be in the amounts as follows:

For manufacturers, agents and all others who desire to bring to, or sell within, the corporate limits of the city such explosives as are designated in Section 15-20-010, insurance in the amount of $3,000,000.00 per person and $10,000,000.00 per occurrence; in case of delivery being made by vehicles, additional charge of $1,000,000.00 per person and per occurrence for each and every vehicle in excess of one vehicle engaged within the city in the delivery of such explosives. Provided, however, no insurance shall be required from any person receiving a license for the sole purpose of keeping, selling or giving away, within the city, loaded paper shells, metallic shot, loaded cartridges, or blank cartridges designed or intended to be used in shotguns, pistols, rifles or firearms, as specified in Section 15-4-300 where the total amount of such loaded paper shells, metallic shot, loaded cartridges or blank cartridges does not exceed 25,000.

For all contractors or others now engaged in, or purporting hereafter to engage in, any activity involving explosives or blasting operations, commercial general liability insurance shall be required in the amount not less than $3,000,000.00 per person and $10,000,000.00 per occurrence for bodily injury, personal injury and property damage, for the payment of any loss, damage or injury resulting to persons or property by reason of the use, keeping, sale or transporting of explosives; and the city shall be named as additional insured on a primary, noncontributory basis for any liability arising directly or indirectly from the contractor's operations.

(Prior code § 90-31; Amend Coun. J. 3-23-94, p. 47131; Amend Coun. J. 5-9-12, p. 27485, § 181; Amend Coun. J. 10-28-15, p. 11951, Art. VI, § 46; Amend Coun. J. 5-18-16, p. 24131, § 70; Amend Coun. J. 11-16-16, p. 37901, Art. II, § 48)

15-4-340 Reserved.

Editor's note – Coun. J. 2-22-17, p. 43916, Art. IV, § 3, repealed § 15-4-380, which pertained to certificate of fitness. See now § 15-4-310.

15-4-350 Inspection.

The fire commissioner shall appoint one or more inspectors whose duty it shall be to make frequent inspection of all premises and work of all licensees. Said inspection shall include: (1) detailed and exact examination of the manner in which licensees are complying with the provisions of Chapter 15-20, and (2) a statement as to whether all due and reasonable precautions to avoid accidents are being taken, and (3) a verification that all employees who are performing work for which a certificate of fitness is required are in possession of such certificate. Each inspector shall make a report in writing to the fire commissioner at the close of each day's inspection, stating conditions observed, and such reports shall be kept on file by the fire commissioner.

(Prior code § 90-33; Amend Coun. J. 12-15-92, p. 27387; Amend Coun. J. 5-18-16, p. 24131, § 72)

15-4-360 Sales to other than licensees.

It shall be unlawful for any person, or his agent or employee, to sell, offer for sale, or give to any person for purposes of sale any of the substances or explosives mentioned in Section 15-4-300 unless such person receiving such substances shall have procured and be in possession of a license as required by this chapter; provided, however, that the provisions of this section shall not apply to flashlight powder or black powder where the amount involved is less than five pounds.

(Prior code § 90-34)

15-4-370 Weekly report of sales.

Any person selling, offering for sale, or giving away any of the aforementioned substances or explosives to any person within the city shall file a weekly statement of such sales or deliveries with the fire commissioner. Such statement shall be verified as to its correctness by an affidavit and shall specify the deliveries for the preceding week for use within the city and in detail as follows:

(a) Date of delivery;

(b) Name of buyer;

(c) Point of delivery;

(d) Number of pounds, name, character, kind and strength of explosives.

Such statements shall be on forms provided by the fire commissioner, and shall be delivered by mail or messenger not later than the second business day in each week.

(Prior code § 90-35; Amend Coun. J. 5-18-16, p. 24131, § 73)

15-4-380 Reserved.

Editor's note – Coun. J. 5-24-06, p. 76974, § 6, repealed § 15-4-380, which pertained to analysis of explosives.

15-4-390 Submission of samples.

No license shall be granted to any person engaged in the use or sale of dynamite or other explosive until such dealer, contractor or other person heretofore referred to, shall first submit to the chemist for analysis a sample of such dynamite or any other explosive sought to be used or sold, and whenever such chemist shall certify that such sample is of standard purity and quality, a license shall be issued, if all other requirements heretofore prescribed are complied with.

It shall be the duty of the inspector from time to time to bring a sample of dynamite or other explosives sold or used by licensees, and to submit such sample to the chemist, who shall analyze and test same, and if it shall be found that such sample is not of standard purity and quality, the license of such licensee shall be revoked by the mayor.

(Prior code § 90-37)

15-4-400 Permit for blasting.

Every person engaged in, as principal, or connected with, any activity involving explosives or blasting operations, shall make an application to the fire commissioner for a permit to keep and use explosives, giving at the time, in writing, the name of the licensee, location of the office or place of business, occupation, proposed location of the magazine, together with plans and descriptions of the construction of such magazine, the quantity and kind of explosives proposed to be kept therein, and the names of the employees required to have certificates of fitness.

If the proposed location of the magazine shall be satisfactory to the fire commissioner, the fire commissioner shall approve such application and transmit the same with his approval thereon to the city clerk, who shall, upon payment by such applicant to the comptroller of a permit fee of $5.00, issue to such applicant a permit to locate the magazine at the location given in such application.

It shall be unlawful for any licensee to move or cause to be moved any magazine, after having received a permit for the use of same, until such licensee shall make a new application to the fire commissioner for permission so to do and shall have secured a permit for such purpose, and every application for such permit shall specify the place at which it is desired to locate the magazine proposed to be moved.

The fire commissioner shall recommend the revocation of any permit issued to blast rock or any other substance for noncompliance with any of the provisions of this section.

(Prior code § 90-38; Amend Coun. J. 11-16-11, p. 13798, Art. I, § 11; Amend Coun. J. 5-18-16, p. 24131, § 74)

ARTICLE VI. LIQUEFIED PETROLEUM GAS TANKS (15-4-410 et seq.)

15-4-410 Application and permit.

Before installing a permanent fixed liquefied petroleum gas tank greater than 2,000 gallons individual water capacity or when the aggregate water capacity exceeds 4,000 gallons, the owner, lessee or agent of the premises where the tank is to be installed shall file with the fire commissioner a written application for permission to install said tank. The application shall set forth the location of the tank, the purpose for which the gas is to be used, the nature of occupancy, the dimensions, specifications and capacity of the tank and such other information as may be required. The application shall have affixed a statement, signed by the installer, stating that the tank, devices, equipment and safety clearances conform to the provisions of this Code. Attached to the application shall be a plat, drawn to scale, showing the location of the tank, all adjoining streets, alleys, railroads, building, occupancies and premises within 300 feet of the tank.

For installation of systems utilizing containers 2,000 gallons water capacity or less or 4,000 gallons aggregate capacity or less, the following procedure should be followed. A supplier having a valid liquefied petroleum gas supplier's certification as hereinafter provided shall file within three days with the fire commissioner a certification that the system and its installation complies with the requirements of this Code. The system can be filled and used upon the filing of such certification.

If the tank is designed in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section VIII Unfired Pressure Vessels, the fire commissioner shall, upon receiving the application and plat, submit the application to the department of buildings for zoning approval, and for approval of the tank and all equipment subject to pressure.

Upon receipt of the approval of the department of buildings, if required, the fire commissioner shall make, or cause to be made, an inspection of the site where said tank is to be installed to determine whether or not said location provides the safety clearance required by Chapter 15-26.

Upon satisfactory evidence that the site, tank and equipment as described in the application, specifications and plat conform to the provisions of the chapter, the fire commissioner shall issue to said applicant a permit for the installation of the tank. Upon the completion of the installation and before any liquefied petroleum gas has been put into the tank or container, the applicant shall notify in writing the department of buildings and the fire commissioner that the installation is ready for final external inspection. Upon receipt of the reports from the department of buildings and applicable fire department bureau that the installation has been approved, the fire commissioner shall issue to the owner, lessee or agent or other person in charge of the property, a certificate stating that the installation conforms to the provisions of this Code.

All tanks, cylinders, containers, valves, piping, devices and equipment for such gas shall conform to the requirements given in the National Fire Protection Association's Pamphlet 58 entitled "Liquefied Petroleum Gases, 1972 Edition", unless specifically covered in Chapter 15-26 of this Code.

(Prior code § 90-39; Amend Coun. J. 9-13-89, p. 4604; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 3-5-03, p. 104990, § 41; Amend Coun. J. 11-13-07, p. 14999, Art. II, § 1; Amend Coun. J. 5-18-16, p. 24131, § 75; Amend Coun. J. 4-10-19, p. 100029, Art. VIII, § 10)

15-4-420 Temporary portable and fixed installations.

Temporary fixed or temporary portable liquefied petroleum gas systems, as hereinafter defined, may be installed and shall be used only in construction, repair and alterations operations as herein provided. A “temporary fixed liquefied petroleum gas system” shall be defined as a system using piping, tubing and devices which are installed and maintained in a fixed position during its period of use.

A temporary portable liquefied petroleum gas system shall be defined as a liquefied petroleum gas system using piping, tubing, and devices which may be moved from place to place on the premises during its period of use.

A temporary fixed liquefied petroleum gas system shall not be used, unless first inspected for compliance with the applicable requirements of Chapter 15-26 of this Code by a supplier having a valid liquefied petroleum gas suppliers' certification as hereinafter provided. The supplier shall certify, within three days, to the fire commissioner that the temporary fixed system complies with the requirements of this Code.

Every liquefied petroleum gas supplier shall make available on call repair crews to respond to any emergency involving liquefied petroleum gas or equipment supplied by them.

Every liquefied petroleum gas supplier shall notify, within three days, the fire commissioner that liquefied petroleum gas has been sold or delivered to any firm or site.

A liquefied petroleum gas supplier's certification shall be issued to any supplier who demonstrates to a board, hereinafter established, that he has knowledge of the applicable provisions of this Code.

There is hereby established a board which shall pass upon the qualifications of applicants desiring to be certified as a liquefied petroleum gas supplier. The board shall consist of the deputy fire commissioner in charge of the bureau of fire prevention, the chief fire prevention engineer of the bureau of fire prevention, and a person selected by the deputy fire commissioner who is experienced in handling of liquefied petroleum gas and has the recommendation and approval of the National Liquefied Petroleum Gas Association.

Said board shall have the power to certify any liquefied petroleum gas supplier having a knowledge of the provisions of this Code concerning liquefied petroleum gas. Said board shall have the power to revoke any certification of any supplier who violates the provisions of this Code as well as for any other just cause.

(Prior code § 90-40; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 5-18-16, p. 24131, § 76)

ARTICLE VII. FIRE EXTINGUISHER SERVICEMEN (15-4-430 et seq.)

15-4-430 Board of examiners.

There is hereby established a board of examiners which shall pass upon the qualifications of applicants desiring to be licensed as fire extinguisher servicemen to charge, fill, maintain, recharge, refill, repair and test fire extinguishers. The board shall consist of three members as follows: the deputy fire commissioner in charge of the bureau of fire prevention, the chief fire prevention engineer of the bureau of fire prevention, and a person selected by said deputy fire commissioner who is experienced in the work of servicing fire extinguishers and has the recommendation and approval of at least one organization in the fire equipment field.

(Prior code § 90-41; Amend Coun. J. 5-18-16, p. 24131, § 77)

15-4-440 Duties and powers.

The board of examiners shall prescribe and hold written examinations for applicants for fire extinguisher serviceman licenses and practical tests of the applicant's knowledge of fire extinguishers and how to service them. Said board shall issue licenses to qualified applicants. The board is authorized to impose a reasonable fee for the administration and processing of such written examinations and practical tests and for issuing fire extinguisher serviceman licenses under this Article VII. The board is empowered to revoke the license of any licensee who fails to properly service a fire extinguisher, or for any other just cause.

(Prior code § 90-42; Amend Coun. J. 5-18-16, p. 24131, § 78)

15-4-450 License required.

No person shall engage in the business of servicing fire extinguishers without first having obtained a license as provided in this Article VII.

(Prior code § 90-43; Amend Coun. J. 5-18-16, p. 24131, § 79)

15-4-460 License application.

Every applicant for a license as a fire extinguisher serviceman shall file with the board of examiners a written application, signed by the applicant, stating the applicant's address, age, present occupation, business activities during the previous five years, experience with the repair, recharging, testing and use of fire extinguishers, knowledge of the ordinances pertaining to fire extinguishers and such other information as the board of examiners may deem to be necessary or appropriate.

Every application shall be accompanied by two one-inch by one-inch prints of a bust photograph of the applicant.

(Prior code § 90-44; Amend Coun. J. 5-18-16, p. 24131, § 80)

15-4-470 Issuance of license.

A license shall be granted to all qualified applicants who have passed the examinations required under Section 15-4-440 and who have delivered to the fire commissioner satisfactory evidence of the existence of a commercial general liability insurance policy issued by an insurance company authorized to insure in Illinois, insuring the public in an amount of not less than $300,000.00 per occurrence for bodily injury, personal injury and property damage arising in any way from the issuance of the license or activities conducted pursuant to the license. The insurance coverage shall include products and completed operations liability. The insurance policy required under this section shall: (1) name the City of Chicago as additional insured on a primary, noncontributory basis for any liability arising directly or indirectly from the licensee's operations; and (2) be in full force and effect throughout the duration of the license.

(Prior code § 90-45; Amend Coun. J. 5-18-16, p. 24131, § 81; Amend Coun. J. 11-16-16, p. 37901, Art. II, § 49)

15-4-480 License fee.

Upon approval by the board of examiners of an application for a license under this Article VII and the acceptance by the fire commissioner of the commercial general liability insurance policy, fire commissioner shall forward such approved application to the comptroller. Upon payment of an annual license fee of $30.00, a license shall be issued. Such license shall expire on the thirty-first day of December of the year in which it is issued. The fire commissioner shall cause all licensees' information to be kept on a database readily accessible by first response agencies.

(Prior code § 90-46; Amend Coun. J. 12-15-92, p. 27387; Amend Coun. J. 11-16-11, p. 13798, Art. I, § 11; Amend Coun. J. 5-18-16, p. 24131, § 82; Amend Coun. J. 11-16-16, p. 37901, Art. II, § 50)

15-4-490 License renewal.

Any license issued under this Article VII may be renewed upon payment of an annual renewal fee of $50.00. Any change of address of the licensee or any change of licensee's employer shall be reported within ten days to the fire commissioner.

(Prior code § 90-47; Amend Coun. J. 12-15-92, p. 27387; Amend Coun. J. 5-18-16, p. 24131, § 83)

15-4-500 Violation – Penalty.

Any person who violates any provision of Sections 15-4-430 to 15-4-490, inclusive, shall be fined not more than $200.00 for each offense.

(Prior code § 90-48; Amend Coun. J. 5-18-16, p. 24131, § 84)

15-4-510 Rules and regulations.

The fire commissioner, at his discretion, may make or cause to be made an inspection of the contents and working condition of any fire extinguisher, and may promulgate such reasonable rules and regulations as the fire commissioner deems necessary or appropriate to carry out the purposes of the provisions of Sections 15-16-620 to 15-16-680, inclusive, and Sections 15-4-430 to 15-4-510, inclusive.

(Prior code § 90-49; Amend Coun. J. 5-18-16, p. 24131, § 85)

ARTICLE VIII. OTHER LICENSE REQUIREMENTS (15-4-520 et seq.)

15-4-520 Other licenses and permits required.

For the licensing and permit requirements covering the following occupancies, refer to the chapter indicated:

Adult family care home, 4-6;

Assisted living establishment, 4-6;

Public places of amusement, 4-156;

Drug, chemical or paint stores (wholesale), 4-6;

Dry cleaners and spotters, 4-6;

Filling stations, 4-108;

Long-term care facilities, 4-6;

Manufacturing establishments, 4-224;

Motor vehicle repair, 4-228;

Motor vehicle storage and sales, 4-232;

Day care centers, 4-75;

Recycling facilities, 11-4;

Roofers, 4-256;

Warehouses, 4-364;

Solid and liquid waste handling and disposal; 11-4;

Junk facilities, 11-4.

(Prior code § 90-50; Amend Coun. J. 6-14-95, p. 2841; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 10-7-98, p. 78812; Amend Coun. J. 5-9-12, p. 27485, § 182; Amend Coun. J. 11-8-12, p. 38872, § 231)

ARTICLE IX. PERMITS. (15-4-530 et seq.)

15-4-530 Matches.

No person shall manufacture, transport, store or sell matches exceeding in aggregate 60 matchman's gross (14,400 matches each gross) without securing a permit from the fire commissioner.

(Prior code § 90-51; Amend Coun. J. 5-18-16, p. 24131, § 86)

15-4-540 Application.

Application for the permit required under Section 15-4-530 shall be made to the fire commissioner in writing and shall set forth in detail the location or proposed storage or place of sale or method of transportation of the matches, and the character of building construction, location of storage or place of sale within the building where the matches will be stored or sold, and the kind of matches involved and type of containers in which the matches will be placed. If, after an inspection of premises, the provisions of this Code are found to have been complied with, a permit shall be issued by the fire commissioner.

(Prior code § 90-52; Amend Coun. J. 5-18-16, p. 24131, § 87)

15-4-550 Fireworks.

The fire commissioner may, upon due application, issue a permit to a properly qualified person for giving a display of fireworks on privately owned property. The applicant shall give written notice to the alderman of the affected ward ten days prior to the date of application for such permit. The application shall be filed with the fire commissioner, and shall include the following information: (1) the written consent of the alderman of the affected ward; (2) the written consent of the owner of the property where the applicant proposes to give the display; (3) proof that the applicant is in compliance with all provisions of the Illinois Pyrotechnic Operator Licensing Act, as amended; (4) proof that the applicant is in compliance with the Illinois Fireworks Use Act, as amended; and (5) proof of commercial general liability insurance, in an amount not less than $1,000,000.00 per occurrence for bodily injury, personal injury and property damage, issued by an insurer authorized to insure in Illinois. The City of Chicago and its officers and employees shall be named as additional insured on a primary, noncontributory basis for any liability arising directly or indirectly from the permittee's operations. The insurance policy shall provide for notice to the fire commissioner no less than 72 hours prior to cancellation or lapse of coverage. If the proposed location of the display is licensed for the retail sale of alcoholic liquor for consumption on the premises, the applicant shall also include proof of the licensee's compliance with Section 6-32(a) of the Illinois Liquor Control Act, as amended. No display of fireworks shall be permitted between the hours of 11:00 P.M. and 6:00 A.M. In no case shall any display of fireworks be conducted unless the site meets safety standards set by the fire commissioner. The fire commissioner shall promulgate such safety standards as needed to determine if a proposed site has the proper safety equipment, personnel and procedures necessary to conduct a fireworks display. The safety standards shall be no less stringent than those adopted by the state fire marshal. The fire commissioner may impose additional specific conditions related to unique conditions of the property where an indoor display is proposed.

(Prior code § 90-53; Amend Coun. J. 12-13-95, p. 13845; Amend Coun. J. 2-10-99, p. 89142; Amend Coun. J. 9-4-03, p. 6950, § 1; Amend Coun. J. 10-28-15, p. 11951, Art. VI, § 47; Amend Coun. J. 5-18-16, p. 24131, § 88; Amend Coun. J. 11-16-16, p. 37901, Art. II, § 51)

15-4-560 Certificate of fitness.

Every person conducting or in charge of any public display of fireworks as herein provided for shall be in possession of a certificate of fitness, as provided for in Section 15-4-340 of this Code.

Every applicant shall also file an indemnity bond running to the city in the sum of $10,000.00 to indemnify the city against any and all claims arising through or because of such display. Such bond shall be subject to the approval of the city comptroller and shall be filed in the office of the comptroller.

(Prior code § 90-54)

15-4-570 Permit fee.

The permit fee for each display on public or private property shall be $200.00.

(Prior code § 90-55; Amend Coun. J. 12-15-92, p. 27387; Amend Coun. J. 11-14-18, p. 90376, Art. V, § 1)

ARTICLE X. SCENERY AND DECORATIONS (15-4-580 et seq.)

15-4-580 Definitions.

The provisions of Sections 15-4-580 to 15-4-630 both inclusive, shall apply to pre-ordinance buildings, existing building and buildings hereafter constructed.

The words “scenery and decorations” are hereby defined as any stage materials, paraphernalia, scenery, decorations, drapes, curtains or similar material used for decorative effect or stage settings.

Any material used as scenery and decorations which will neither support combustion nor carry a flame when subjected to a temperature of 1,200 degrees Fahrenheit shall not be classed as scenery and decorations and shall not be governed by the following regulations

pertaining to scenery and decorations. Such materials shall include scenery and decorations made entirely of metal or asbestos or 100 percent spun glass fibers or metal and asbestos with all attachments, supports and framing of metal.

(Prior code § 90-56)

15-4-590 Combustible scenery and decorations.

Any material used as scenery and decorations which will either support combustion or carry a flame when subjected to a temperature of 1,200 degrees Fahrenheit for a period of not less than ten minutes shall be classed as scenery and decorations and shall be governed by the following regulations pertaining to scenery and decorations.

(Prior code § 90-57)

15-4-600 Test standard.

Any material, which does not comply with Section 15-4-590 and is used as scenery and decoration shall meet the requirement of the large and small scale tests given in the National Fire Protection Association's Pamphlet No. 701 entitled *Standard Methods of Fire Tests for Flame Resistant Textiles and Films*, 1973 Edition, and be so certified by a testing agency recognized by the fire commissioner. The large-scale test shall be used whenever the material will be hung in folds or whenever the small test reveals that the material is subject to excessive melting or shrinking. The small test shall be used in all other instances.

(Prior code § 90-58; Amend Coun. J. 5-18-16, p. 24131, § 89)

15-4-610 Wall area and school stages.

For the purpose of determining the amount of scenery and decorations permitted in any premises, the words “wall area” are hereby defined as the sum of the areas of the ceiling and enclosing walls of the room, auditorium or part of the building in which such scenery and decorations are located, including the areas of all openings through such ceiling and enclosing walls. Except as hereinafter provided for curtains, portable screens, and projection screens on the stages of schools, all scenery and decorations used as stage settings in any type of occupancy shall be located within a Type 2 stage as defined and regulated in Chapter 13-84 of this Code or a stage as defined in Chapter 14B-2 and regulated in Section 14B-4-410 of this Code.

On school stages which are not equipped as required by the provisions of Chapter 13-84 or 14B-4 of this Code, as applicable, it shall be permissible to use a pair of sliding curtains hung on horizontal metal rods not more than 12 feet above the floor of the stage and portable screens set on the floor. Said screens shall be not more than eight feet in height. On such stages located on the first or ground floor of a school of fireproof construction, it shall be permissible to use not more than four curtains hung from the top of the proscenium arch or from the ceiling. In addition, necessary projection screens may be used on such school stages. All such scenery and decorations, before being used, shall be treated with a flame-retardant solution, and thereafter continuously maintained, so that they will be capable of withstanding the test for scenery and decorations given in Section 15-4-600 of this Code.

No scenery or decorations in excess of the amount necessary as stage settings or the current production shall be stored or kept in any theater.

(Prior code § 90-59; Amend Coun. J. 4-10-19, p. 100029, Art. VIII, § 11)

15-4-620 Institutional public assembly, church, school and theater.

Excepting the aforesaid provisions for scenery and decorations on the stages of schools and within Type 2 stages, all decorations and scenery in every institutional building, public assembly unit, general sales unit, church, school or theater shall conform to the following requirements:

1. Before being used, all scenery and decorations shall have been so treated with a flame-retardant solution and continuously maintained in such condition as to pass the test for scenery and decorations given in Section 15-4-600 of this Code;

2. No scenery and decorations shall be so hung or applied as to conceal any means of exit nor to reduce the width of any exit nor to give the appearance of an exit where none exists;

3. Not more than five percent of the wall area of any auditorium or room in any of the buildings mentioned in this section shall be covered by scenery and decorations;

4. No one article of scenery and decoration shall cover more than three percent of said wall area.

(Prior code § 90-60)

15-4-630 Open flame devices.

All open flame devices used for illumination or decorative purpose shall be in suitable noncombustible holders and be placed in such a manner that they will not ignite any combustible material or constitute a dangerous hazard or condition.

(Prior code § 90-61)

ARTICLE XI. EXHIBITIONS AND SHOWS (15-4-640 et seq.)

15-4-640 Fireguard requirements.

It shall be the duty of the promoter, show manager or person in charge of any show, display, convention, contest, social function, exhibition, or similar activity (for purposes of this section, the “event”) to provide, at his own expense, special fireguards for such

activities. While on duty the special fireguards shall wear such uniform and badges as the fire commissioner may prescribe and shall carry on their person the license issued under the provisions of Section 15-4-680. Special fireguards shall be subject to the orders of the fire commissioner at all times while the special fireguard is on duty. The number and locations of such fireguards shall be determined by the following methods:

1. During such time the event is open for business or activity, one special fireguard shall be provided for each 25,000 square feet of exhibition or show area including the storage space used by the show or exhibition.

2. During such time the event is closed for business, such as the nighttime hours and during the move-in and move-out periods of the event one, special fireguard shall be provided for each 50,000 square feet of exhibition or show area including the storage space used by the show or exhibition.

3. Depending upon the nature of the event, the anticipated attendance, the nature of the audience or in cases where the number of floors or levels of exhibition at the event make compliance with items 1 and 2 of this section inadequate, the fire commissioner may, at his discretion, require additional special fireguards.

4. Notwithstanding the foregoing paragraphs 1, 2 and 3 of this section, and subject to review and approval of the fire commissioner, the Metropolitan Pier and Exposition Authority (M.P.E.A.) shall be responsible for determining the appropriate number and location of fireguards to be provided at the McCormick Place Convention Complex and at Navy Pier Festival Hall, as long as those facilities are owned and operated by M.P.E.A. M.P.E.A's authority to make this determination is subject to its compliance with the following conditions: (a) maintaining a fire prevention staff of at least 25 employees certified by the State of Illinois as Firefighter II and as emergency medical technicians; and (b) maintaining a security staff of at least 120 employees registered with the city as fireguards available for events at the named M.P.E.A. facilities, to function in the capacity as fireguards available for events at the named M.P.E.A. facilities; and (c) maintaining the capacity to contract for additional fireguards as may be necessary for any event or series of events at the named M.P.E.A. facilities; and (d) documenting and submitting to the fire commissioner the number and location, and other such information as the fire commissioner may require, of fireguards for each event at M.P.E.A. facilities no later than 30 days prior to the event. At all times, when an event is ongoing, there shall be an adequate number of fireguards. When the event consists of 25,000 square feet or more, there shall be at least one fireguard assigned to the event. Such fireguards shall be placed in appropriate locations, subject to review and approval of the fire commissioner. There shall also be an adequate number of fireguards during nighttime hours and move- in and move-out periods. If, at any time, in the opinion of the fire commissioner, the number and location of the fireguards is insufficient at the named M.P.E.A. facility, the fire commissioner shall order additional fireguards placed on duty. The fire commissioner shall consider, in determining the appropriate number of fireguards, the square footage of the event, the materials and equipment to be used during the event, the number of event attendees, and exit and aisle configuration of the exhibits. The fire commissioner may also consider additional factors as are necessary or appropriate to ensure public safety.

(Prior code § 90-62; Amend Coun. J. 7-10-02, p. 90060, § 1; Amend Coun. J. 11-8-12, p. 38872, § 232; Amend Coun. J. 5-18-16, p. 24131, § 90)

15-4-650 Watchman clocks and keys.

It shall also be the duty of the promoter, show manager, or person in charge of any activity requiring special fireguards to provide sufficient listed portable watchmen's clocks and keys so that regular hourly rounds shall be made. The location of the keys shall be designated by the fire commissioner.

(Prior code § 90-63; Amend Coun. J. 5-18-16, p. 24131, § 91)

15-4-660 Fireguard duties.

It shall be the duty of the fireguard to see that all exit doors are unfastened and unobstructed, that the aisles, corridors, fire escapes and other means of egress are kept clear and free from all obstructions and, in the event of a fire, it shall be his duty to see that the fire department is notified and an orderly evacuation is started. He shall see to it that first aid fire appliances, including standpipe and hose connections, are in place, properly identified, unobstructed, and in working order and that the fire prevention provisions contained within this Code are adhered to.

(Prior code § 90-64)

15-4-670 Watchman tours.

During the time the event described in Section 15-4-640 is not open to the public, and during the time such event is being set up or dismantled, the fireguard shall make regularly scheduled rounds of his assigned areas on at least an hourly basis. Such areas shall be designated by the fire commissioner. Regularly scheduled rounds shall also be made of any storage area used by or during the event on a 24-hour basis while the storage area is occupied.

(Prior code § 90-65; Amend Coun. J. 5-18-16, p. 24131, § 92)

15-4-680 Fireguard license.

Any person who desires employment as a special fireguard shall make application for a license to the fire commissioner.

To receive such license the applicant must:

(a) Be of legal age, have temperate habits and be mentally competent;

(b) Not have any record of conviction for a felony charge;

(c) Be able to speak and understand the English language;

(d) Produce evidence of his employment or occupation and residence for the previous two years;

(e) Pass a written examination conducted by the issuing officer upon the laws and ordinances governing fire protection, operation of first aid fire equipment, upon the hazards and duties incident to the supervision of the safety of the persons and property to be accommodated, and any other related fire prevention items;

(f) Not have had any such certificate revoked;

(g) Furnish with the application for license two unmounted photographs of the applicant, no less than two inches by three inches, one of which shall be attached to the application, the other to the license when issued.

The fire commissioner shall examine all persons who seek employment as special fireguards; as to their qualifications and fitness for the duties for which they seek to be employed; and whenever the fire commissioner finds any such applicant to be competent, the fire commissioner shall, upon payment of $20.00 by the applicant to the comptroller, issue a license to such applicant. The fire commissioner may suspend for a period not to exceed 30 days or revoke any license at any time when the fire commissioner finds any special fireguard to be incompetent, inefficient or neglectful of the duties required of such special fireguard by the provisions of this Code. If such a license is revoked, the holder thereof, upon written request made to the fire commissioner, shall be given a hearing before said fire commissioner within 30 days after such revocation. No person shall employ anyone as a special fireguard whose license has been revoked or suspended.

(Prior code § 90-66; Amend Coun. J. 12-15-92, p. 27387; Amend Coun. J. 11-16-11, p. 13798, Art. I, § 11; Amend Coun. J. 5-18-16, p. 24131, § 93)

15-4-690 Submission of floor plan.

The promoter, show manager, or person in charge of any show, display, convention, contest, exhibition or similar activity shall submit in triplicate a diagram to the fire commissioner for approval, before any space is let and not less than 60 days prior to the opening of such event, indicating the arrangement of each booth, display area, aisles, means of exit and fire protection equipment. The diagram shall also show the amount and the type of drapes, hangings and other materials used for decorations or separations. One copy of the approved diagram shall be returned to the person in charge of such event and the others retained by the fire commissioner.

(Prior code § 90-67; Amend Coun. J. 5-18-16, p. 24131, § 94)

15-4-700 Submission of show description.

The promoter, show manager or person in charge of any show, display convention, contest, exhibition or similar activity shall submit to the fire commissioner a statement indicating the nature of the exhibits and especially those exhibits where flammable liquids, fume or explosion hazard gases, flammable materials and similar materials are intended to be used. All such exhibits shall comply with the applicable fire prevention provisions of this Code.

(Prior code § 90-68; Amend Coun. J. 5-18-16, p. 24131, § 95)

15-4-710 Storage of combustibles.

Combustible packing cases or cartons shall not be stored behind or between exhibit booths or behind draperies.

(Prior code § 90-69)

ARTICLE XII. STAGE FIREMEN AND FIREGUARDS (15-4-720 et seq.)

15-4-720 Requirements.

It shall be the duty of every person conducting, operating or maintaining any theater which is used regularly for motion picture, theatrical or vaudeville purposes and having a seating capacity of 300 or more persons, to procure and keep at his, their or its own expense, one adult male person as a special stage fireman and one adult male person as a fireguard, who shall wear such uniforms and badges as the fire commissioner may prescribe.

Such special stage fireman shall be kept on duty by every such person at every such theater conducted by him at least thirty minutes prior to the commencement of every performance and continuously thereafter during the entire time of such performance and until the entire audience shall have left the building; provided, however, that there shall be no necessity for the employment of a special stage fireman where the stage portion of any building is less than 72 square feet in area.

(Prior code § 90-70; Amend Coun. J. 5-18-16, p. 24131, § 96)

15-4-730 Duties of stage firemen.

It shall be the duty of the special stage fireman to see that all fire appliances on stage and above and below it, in the dressing rooms and throughout the basement of every such building used as theater are in their proper places and in good working order, that the tanks supplying the standpipes and sprinkler system are full of water; and that any ventilator above the stage is in good working order, to be determined by actually opening such ventilator(s) at least once in every two weeks. The result of such test shall be noted in daily reports hereinafter described. Such special stage firemen shall make daily reports in duplicate, in such manner and form as the fire commissioner shall prescribe which report shall be countersigned by the fireguard. The original of the said report shall be forwarded each day to the fire commissioner and the duplicate thereof shall be delivered to the owner of the theater where such special stage fireman is employed or to the person having the management thereof. Said special stage fireman shall be subject to the orders of the fire commissioner during such time as the theater shall be opened to or occupied by the public.

(Prior code § 90-71; Amend Coun. J. 5-18-16, p. 24131, § 97)

15-4-740 Duties of fireguard.

It shall be the duty of the fireguard to see that all exit doors are unfastened and unobstructed, and that the aisles, corridors and fire escapes are kept clear and free from all obstructions. In the event of a fire, it shall be the fireguard's duty to see that the operation of the ventilation system in the auditorium is discontinued, and the fireguard shall also perform such other duties as may be assigned to him by the fire commissioner. Such fireguard may in the discretion of the owner or manager of the theater wherein the fireguard is employed, act as chief usher or auditorium superintendent during performance.

(Prior code § 90-72; Amend Coun. J. 5-18-16, p. 24131, § 98)

15-4-750 Monthly reports.

It shall be the duty of any special stage fireman and fireguard to report in person to the fire commissioner at least once in each month. All special stage firemen and fireguards shall be subject to, and required to obey, such rules and regulations as the fire commissioner may prescribe governing the duties to be performed by special stage firemen and fireguards in conformity with this Code.

(Prior code § 90-73; Amend Coun. J. 5-18-16, p. 24131, § 99)

15-4-760 Other duties.

This part of this chapter dealing with stage firemen and fireguards shall not be construed so as to prevent the owner or manager of a theater employing special stage firemen or fireguards from assigning such person so employed to duties other than those herein enumerated when the theater is not open to the public.

(Prior code § 90-74)

15-4-770 License required.

The Fire Commissioner shall examine all persons who desire to seek employment as special stage firemen or fireguards as to their qualifications and fitness for the duties for which they seek to be employed. If the Fire Commissioner finds any such applicant to be competent, the Fire Commissioner shall, upon payment of $40.00 by the applicant to the Comptroller, issue a license to such applicant. The Fire Commissioner may revoke any such license at any time when the Fire Commissioner finds such special stage fireman or fireguard to be incompetent, inefficient, or neglectful of the duties required under this Article XII. Provided, however, that the Fire Commissioner shall give the licensee a reasonable opportunity to be heard before revocation. No person shall employ anyone as a special fireman or fire guard unless the person so employed is licensed as required in this section.

(Prior code § 90-75; Amend Coun. J. 12-15-92, p. 27387; Amend Coun. J. 11-16-11, p. 13798, Art. I, § 11; Amend Coun. J. 5-18-16, p. 24131, § 100; Amend Coun. J. 11-14-18, p. 90376, Art. V, § 2)

ARTICLE XIII. DESK CLERKS (15-4-780 et seq.)

15-4-780 Where required.

It shall be the duty of any person, firm or corporation who conducts, engages in, maintains, operates, carries on or manages a business or occupation where any public sleeping accommodations are furnished or maintained for 20 or more persons for a period of one day or more, including accommodations in single-room occupancy buildings, to retain and keep at his or their own expense at least one adult who has received a certificate of fitness as hereinafter provided as a desk clerk. Such desk clerk shall be kept on duty continuously during such times as the premises shall be open to or occupied by the public. Any employee at the premises meeting the qualifications set forth in Section 15-4-810 may file an application for certification as a desk clerk. In lieu of providing a desk clerk as required by this section, an Underwriters Laboratories listed central station supervisory service may be connected to the building fire alarm system. When such a service is used, the fire commissioner shall be furnished with a current certificate of contract for the central station supervisory service, and shall be notified within 24 hours of discontinuance of the service.

(Prior code § 90-76; Amend Coun. J. 5-4-94, p. 49750; Amend Coun. J. 5-18-16, p. 24131, § 101)

15-4-790 Certification.

The Fire Commissioner shall examine all persons who file an application for certification as desk clerks as to their qualifications and fitness for duties. If the Fire Commissioner finds such an applicant to be competent, the Fire Commissioner shall, upon payment by the applicant to the Comptroller of a $40.00 certification fee, issue a desk clerk certificate to such applicant, which certificate shall be valid for a period of one year from the date of its issuance. Every desk clerk shall keep said certificate on his person at all times while he is on duty, and said certificate shall be subject to inspection by any officer of the Fire, Police or Building Departments. Renewals of said certificates shall be subject to all the provisions of Sections 15-4-780 to 15-4-840 of this Code.

(Prior code § 90-77; Amend Coun. J. 12-15-92, p. 27387; Amend Coun. J. 11-16-11, p. 13798, Art. I, § 11; Amend Coun. J. 5-18-16, p. 24131, § 102; Amend Coun. J. 11-14-18, p. 90376, Art. V, § 3)

15-4-800 Suspension.

The fire commissioner may suspend for a period of not to exceed 30 days or revoke any certificate issued under Section 15-4-790 at any time when the fire commissioner finds any desk clerk to be incompetent, inefficient or neglectful of the duties required of desk clerks by the provisions of this Code. If such a certificate is revoked, the holder thereof, upon filing with the fire commissioner a written request for a hearing, shall be given a hearing before said fire commissioner within 30 days after such revocation.

No person shall employ anyone as a desk clerk whose certificate has been revoked or suspended.

(Prior code § 90-78; Amend Coun. J. 5-18-16, p. 24131, § 103)

15-4-810 Certification requirements.

Any person who desires to act as a desk clerk shall make application for a certificate to the fire commissioner. To receive such certificate the applicant must:

(a) Be of legal age, temperate habits and good moral character;

(b) Be able to speak and understand the English language;

(c) Produce evidence of his employment or occupation and residence for the previous two years;

(d) Pass an examination conducted by the fire commissioner upon the laws and ordinances governing fire protection, the operation of emergency first aid equipment, and upon the hazards and duties incident to the supervision of the safety of persons to be accommodated as provided in Section 15-4-780 hereof;

(e) Not have had any such certificate revoked;

(f) Furnish with the application for such certificate two unmounted photographs of the applicant, not less than two inches by three inches, one of which shall be attached to the application, the other to the certificate when issued.

(Prior code § 90-79; Amend Coun. J. 5-18-16, p. 24131, § 104)

15-4-820 Monthly reports.

Monthly reports concerning the premises and fire equipment shall be made and certified to by a certified desk clerk, in such manner and form as the fire commissioner shall prescribe, which report shall be countersigned by the desk clerk's immediate superior. The original of said report shall be forwarded before the fifth day of each month to the fire commissioner, and the duplicate thereof shall be delivered to the owner of the public sleeping accommodations where such desk clerk is employed, or to the manager of such accommodations or to the person exercising control thereof.

(Prior code § 90-80; Amend Coun. J. 5-18-16, p. 24131, § 105)

15-4-830 Duties.

It shall be the duty of the desk clerk daily to see that all exit doors are unfastened and unobstructed and that the corridors and fire escapes are kept clear and free of all obstructions; that all fire appliances in the rooms and throughout the premises are in proper place and in good working order. In the event of a fire, it shall be the desk clerk's duty to first notify the Chicago Fire Department of said fire immediately, and, thereafter, to spread the alarm to all occupants of the premises. The desk clerk shall obey and perform such other duties as may be prescribed by rules and regulations adopted, from time to time, by the fire commissioner.

Such desk clerk may, at the discretion of the owner or manager of the premises wherein he is employed, perform other duties during his hours of employment, provided the additional duties are not inconsistent with the duties herein set forth.

(Prior code § 90-81; Amend Coun. J. 5-18-16, p. 24131, § 106)

15-4-840 Violation – Penalty.

Any person violating any of the provisions of Sections 15-4-780 to 15-4-830 shall be fined not more than $200.00 for each offense, and each day such violation shall continue shall be regarded as a separate offense. In addition, such violation shall be cause for suspension or revocation of the certificate of the desk clerk.

(Prior code § 90-82)

ARTICLE XIV. THEATER SEATING (15-4-850 et seq.)

15-4-850 Diagram of theater exits and seats.

The owner, lessee or manager of any theater having a seating capacity of 300 persons or more shall cause to be printed on all programs furnished for any performance, on a page opposite to that on which the cast is printed, a diagram showing conspicuously the place of every exit from such building. This diagram shall be drawn to such a scale that the diagram shall cover the entire page on which it is printed. A diagram of the floor plans, showing the location of every seat on each floor and also the exits leading from each floor drawn to a scale on one-eighth inch to the foot, shall be posted in a conspicuous place outside the box office of such theater so as to be easily seen by the public.

(Prior code § 90-83)

15-4-860 Aisles for seats not permanently fastened.

Whenever seats, chairs, camp stools or benches are used in theater buildings or public assembly units and said seats, chairs, camp stools or benches are not permanently fastened or attached to the floor, all aisles, side aisles, front aisles and cross aisles shall be plainly marked out with white paint, whitewash or white tape or other suitable and distinguishing marks or markers, the width of the mark used to identify the aisles being not less than three inches.

(Prior code § 90-84)

ARTICLE XV. OBSTRUCTING EXITS OR OPEN AREAS (15-4-870 et seq.)

15-4-870 Locking doors.

It shall be unlawful to lock or fasten any door or other means of exit from any building, room or space, other than individual dwelling units, where persons are gathered during any of the time in which such space is so occupied, in any manner such as will not permit immediate opening from within of such means of exit without the use of a key and without special knowledge.

(Prior code § 90-85)

15-4-880 Obstruction of exits.

No person shall at any time place an encumbrance of any kind whatsoever before or in any exit way or before or upon any fire escape, balcony or ladder intended as a means of escape from fire. It shall be the duty of every member of the police and fire departments, who shall discover any fire escapes, balconies or ladders encumbered in any manner, to report forthwith to the fire commissioner and the said fire commissioner shall immediately notify the owner and the tenant to remove such encumbrances.

It shall be unlawful for any person to place, store or keep, or permit to be placed, stored or kept under or at the bottom of any stairway, inside or outside, elevator or other shaft in any building, any combustible or flammable materials, fluids or compounds, nor shall any such combustible or flammable materials be placed or stored or kept in any place where ignition or burning would obstruct or render hazardous, egress from a building. No obstruction shall be permitted in hallways of tenement houses or apartment houses.

All full width of doors, aisles and passageways within and leading into or out of theaters, churches and all other places of public assemblage shall be kept free from easels, signs, standards, campstools, chairs, sofas, benches, and any other article which would obstruct the width of the exit or delay the exit of the audience, congregation or assemblage during the entire time during which any show, performance, service, exhibition, lecture, concert, ball or other assemblage may be held, and it shall be unlawful for any person to sit or stand or remain seated or standing, or to allow any other person so to remain in any such place of public assemblage in any aisle under any circumstances, or in any exit or passage required for the safe exit of the assemblage. Clear passage from all exits and on all sidewalks must at all times be maintained outside of all theaters and other places of public assemblage.

No aisle, passageway or stairway in any store shall be obstructed with tables, showcases, or other obstructions during hours said store is open to the public.

It shall be the duty of the superintendent of police to render assistance in the enforcement of the provisions of this section, and to direct and require police officers to enter all places of public assemblage for such purposes.

(Prior code § 90-86; Amend Coun. J. 5-18-16, p. 24131, § 107)

15-4-881 Hotels and single-room occupancy units – Exit diagram.

In every hotel and every single-room occupancy two stories or more in height, a diagram, drawn to scale, shall be provided on the inside of the door to every unit showing the location of the exists from the floor on which the unit is located. Such diagram shall be made of a durable material and shall measure not less than eight inches high and ten inches long.

(Added Coun. J. 5-4-94, p. 49750)

15-4-890 Obstructing safety clearances.

Spaces required as safety clearances shall be maintained free of obstruction and encumbrance by any combustible material.

(Prior code § 90-87)

15-4-900 Arrangement of stocks and stores.

Stocks of all kinds shall be so arranged and maintained as not to obstruct any required means of exit and shall in no case extend above a level one foot and six inches below the ceiling of any sprinklered space.

(Prior code § 90-88)

ARTICLE XVI. FIRE DRILLS (15-4-910 et seq.)

15-4-910 Institutional buildings.

It shall be the duty of the institutional administrator or other person in charge of all institutional buildings to conduct fire drills, subject to the rules and regulations of the fire department. Such fire drills shall be practiced not less than once each calendar month that such building is used for institutional purposes.

(Prior code § 90-89; Amend Coun. J. 5-18-16, p. 24131, § 108)

15-4-920 Schools.

Every principal or other person in charge of an elementary school shall conduct fire drills in accordance with procedures established by the fire commissioner. Fire drills shall be conducted under the supervision of the Chicago Fire Department, not less than once in each calendar month during which a building is used for elementary school purposes.

(Prior code § 90-90; Amend Coun. J. 4-22-93, p. 31558; Amend Coun. J. 5-18-16, p. 24131, § 109; Amend Coun. J. 4-10-19, p. 100029, Art. VIII, § 12)

ARTICLE XVII. SMOKING RESTRICTIONS (15-4-930 et seq.)

15-4-930 Where restricted.

Smoking or the carrying of a lighted cigar, pipe or cigarette is prohibited:

(a) In every hazardous use room, building or premises;

(b) In every institutional building except in the administration office on the first floor and in rooms designated as smoking rooms;

(c) In every theater except in rooms designated as smoking rooms;

(d) In every church, school, garage or hangar;

(e) In every building or premises occupied as a circus, stock show or horse show; also in every public assembly unit where the combustible nature and quantity of contents are, in the opinion of the fire commissioner, hazardous to life and property from fire;

(f) For restrictions on smoking in mercantile occupancies, see Section 7-32-010 of this Code.

(g) In every lumberyard or lumber storehouse except in specific location designated as safe for smoking purposes.

(Prior code § 90-91; Amend Coun. J. 5-18-16, p. 24131, § 110)

15-4-940 “No Smoking” signs.

Standard “No Smoking” signs shall be conspicuously posted in every room, building or premises where smoking is prohibited. A standard “No Smoking” sign shall have a white field with the words “No Smoking” printed in red letters four inches high with one-half-inch face.

(Prior code § 90-92)

ARTICLE XVIII. MISCELLANEOUS HAZARDS (15-4-950 et seq.)

15-4-950 Storage of ashes.

Ashes stored inside any nonfireproof building shall be stored only in masonry bins, approved metal ash cans, or steel truck tanks. All ash containers shall be kept at least five feet from combustible material. Ashes shall not be stored inside or outside of any building in wood receptacles, or dumped in contact or in proximity to any combustible material.

(Prior code § 90-93)

15-4-960 Oily rags and waste.

Oily rags and waste shall be kept during the day in approved waste cans of heavy galvanized iron with self- closing covers and shall be removed from the building each night. Such waste cans shall be kept at least two feet away from any combustible wall or partition or exterior window opening.

(Prior code § 90-94)

15-4-970 Rubbish.

Rubbish shall not be allowed to accumulate in any part of any building, nor outside of and adjacent to any buildings, and special care shall be paid to elevator and air shafts, under benches, in closets, in dark and out-of- the-way places around electric machinery, steam pipes and in premises and buildings in which oils are stored or used. All weeds, grass or other growth, when same constitutes a fire hazard, shall be cut down and removed by the owner or occupant of the property.

(Prior code § 90-95)

15-4-980 Workmen's clothes lockers.

Workmen's clothes shall be placed in well ventilated lockers or closets, or shall be hung in the open away from flammable material and where the air will circulate freely about them. Where wooden lockers or closets are permitted, 75 percent of the area of the door on such wooden locker or closet shall be open and covered only with wire mesh to provide ventilation and allow inspection of the contents without opening the door of such locker or closet. In oil or grease risks they shall not be allowed in wooden lockers. No oily waste or oily rags shall be permitted in clothes lockers or closets in locker rooms.

(Prior code § 90-96)

15-4-985 Storage of ammunition at firearms dealers and shooting range facility licensed premises.

(a) For purpose of this section, the following definitions apply:

(1) the terms “ammunition” and “shooting range facility” have the meaning ascribed to those terms in Section 4-151-010.

(2) A “firearms dealer premises” means the premises for which a person was issued a weapons dealer-firearms dealer license pursuant to Article VII of chapter 4-144.

(b) (1) No certificate of fitness or license issued under this chapter shall be required for the storage of ammunition at a licensed shooting range facility or firearms dealer premises.

(2) Ammunition stored by a firearms dealer or shooting range facility licensee at the licensed premises shall comply with rules and regulations promulgated by the fire commissioner.

(3) The fire commissioner shall promulgate rules and regulations for the storage of ammunition at shooting range facilities and firearms dealers. At a minimum, the rules shall require that the storage of ammunition at the licensed premises of firearms dealer or shooting range facility shall be stored in a separate enclosed area that is secure and equipped with an automatic sprinkler system.

(c) Any person who violates a rule and regulation promulgated pursuant to this section shall be fined not less than $1,500.00 nor more than $3,000.00. A separate and distinct offense shall be deemed to have been committed each day any person continues to violate any of the provisions hereof.

(Added Coun. J. 7-6-11, p. 3073, § 9; Amend Coun. J. 6-25-14, p. 83727, § 10)

ARTICLE XIX. SALE OF DANGEROUS ARTICLES (15-4-990 et seq.)

15-4-990 Restrictions.

Except those articles covered by this Code, it is prohibited to sell or offer for sale any article which is so highly combustible as to constitute a dangerous risk of fire and an immediate and serious hazard of injury to persons and property taking into consideration the use or uses for which the article is made and designed to service.

(Prior code § 90-97)

15-4-995 Sale and use of aerial luminaries – Prohibited.

(a) *Prohibition on sale and use.* It shall be unlawful for any person to sell, give away, offer to sell or give away, distribute, possess, ignite or otherwise use within the corporate limits of the City any aerial luminary, commonly known as a sky candle, flying lantern, wish lantern, Hawaii lantern or Konming lantern.

(b) *Penalty for violation.* In addition to any other penalty provided by law, any person who violates any requirement of this section shall be subject to a fine of not less than $500.00 nor more than $1,000.00 for each offense. Each day that a violation continues shall constitute a separate and distinct offense.

(c) *Definitions.* As used in this section, the term “aerial luminary” means any paper or combustible lantern, designed or intended to be made airborne, containing a small candle or other device for fuel that heats air from inside the lantern causing the lantern to rise into the air and to remain airborne until the candle or device extinguishes, at which time the lantern or its component parts descend.

(Added Coun. J. 12-12-12, p. 44059, § 1)

CHAPTER 15-8

FIRE-RESISTIVE REQUIREMENTS

15-8-010 Fire walls.

Fire walls, when required, shall comply with the requirements of Sections 15-8-020 to 15-8-060, inclusive.

(Prior code § 62-1)

15-8-020 Definition.

A “fire wall” is hereby defined as a wall which subdivides a building into limited fire areas or which separates two or more buildings to prevent the spread of fire and which extends continuously through all stories to a level above the roof.

(Prior code § 62-1.1)

15-8-030 Construction.

All fire walls shall be constructed of noncombustible materials providing fire resistance not less than the following:

(a) Walls exceeding 14 feet in unsupported height – eight hours;

(b) Walls not exceeding 14 feet in unsupported height – four hours.

All structural members supporting fire walls shall be of construction providing fire resistance not less than that required for the wall.

(Prior code § 62-1.2)

15-8-040 Offset construction.

If fire walls are offset at intermediate floor levels, the offset floor and its supporting construction shall provide fire resistance not less than that required for the wall.

(Prior code § 62-1.3)

15-8-050 Parapets.

Fire walls shall extend not less than 36 inches above the roof, except that the fire walls may extend to the roof level when the roof is of fire-resistive construction for a distance of not less than 40 feet on each side of the wall.

(Prior code § 62-1.4)

15-8-060 Openings.

(a) Except as provided in subparagraph (b), the aggregate width of openings through a fire wall shall not exceed 25 percent of the length of the wall, except that at least one opening not exceeding the maximum dimensions for fire doors established in Section 15-12-120 shall be permitted in a fire wall of any length.

(b) In buildings of Types I-A, I-B and I-C construction, equipped throughout with an approved system of automatic sprinklers, the aggregate width of all openings at any floor level shall not exceed 50 percent of the length of the wall.

(c) Openings in fire walls shall be protected on both sides of the wall with Class A fire doors or other approved protective assemblies complying with the requirements of Section 15-12-070. One door shall be automatic and the other door shall be either automatic or self-closing.

(Prior code § 62-1.5)

15-8-070 Exterior walls – Requirements.

Exterior walls shall comply with all structural requirements and the special requirements of Sections 15-8-080 to 15-8-110, inclusive.

(Prior code § 62-2)

15-8-080 Exterior walls – Construction.

Exterior walls shall be constructed of materials providing fire resistance as required in Chapter 13-60. Assemblies including an EIFS (exterior insulation and finish system) that meet the requirements of Sections 15-8-081 through 15-8-086 shall be permitted for exterior walls in all occupancies.

(Prior code § 62-2.1; Amend Coun. J. 5-17-00, p. 32653, § 3)

15-8-081 Exterior insulating and finish systems.

Any exterior wall assembly which includes a combustible plastic foam in its EIFS shall meet the requirements of Sections 15-8-080 through 15-8-086.

(Added Coun. J. 5-17-00, p. 32653, § 3)

15-8-082 Test data required.

(a) Where an exterior wall is required to have a fire resistance rating and an EIFS is installed, test data shall be provided on the permit plans to substantiate that the code-required fire resistance rating will be achieved. The inclusion of an EIFS over a listed fire-rated assembly shall not be deemed to reduce the tested or listed rating.

(b) Where the EIFS plane faces another building or an interior lot line at a distance of less than 30 feet, test data shall demonstrate that the exterior insulation finish system will not ignite upon exposure to a minimum radiant heat energy of 12.5 kw/m^2 , when tested in accordance with NFPA 268-96, Standard Test Method for Determining Ignitability of Exterior Wall Assemblies Using a Radiant Heat Energy Source. Where a material is intended to be installed in more than one thickness, tests shall be performed on the intended maximum and minimum thickness.

(Added Coun. J. 5-17-00, p. 32653, § 3)

15-8-083 Multistory buildings.

EIFS installed on multi-story buildings shall comply with NFPA 285-98, Evaluation of Flammability Characteristics of Exterior Non-load Bearing Wall Assemblies Containing Components Using the Intermediate Scale Multi-Story Test Apparatus.

(Added Coun. J. 5-17-00, p. 32653, § 3)

15-8-084 Required fastening.

Facing, coating and core materials shall be fastened to each other, and the overall assembly shall be attached to the building frame so as to prevent failure due to elevated temperatures that occur in a building fire, wind loads, wetting or other environmental conditions. Installations over two stories shall be secured with non- corrosive mechanical fasteners.

(Added Coun. J. 5-17-00, p. 32653, § 3)

15-8-085 Labeling.

The foam insulation shall be listed by an approved testing laboratory and shall be labeled with the following information: (a) inspection agency name; (b) specific manufacturer's product for which the insulation is listed; (c) identification of the insulation manufacturer; (d) flame-spread and smoke-developed classifications.

(Added Coun. J. 5-17-00, p. 32653, § 3)

15-8-086 Moisture control.

Barrier-type EIFS without drainage systems shall not be permitted. The exterior wall finish assembly shall be designed and installed to prevent the accumulation of moisture through condensation or by leakage through the exterior wall construction. Details of the required moisture control mechanisms shall be provided on plans submitted for permit.

(Added Coun. J. 5-17-00, p. 32653, § 3)

15-8-090 Sloping walls.

Any exterior enclosing surface of a building, the plane of which forms an angle of 75 degrees or more with the horizontal, shall be subject to the requirements of exterior walls.

(Prior code § 62-2.2)

15-8-100 Parapets.

Exterior walls of buildings of Type III-A, III-B and III-C shall each be provided with a parapet having a fire resistance not less than that required for the walls.

(a) Parapets shall not be required on:

(1) Exterior walls connecting with roofs of fire-resistive construction;

(2) An exterior wall of a building the roof of which is at least three feet lower than the roof of, or any opening in, an adjacent building wall;

(3) Exterior walls facing on a street having a width of 30 feet or more;

(4) Exterior walls of a building which is 30 feet or more distant in all directions from the nearest line to which other buildings are or may be legally built and from other buildings on the same lot;

(5) In single-family and two-family dwellings not more than two stories and attic in height located not less than three feet from a lot line;

(6) Exterior walls of a building not exceeding 1,000 square feet in area;

(7) Exterior walls of a building which is 30 feet or more distant in all directions from the nearest line to which other buildings are or may be legally built but less than 30 feet distant to one or more buildings on the same lot, where the total area of the buildings within 30 feet of each other does not exceed one and one-half times the allowable area for any of the buildings considered;

(8) Exterior walls of a building where the roof has an angle of more than 20 degrees with the horizontal.

(b) Parapets on exterior walls required to have a fire resistance rating of two hours shall extend not less than two feet above the roof; parapets on exterior walls required to have a fire resistance rating of three or four hours shall extend not less than three feet above the roof; parapets on fire walls shall extend at least to the same height as any part of the roof through which the fire wall passes within 15 feet of the parapet and in no case shall it extend less than three feet above the point where the parapet and roof intersect.

(c) Masonry and reinforced parapets shall be at least as thick as the required thickness of the wall on which it is provided but need not be more than 12 inches thick on exterior walls.

(d) Parapets shall be properly coped and flashed with noncombustible, weatherproof material. All corners of masonry parapet walls shall be reinforced with at least one one-fourth-inch bar in every third joint, continuous around the corner and extending into the masonry at least three feet from the corner.

(Prior code § 62-2.3)

15-8-110 Protection of openings.

Openings shall be deemed to face an interior lot line or the wall of another building when the plane of the opening forms an angle of less than 60 degrees with the plane of such lot line or wall.

(a) Protection of openings in exterior walls, except as required for protection of vertical exits in chapter 13-160, shall not be required in the following buildings:

(1) church auditoriums;

(2) residential units not more than four stories in height; and

(3) buildings of any occupancy of Types IV- A or IV-B construction.

(b) In all other buildings, the following openings in exterior walls shall be protected with Class D or Class E fire doors, fire windows or other approved opening protective assemblies complying with the requirements of Chapter 15-12.

(1) Openings facing an interior lot line or the opposite side of a public way at a distance of less than 12 feet;

(2) Openings facing an opening in the exterior wall of another building at a distance of less than 12 feet;

(3) Openings facing the wall of a building of Type IV-B construction at a distance of less than 12 feet;

(4) Openings less than 50 feet above and less than 12 feet horizontally from the roof of another building;

(5) Openings adjacent to smokeproof towers, horizontal exits, exterior stairways or fire escapes shall be protected as required in Sections 13-160-390, 13-160-510, 13-160-600 and 13-160-650;

(6) Openings in a garage, less than 30 feet vertically or horizontally from an institutional use in a mixed occupancy.

(Prior code § 62-2.4; Amend Coun. J. 10-28-97, p. 54730)

15-8-120 Protection of stairs, shafts and vertical openings.

Stairs, shafts and openings in floors and roofs shall be enclosed as required in Sections 15-8-130 to 15-8-180, inclusive, to prevent spread of fire from floor to floor and to protect exit areas.

(Prior code § 62-3)

15-8-130 Enclosure partitions.

(a) Enclosure partitions supporting loads shall comply with the provisions of Chapter 13-60 for bearing partitions and with the provisions of this section.

(b) The bottoms of enclosures and the tops of enclosures not extending to the roof shall be of construction providing fire resistance not less than that required for the enclosure walls.

(c) Structural members supporting enclosure walls or partitions shall be of construction providing fire protection not less than required for the enclosure.

(Prior code § 62-3.1)

15-8-140 Stairway enclosures.

(a) Except as provided in paragraphs (b) and (c) of this section, all interior stairways shall be enclosed with walls and partitions providing fire resistance as follows:

In buildings exceeding three stories in height – Two hours (Except open plan schools equipped throughout with an approved automatic sprinkler system as defined in Article II of Chapter 15-16 of this Code);

In buildings not exceeding three stories in height – One hour (Except open plan schools equipped throughout with an approved automatic sprinkler system as defined in Article II of Chapter 15-16 of this Code);

In institutional buildings – Two hours;

In open plan schools equipped throughout with an approved automatic sprinkler system as defined in Article II of Chapter 15-16 of this Code – Noncombustible.

(The enclosure shall be constructed of noncombustible materials having fire-resistant properties not less than that of one-fourth-inch thick wired glass installed in steel sash and frames. Doors provided therein shall be not less fire-resistant than the enclosure, shall close the opening completely with only such clearance as is necessary for proper operation, and shall be equipped with approved self-closing devices. Whenever such doors must be maintained open, approved electromagnetic hold-open devices shall be provided, arranged to close the doors automatically when activated by the building's fire alarm system or by specially installed approved smoke detectors located above such door openings.)

(b) Stairway enclosures shall not be required in buildings of Types I-A, I-B and I-C construction for the following stairs:

(1) Stairs from the second floor to the main exit floor and serving the second floor only, except in hazardous use units, in multiple dwellings and in institutional units where habitable rooms are located on the second floor;

(2) Stairs in mercantile and business units from a basement sales space to the main exit floor level, constituting not more than 50 percent of the total required width of exit stairs.

(c) Stairway enclosures shall not be required in buildings of any type of construction for the following stairs:

(1) In residential units, stairs serving one dwelling unit only and entirely contained within such dwelling unit;

(2) In assembly units, stairs connecting any balcony level with the main floor level;

(3) In all occupancies, stairs connecting a mezzanine floor to the floor immediately below.

(d) Group homes located in one-family dwellings shall require vertical cutoffs for one of the required interior stairs either at the first floor or second floor levels and on any floor above the second floor.

The stair enclosure shall be of one-hour fire- resistive construction and the door opening shall be protected with a self-closing one and three-fourths-inch solid-core wood door installed in a one and three- fourths-inch solid rabbeted frame or No. 16 gauge metal frame. The other required stair shall be enclosed as required by Sections 15-8-140 and 15-8-180, and provide protection to the exterior of the building.

(e) Interior stairways in intermediate care facilities for the developmentally disabled – 15 or less shall have a vertical cutoff with a one and three-fourths- inch solid-core door equipped with a self-closing device located at either the top or the bottom of the stairway. The frame of such door shall be one and three-fourths inch solid rabbeted frame or No. 16 gauge metal frame. Stair enclosures in such facilities shall be of one-hour fire-resistive construction. Other required stairways in such facilities shall be enclosed as required by Sections 15-8-140 and 15-8-180 of this Code and shall provide protection for the exterior of the building.

(Prior code § 62-3.2; Amend Coun. J. 12-21-84, p. 12140; Amend Coun. J. 6-27-90, p. 17607)

15-8-150 Elevator and escalator enclosures.

(a) *Elevator Enclosures.*

(1) Elevator shafts and dumbwaiter shafts shall be enclosed with walls or partitions providing fire resistance of not less than two hours, except that walls and partitions separating adjacent shafts shall provide fire resistance of not less than one hour.

(2) No more than four elevators shall be placed in one shaft enclosure.

(b) *Escalator Enclosure.* Escalators shall be enclosed with walls and partitions complying with the requirements for stairway enclosures as required in Section 15-8-140 with the following exception:

(1) Escalators not required as a means of exit shall not be required to be enclosed providing effective means are provided which will prevent the spread of fire or gases from one floor to another in the event of fire.

(Prior code § 62-3.3)

15-8-160 Enclosure of pipe shafts and ducts.

Pipe shafts and ducts passing from one floor to another shall be enclosed with construction providing fire resistance of not less than one hour except that pipes and ducts requiring openings through floors not exceeding nine square feet in area shall not require enclosure; provided, that openings between such pipes or ducts and the floor construction shall be filled with noncombustible materials securely held in place to prevent the passage of fire.

(Prior code § 62-3.4)

15-8-170 Enclosure of wells and chutes.

Wells, chutes and similar openings through a floor shall be enclosed with construction providing fire resistance of not less than one hour, except that enclosure of wells shall not be required where open stairways are permitted.

(a) In all buildings exceeding three stories in height and in institutional buildings every laundry and rubbish chute enclosure shall be of not less than two- hour fire-resistive construction. The minimum inside dimensions of the chute shall be 18 inches. All chutes shall discharge directly into a room having walls, ceiling and floor of two-hour fire-resistive construction used solely for the reception of laundry or rubbish. The room shall be equipped with one sprinkler head for the first 130 square feet of floor area and one additional head for each additional 130 square feet or less. One sprinkler head shall be installed in the chute at the top service opening; and one additional sprinkler head at every second floor level below the top floor. A self- closing one and one-half-hour Class B labeled fire door assembly shall be installed at the service opening at each level and at the bottom of the chute and in the service door opening of the room into which the laundry or rubbish is discharged.

No laundry or rubbish chute shall be located in any stairwell nor within ten feet of any open stairway. The chute shall extend not less than four feet above the roof, and shall be covered with a metal skylight and plain glass or any approved automatic venting device.

(b) Every refuse chute enclosure located outside of a building shall be constructed of at least 16 U.S. gauge metal with a minimum dimension of at least 18 inches. A clearance of at least six inches shall be provided between the chute and any combustible material; provided, however, that this clearance may be reduced to three inches where the space between the chute and combustible material is protected by three inches of tile, cellular asbestos board or some similar fire-resistive material. The bottom of the chute shall discharge directly into a metal or other noncombustible receptacle which will be maintained closed at all times.

(c) In nursing homes, hospitals and sheltered care facilities, no chutes shall open directly on any corridor but shall be in a separate room of one-hour fire-resistive construction and the door opening shall be protected with a self-closing one-and-one-half-hour Class B labeled fire door assembly.

(Prior code § 62-3.5)

15-8-180 Protection of openings.

Openings in all required stairway and shaft enclosures shall be limited to those essential to the purpose of the shaft and shall be protected with self-closing one-and-one-half-hour Class B fire doors or other approved protective assemblies complying with the requirements of Section 15-12-070 with the following exceptions:

(a) In residential units not exceeding three stories in height, openings in the enclosures of stairways serving not more than four dwelling units in any floor may be protected with doors not less fire-resistant than solid wood doors one-and-three-fourths-inches thick, and shall be equipped with approved self-closing devices.

(b) Door openings in elevator and dumbwaiter shafts shall be protected by opening protective assemblies having a fire-resistive rating of one-and-one-half-hour conforming to the test requirements of Sections 15-12-080 to 15-12-100 inclusive, and Sections 15-12-120 to 15-12-150 inclusive. Such doors shall not be required to be self-closing and no heat-actuated closing device shall be installed on any landing opening in an elevator or dumbwaiter hatchway.

(c) In all occupancies except Class B, institutional, stairwell doors in buildings of Type I construction serving not more than three floors may be equipped with automatic closers activated by products of combustion (other than heat) fire detectors. Such closers shall comply with all of the following:

(1) Upon release of the hold-open mechanism, the door shall be self-closing.

(2) The hold-open mechanism shall be so designed that the door may be instantly released manually and upon release become self-closing.

(3) Upon loss of power to the hold-open device, the hold-open mechanism shall release.

(4) Each door shall be equipped with a fire detector on either side of the door opening arranged so that operation of either detector will release the hold- open mechanism.

(5) Each fire detector shall be located on the ceiling along the centerline of the door opening not more than five feet or less than one

foot from the opening. Where a door opening into a stairwell has more than one double door, each pair of doors shall be equipped with detectors arranged to release all doors at that floor level.

(6) The fire detectors, hold-open mechanisms, and closers, shall be listed by a national products testing laboratory whose main purpose is the testing of products for fire protection and safety.

(Prior code § 62-3.6; Amend Coun. J. 6-27-90, p. 17607)

15-8-190 Enclosure of heating plants and boiler rooms.

Boiler rooms and heating plants located within a building of any occupancy shall be enclosed as provided in Sections 15-8-200 to 15-8-230, inclusive, and when located in separate structures, shall comply with the requirements of Section 13-104-020.

(Prior code § 62-4)

15-8-200 Protection not required.

Enclosure of heating plants other than high pressure boilers shall not be required in the following buildings:

(a) Single-family dwellings;

(b) Multiple dwellings when the heating plant serves not more than two dwelling units;

(c) Low-hazard industrial units;

(d) One-story business, mercantile, industrial or storage units having a floor area not exceeding 3,000 square feet;

(e) Except in hazardous use units listed in Chapter 13-112, enclosures shall not be required for gas or oil fired unit heaters complying with Section 13-108-080(c).

(Prior code § 62-4.1; Amend Coun. J. 6-14-95, p. 2841)

15-8-210 Two-hour protection required.

Rooms containing heating plants or steam boilers shall be enclosed with walls, partitions, floors and ceilings of noncombustible construction providing fire resistance of not less than two hours under the following conditions:

(a) Rooms containing steam boilers carrying a pressure of more than 15 pounds per square inch and having a rating in excess of ten boiler horsepower;

(b) Rooms containing heating plants or steam boilers in buildings having a capacity exceeding 200 persons;

(c) Rooms containing heating plants or steam boilers in institutional units.

(Prior code § 62-4.2)

15-8-220 One-hour protection required.

Except as provided in Sections 15-8-200 and 15-8-210, rooms containing heating plants or steam boilers shall be enclosed with walls, partitions, floors and ceilings providing fire resistance of not less than one hour. Walls, partitions and floors shall be constructed of noncombustible materials.

(Prior code § 62-4.3)

15-8-230 Protection of openings.

Openings in enclosures of heating plants and boiler rooms shall be limited to those essential to the use of the room. All such openings shall be protected with self- closing one-and-one-half-hour Class B fire doors or other approved opening protective assemblies complying with the requirements of Section 15-12-070.

(Prior code § 62-4.4)

15-8-240 Other enclosures and separations.

(a) *Public Corridors and Area Separations.*

(1) In business, mercantile, industrial and storage units or buildings fully protected by a standard sprinkler system as defined in Article II of Chapter 15-16 of this Code, partitions, floor construction and ceiling construction enclosing public corridors shall be of construction providing fire resistance of not less than one hour with doors not less fire-resistive than one and three-fourths-inch solid slab doors or shall be constructed of noncombustible materials; provided, however, that wherever glass is used it shall be of minimum thickness of one-fourth inch. Corridor partitions may terminate at noncombustible ceilings in new and existing buildings.

(2) In business, mercantile, moderate hazard industrial and moderate hazard storage units any area occupied by more than one business owner, firm or corporation, or for more than one business enterprise conducted by the same owner, firm or corporation, in separate enclosures on any one floor above the first story shall be divided by partitions providing fire resistance of not less than two hours into areas not exceeding the following:

Buildings equipped throughout with an approved system of automatic sprinklers – 20,000 square feet;

All other buildings – 10,000 square feet.

In new and existing buildings partitions may terminate at noncombustible ceilings and at partitions separating occupied areas from the public corridor.

(3) In all new and existing buildings of business, mercantile, moderate hazard industrial and moderate hazard storage occupancies, area separation partitions shall not be required on any floor, occupied by a single tenant or in any single tenant space on a multiple-tenant floor.

(4) Enclosure of public corridors and area separations in other occupancies shall be as provided in the chapters of this Code covering special occupancy requirements.

(5) In all new and existing residential buildings exceeding four stories in height all apartment doors opening upon public corridors shall be equipped with approved self-closing devices.

(6) In all new and existing single-room occupancy buildings all dwelling unit doors opening at public corridors shall be equipped with approved self- closing devices.

(b) *Storage Rooms.* In multiple dwellings, institutional units, and assembly units, all storage rooms exceeding 100 square feet in area shall be enclosed with partitions providing fire resistance of not less than two hours, except that in open schools equipped throughout with an approved sprinkler system, as defined in Article II of Chapter 15-16 of this Code, such partitions shall provide fire resistance of not less than one hour. Openings in such partitions shall be protected with Class C fire doors.

(Prior code § 62-5; Amend Coun. J. 5-4-94, p. 49750)

15-8-250 Partitions.

All load bearing partitions shall comply with the fire-resistive requirements established in Section 13-60-100. Nonload-bearing partitions shall comply with the provisions of Sections 15-8-260 and 15-8-270.

(Prior code § 62-6)

15-8-260 Fire-resistive requirements.

Except as provided in Section 15-8-270, non-load- bearing partitions other than those required for enclosures or separations as provided in Sections 15-8-120, 15-8-190 and 15-8-240 shall comply with the following minimum requirements:

(a) In buildings of Types I-A, I-B, I-C and II construction, partition framing shall be of either or both of the following materials:

(1) Noncombustible materials;

(2) Fire-retardant treated wood within assemblies of one-hour maximum rating.

(b) In buildings of Type III-A construction partition framing shall be of heavy timber construction providing fire resistance as required for floor construction or roof construction above or shall be of noncombustible materials or fire-retardant treated wood within a one-half-hour to one-hour fire-rated assembly.

(c) In buildings of Types III-B and IV-A construction, partitions shall be of either of the following types:

(1) Combustible construction protected to provide fire resistance of not less than one-half hour;

(2) Noncombustible construction.

(Prior code § 62-6.1)

15-8-270 Subdividing partitions.

Partitions of combustible materials may be used for subdividing offices and similar spaces occupied by a single tenancy; provided, that the total area of combustible portions of such partitions measured as area of partition construction shall not exceed 25 percent of the subdivided space.

(Prior code § 62-6.2)

15-8-280 Exterior trim.

Exterior trim shall comply with provisions of Sections 15-8-290 to 15-8-320, inclusive.

(Prior code § 62-7)

15-8-290 Definition.

Exterior trim shall be construed to include exterior wall decorations, cornices, gutters, leaders, balconies, storm enclosures and all ornamental elements accessory to the structural building frame.

(Prior code § 62-7.1)

15-8-300 Cornices, gutters and leaders.

(a) Cornices, gutters and leaders hereafter erected on all buildings in fire district No. 1 or on buildings exceeding 40 feet in height in any fire district shall be constructed of noncombustible materials.

(b) Cornices of combustible materials, except on buildings of Types IV-A and IV-B construction and on single-family dwellings of

any construction type shall be covered with noncombustible materials when located on a wall facing an interior lot line at a distance of less than three feet.

(Prior code § 62-7.2)

15-8-310 Balconies and bay windows.

(a) A balcony shall be defined as an open unheated floor area cantilevered from or supported by a building, and open to the atmosphere on at least one side.

(1) On a building not exceeding 55 feet in height, a combustible balcony may be constructed not closer than three feet from an interior lot line, provided it is not larger than 100 square feet and is separated from another structure on the same lot by not less than six feet.

(2) A balcony not larger than 100 square feet may be built of unprotected noncombustible construction, regardless of the type of construction required for the building to which it is attached.

(3) The floor, roof and wall construction of all other balconies shall conform to the requirements of the type of construction required for the building to which they are attached.

(b) An outdoor area which is accessible through a single dwelling unit, and on the same story as a habitable space within the dwelling unit shall be classified as a balcony, whether or not it is on top of the roof of a building.

(c) The floor, roof and wall construction of bay windows shall conform to the requirements of the type of construction required for the building to which they are attached.

(Prior code § 62-7.3; Amend Coun. J. 3-29-17, p. 45477, § 5)

15-8-320 Porches.

A porch shall be defined as in Section 13-4-010 of this Code. Porches constructed of combustible materials shall be permitted when attached to residential units of Types III-B, III-C, IV-A or IV-B construction with the following limitations:

(a) Porches shall not exceed three stories in height.

(b) Porches shall not project more than ten feet from the building nor exceed 150 square feet in area per dwelling unit, exclusive of stairs.

(c) Porches shall not be located less than six feet from an interior lot line, except that porches meeting requirements (a) and (b) of this section may be located as close as three feet from an interior lot line if the porch side walls are fire-rated at one hour or more.

Exceptions: (1) Pre-ordinance porches (erected prior to January 20, 1950) not exceeding four stories in height and erected less than six feet from an interior lot line may be replaced with respect to height, size and location, subject to approval of the building commissioner. (2) New unenclosed front porches on new or existing buildings shall be permitted to be erected not less than three feet from an interior lot line if all of the following requirements are met: (i) the porch does not exceed one story in height; and (ii) the porch fronts entirely on a street; and (iii) the porch does not project more than ten feet from the building nor exceed 200 square feet in floor area, exclusive of stairs.

(Prior code § 62-7.4; Amend Coun. J. 9-13-89, p. 4604; Amend Coun. J. 10-2-95, p. 8040; Amend Coun. J. 3-5-03, p. 104990, § 42; Amend Coun. J. 7-27-05, p. 53348, § 1; Amend Coun. J. 11-13-07, p. 14999, Art. II, § 1)

15-8-321 Decks.

(a) A deck shall be defined as an open, unroofed floor structure designed or used for more than incidental occupancy.

(b) A combustible deck shall be located not closer than six feet to an interior lot line and not closer than six feet to any building on the same lot, other than the building to which it is attached, except that:

(1) A combustible deck may be located not closer than three feet from an interior lot line provided the deck does not exceed 400 square feet in area and is separated by not less than six feet from another structure on the same lot.

(2) If the combustible deck is laid directly on the ground without any air spaces under individual boards, it may be carried up to the lot line.

(c) The maximum area and location of a deck of unprotected noncombustible construction, or supported by unprotected noncombustible construction and with a walking surface meeting requirements for Class A roofing, is unlimited.

(d) The maximum area of a deck of combustible construction located not less than six feet from any interior lot line, not less than six feet from any building on the same lot, and not more than six feet above grade is unlimited.

(Added Coun. J. 10-2-95, p. 8040; Amend Coun. J. 3-29-17, p. 45477, § 5)

15-8-322 Rooftop decks.

(a) A rooftop deck is a deck that is erected on top of the roof or on top of any part of a building and shall comply with all the requirements for decks in Section 15-8-321, except as expressly modified in this section.

(b) Rooftop decks are roof structures and shall comply with Section 15-8-510.

(c) A rooftop deck that is protected by a two-hour noncombustible parapet wall at least three feet high, and that does not exceed the greater of 500 square feet or 33 percent of the total roof area of the building on which it is located, may be run to the face of the parapet wall, provided that no more than one such deck shall be allowed per building. A parapet wall shall not be required on any side that is not less than six feet from an interior lot line and not less than six feet from another building.

(d) A rooftop deck must have access to two exits, except only one exit shall be required for a rooftop deck:

(1) not more than 800 square feet in area, not more than 12 feet above grade, and adjoining a public way;

(2) not more than 300 square feet in area and not more than 40 feet above grade; or

(3) on a building of A-1 occupancy.

(e) Exterior stairs, when otherwise permitted, may be used for all required exits from a rooftop deck.

(f) A level containing no habitable space other than a rooftop deck shall not be considered a separate floor or story.

(g) Rooftop decks shall not be erected above any building of type IV-B construction.

(h) The construction of a roof below a rooftop deck shall provide fire resistance of not less than one- half hour from both sides

(Added Coun. J. 10-2-95, p. 8040; Amend Coun. J. 3-29-17, p. 45477, § 5)

15-8-323 Weather-protected entries.

A weather-protected entry shall be defined as a covered unheated structure attached to a building at the building entrance to facilitate ingress and egress. A weather-protected entry of combustible construction shall be located at least six feet from an interior lot line, except that if the weather-protected entry is not larger than 50 square feet and is separated from another building on the same lot by not less than six feet, the entry may be located as close as one foot from an interior lot line.

(Added Coun. J. 10-2-95, p. 8040; Amend Coun. J. 3-29-17, p. 45477, § 5)

15-8-324 Open stairs.

An open stair, as used in this chapter, shall mean an unheated structure attached to a principal building, intended exclusively for vertical ingress or egress, and containing no additional floor area for miscellaneous purposes. An open stair of combustible construction shall be located not closer than six feet from an interior lot line. An unprotected non-combustible stair may be located on the lot line. Open stairs used as required exits shall be subject to the same height limitations as porch stairs, except that open stairs serving a special rooftop club licensed pursuant to Chapter 4-388 may be used as one of the two required stairs and may extend to the highest allowable deck height, provided such stairs are of noncombustible construction.

(Added Coun. J. 10-2-95, p. 8040; Amend Coun. J. 1-20-99, p. 88461; Amend Coun. J. 1-11-06, p. 68371, § 5; Amend Coun. J. 3-29-17, p. 45477, § 5)

15-8-325 Reserved.

Editor's note – Coun. J. 3-29-17, p. 45477, § 5, repealed § 15-8-325, pertaining to fire-protective treatments and coatings.

15-8-326 Pergolas, trellises, arbors, and privacy screens.

(a) Vertical elements of pergolas, trellises, arbors, privacy screens, and similar structures greater than 42 inches in height above the adjacent walking surface of a balcony, porch, deck, rooftop deck, or roof shall be treated as fences and comply with Section 13-96-120.

(1) Any element classified as a combustible solid fence shall be located not less than six feet from an interior lot line and not less than six feet from another building on the same lot.

(2) Any element classified as a combustible screen fence shall be located not less than three feet from an interior lot line and not less than six feet from another building on the same lot.

(3) Any element classified as a noncombustible fence may be used without regard to separation distance.

(b) Horizontal elements of pergolas, arbors, and similar structures shall be of noncombustible construction unless located not less than three feet from an interior lot line and not less than six feet from another building on the same lot.

(c) Combustible pergolas, trellises, arbors, privacy screens, and similar structures installed on a balcony, porch, deck, rooftop deck, roof, or similar surface shall not exceed 12 feet in height above the highest adjacent walking surface.

(d) Guards required by Section 13-124-310 and no greater than 42 inches in height may be constructed of combustible material if located not less than three feet from an interior lot line and not less than six feet from another building on the same lot.

(e) Any structure above a rooftop deck which provides protection from weather from above equivalent to a roof and projects more than 24 inches horizontally from a wall or other support shall be treated as a part of the building to which it is attached for purposes of determining the construction type, building height, and number of stories.

(Added Coun. J. 3-29-17, p. 45477, § 5)

15-8-330 Roof coverings.

All roof coverings shall comply with the provisions of Sections 15-8-340 to 15-8-360, inclusive.

(Prior code § 62-8)

15-8-340 Classification.

All roof coverings shall be classified in accordance with their fire-resistant properties as follows:

Class A. Roof coverings effective against severe fire exposure;

Class B. Roof coverings effective against moderate fire exposure;

Class C. Roof coverings effective against light fire exposure.

(Prior code § 62-8)

15-8-350 Materials.

The classification of any specific material shall be determined as provided in Section 15-12-260.

(Prior code § 62-8.2)

15-8-360 Use.

Every roof placed on a building or structure shall be covered with Class A or Class B roof coverings except that Class C roof coverings shall be accepted on:

(1) Buildings of one-family or two-family residential use;

(2) Buildings of wood frame construction;

(3) Buildings located outside of the fire limits which on the basis of height and area could be of wood frame construction under this Code.

(Prior code § 62-8.3; Amend Coun. J. 11-9-16, p. 36266, § 30)

15-8-370 Interior wall and ceiling finish and trim.

Interior wall and ceiling finish, floor covering, and trim shall comply with the requirements of Sections 15-8-380 to 15-8-430, inclusive.

(Prior code § 62-9; Amend Coun. J. 6-27-90, p. 17610)

15-8-380 Interior wall and ceiling finishes.

Interior wall and ceiling finishes, as herein referred to, are defined as those materials applied over wall, partition and ceiling construction on the inside of a building or subdivision thereof including finishes utilized for decoration, acoustical correction, surface insulation and similar purposes. Wall finishes not exceeding 20 percent of the wall area and ceiling finishes not exceeding ten percent of the ceiling area of a room or space shall be classified as interior trim. Surface decoration consisting of paint, paper or similar surface treatment less than one-twenty-eighth-inch thickness, applied directly to the finish without intervening air space shall not be considered as a part of interior wall and ceiling finish unless such surface treatment is required for the purpose of increasing fire resistance.

(Prior code § 62-9.1)

15-8-390 Interior trim.

Interior trim, as herein referred to, is defined as including moldings, cornices, wainscoting and other wall and ceiling finishes not exceeding 20 percent of the wall area or ten percent of the ceiling area of a room or space. Interior trim shall not include the following:

(a) Doors and frames;

(b) Window sash and frames;

(c) Casings not exceeding four inches in width around door and window openings;

(d) Baseboards not exceeding six inches in height.

(Prior code § 62-9.2)

15-8-400 Classification of materials.

(a) All materials used for interior wall and ceiling finish and for interior trim shall be classified in accordance with flame spread characteristics into the following classifications:

Classification	*Flame Spread Rating*	*Smoke Developed*
Class 1	0 to 25	200
Class 2	26 to 75	450
Class 3	76 to 200	450

(b) The classification of any specific material shall be determined in accordance with test procedure as provided in Section 15-12-320.

(c) All materials used as floor covering shall be classified in accordance with the critical radiant flux characteristics as follows:

Class A interior floor finish: Critical radiant flux of 0.45 watts per square centimeter or higher.

Class B interior floor finish: Critical radiant flux between 0.22 watts per square centimeter and 0.44 watts per square centimeter.

Wherever the use of Class B interior floor finish is required, Class A interior floor finish material is permitted.

(d) The classification of specific floor covering materials shall be in accordance with test procedures as provided for in Section 15-12-344.

(Prior code § 62-9.3; Amend Coun. J. 6-27-90, p. 17610)

15-8-410 General requirements.

Except in buildings of Type III-A, III-C or IV-B construction, all interior wall and ceiling finish shall be applied directly and securely to a noncombustible base or to furring or nailing strips not exceeding one inch in nominal thickness applied over a noncombustible base with all spaces behind the material filled with noncombustible material or firestopped at intervals not exceeding eight square feet in area. In buildings of Type III-A construction, interior wall and ceiling finish shall be applied directly to the wall or floor construction.

(Prior code § 62-9.4)

15-8-420 Requirements for interior wall and ceiling finish.

Materials used for interior wall and ceiling finish shall be not less resistant to flame spread than the class of materials specified in this section:

(a) Stairways, elevator shafts, and enclosed connections from such stairway to outside exits of all buildings, Class 1;

(b) Institutional units, Class 1;

(c) Residential units, Class 1;

(d) Business units, industrial and storage units, Class 2;

(e) Assembly and mercantile units having a capacity exceeding 100 persons, Class 1;

(f) Public lobbies required as a means of exit in buildings of all occupancies having a capacity of more than 100 persons, and in all public corridors required as a means of exit, Class 1;

(g) All other rooms and spaces, materials used for interior wall and ceiling finish shall be not less resistant to flame spread than Class 3 materials; provided, however, that Class 2 and Class 3 materials shall be limited in area as follows:

(1) The total surface area of Class 2 materials used for interior wall and ceiling finish in any building shall not exceed 7,500 square feet except that when a building is divided into areas separated by partitions, floor and ceiling construction providing fire resistance of not less than two hours with all partition openings protected by Class C fire doors, interior wall and ceiling finish of Class 2 materials not exceeding 7,500 square feet in surface area may be used in each area so separated,

(2) The total surface area of Class 3 material used for interior wall and ceiling finish in any building shall not exceed 5,000 square feet except that when a building is divided into areas separated by partition, floor and ceiling construction providing fire resistance of not less than two hours with all partition openings protected with Class C fire doors, interior wall and ceiling finish of Class 3 materials not exceeding 5,000 square feet in surface area may be used in each area so separated.

Exception: In administrative offices, art galleries, libraries, and restaurants and also in not more than one room of each residential unit, Class 3, interior finish materials (not more combustible than wood) may be used on walls only, subject to the approval of the fire commissioner;

(h) The interior wall and ceiling in hazardous use units, now existing or hereafter constructed, shall be of noncombustible (Class I) construction;

(i) In buildings which are equipped with a standard sprinkler system as defined in Article II of Chapter 15-16 of this Code, Class 2.

(Prior code § 62-9.5; Amend Coun. J. 5-18-16, p. 24131, § 111)

15-8-430 Interior trim.

Materials used for interior trim shall be not less resistant to flame spread than the class of materials specified in this section for the following rooms or spaces:

(a) Required stairway enclosures and enclosed connections from such stairways to outside exits, Class 1;

(b) Assembly rooms or spaces having a capacity exceeding 1,000 persons, Class 1;

(c) Materials used for interior trim in all other rooms and spaces shall be not less resistant to flame spread than Class 3 materials.

(Prior code § 62-9.6)

15-8-440 Floor coverings.

All materials used as floor coverings shall comply with the following provisions:

(a) All floor coverings used in corridors, lobbies, stairs or other exit paths or exit areas in buildings used in whole or in those parts as occupancy Class A-2 shall meet Class A requirements.

(b) All floor coverings used in corridors, lobbies, stairs or other exit paths or exit areas in buildings used in whole or in those parts as occupancy Class E shall meet Class B requirements.

(c) All floor coverings used in buildings used in whole or in part as occupancy Class B or C shall meet Class A requirements.

(d) Floor coverings used in occupancies or areas other than as listed above need not be classified.

(Prior code § 62-9.7; Amend Coun. J. 6-27-90, p. 17610)

15-8-450 Flooring.

Finished flooring of wood or other combustible materials shall comply with the requirements of Sections 15-8-460 to 15-8-500, inclusive.

(Prior code § 62-10)

15-8-460 Sleepers.

When finished flooring or subflooring is attached to combustible sleepers, such sleepers shall be fire- stopped at intervals under the flooring not exceeding 100 square feet in area, and no open spaces shall extend under or through permanent walls or partitions.

(Prior code § 62-10.1)

15-8-470 Insulation.

In all cases where finished flooring is applied directly to the floor construction or to sleepers, a resilient insulating base not exceeding one-half inch in thickness and applied directly to the floor construction shall be permitted.

(Prior code § 62-10.2)

15-8-480 Fire-resistive or noncombustible construction.

(a) In buildings of fire-resistive or noncombustible construction, all wood flooring and subflooring shall be applied directly to a floor construction of noncombustible material or may be attached to sleepers of combustible material. In buildings exceeding 100 feet in height, the space between the floor construction and the finished flooring shall be solidly filled with noncombustible materials.

(b) Combustible composition flooring not exceeding one-half inch in thickness may be applied directly to the noncombustible floor construction or to subflooring.

(c) When the subflooring and the structural elements are of fire-retardant treated wood, the space between the floor construction and the subflooring need not be filled.

(Prior code § 62-10.3)

15-8-490 Heavy timber construction.

(a) In buildings of heavy timber construction, all wood finished flooring and subflooring shall be applied directly to the floor construction or may be attached to sleepers of combustible materials provided that the space between the floor construction and the finished flooring is solidly filled with noncombustible materials.

(b) Combustible composition flooring not exceeding one-half inch in thickness may be applied directly to the floor construction or to subflooring.

(c) When the subflooring and the structural elements are of fire-retardant wood, the space between the floor construction and the subflooring need not be filled.

(Prior code § 62-10.4)

15-8-500 Stairways and exitways.

In stairways required by Section 15-8-490 to be of noncombustible construction, finish flooring of combustible materials shall not exceed one-sixth inch in thickness.

(Prior code § 62-10.5)

15-8-510 Roof structures.

Except aerial supports, not exceeding 12 feet in height, all roof structures hereafter placed above the roof of any building within the fire limits, or above the roof of any building exceeding 55 feet in height, shall be constructed of noncombustible materials and shall be supported by construction of noncombustible materials, except the walking surface of a rooftop deck may be of combustible materials meeting the requirements for Class A roof coverings if constructed above a roof of noncombustible material and supported by construction of noncombustible material. Such structures shall also comply with the special requirements of Sections 15-8-520 to 15-8-560, inclusive.

(Prior code § 62-11; Amend Coun. J. 3-29-17, p. 45477, § 5)

15-8-520 Skylights and monitors.

(a) Sashes and frames of skylights which are inclined more than 30 degrees from the vertical shall be constructed of noncombustible materials, except, as provided by the building commissioner, in buildings where acid fumes deleterious to metal are incidental to the use of the building.

(b) All skylights, except in greenhouses, shall be glazed with wired glass having no single pane exceeding 720 square inches in area or 48 inches in any dimension.

(c) Walls of skylights and monitors shall be of construction not less fire-resistant than required for the roof on which they are erected; provided, however, the walls which extend more than ten feet above the roof shall be constructed of noncombustible materials.

(Prior code § 62-11.1; Amend Coun. J. 9-13-89, p. 4604; Amend Coun. J. 3-5-03, p. 104990, § 42; Amend Coun. J. 11-13-07, p. 14999, Art. II, § 1)

15-8-530 Penthouses.

(a) A penthouse is hereby defined as an enclosed space located on a roof for the housing of a stairway or equipment used in the operation of a building such as tanks, fans or elevator machinery, but containing no habitable or storage space.

(b) Penthouses occupying an aggregate area exceeding one-third of the roof area shall be considered a story of the building and shall be subject to all applicable requirements of this Code.

(c) Walls of penthouses located less than five feet from the exterior walls of the building shall provide fire resistance as required for the exterior wall. Walls of penthouses located five feet or more from the exterior wall of a building, except in buildings of Types II, IV-A and IV-B construction, shall provide fire resistance of not less than one hour.

(d) Roofs of penthouses shall provide fire resistance as required for the roof construction on which the penthouse is located.

(Prior code § 62-11.2)

15-8-540 Mansard and sloping roofs.

Mansard or sloping roofs, the plant of which forms an angle of more than 60 degrees but not more than 75 degrees with the horizontal, shall be classified as roofs and shall comply with all applicable requirements of this Code, except that such roofs, erected on buildings more than 40 feet in height, of Types III-A, III-B or III- C construction shall be constructed of noncombustible materials or fire-retardant-treated wood, providing fire resistance of not less than one hour. Such use shall comply with Section 13-128-100(a) if applicable.

(Prior code § 62-11.3)

15-8-550 Towers.

(a) Towers are defined as structures, including spires, domes or cupolas, extending above the roof of a building and used only for architectural embellishment or for housing bells, clocks and similar installations.

(b) Every tower shall be of a type of construction not less fire-resistant than required for the building on which it is erected and when exceeding the height limitations for the building as established in Section 13-48-030.

(1) Towers exceeding 60 feet in height above grade shall be constructed of and supported by Types I- A, I-B or I-C construction.

(2) Towers exceeding 25 feet in height above the roof on which they are erected or exceeding 200 square feet in area at any horizontal section shall be constructed of and supported by noncombustible materials and shall be separated from the building below by a floor or roof deck providing fire resistance of not less than one hour.

(Prior code § 62-11.4)

15-8-560 Miscellaneous roof structures.

Miscellaneous roof structures, including dormers, bulkheads, scuttles and similar structures shall be constructed of material not less fire-resistant than required for the roof construction on which they are erected.

(Prior code § 62-11.5)

15-8-570 Firestopping.

Firestopping, complying with the provisions of Sections 15-8-580 to 15-8-640, inclusive, shall be designed and constructed to close all concealed draft openings and to form effective fire barriers between stories of every building and in all concealed spaces therein against the spread of fire.

(Prior code § 62-12; Amend Coun. J. 6-14-95, p. 2841)

15-8-580 Materials.

All fire-stopping shall be constructed of noncombustible materials, except that fire-stopping of wood not less than two inches in nominal thickness shall be permitted in open spaces of wood framing.

(Prior code § 62-12.1)

15-8-590 Walls and partitions.

Walls, including masonry walls furred with combustible material, and stud partitions shall be effectively fire-stopped at floors, ceilings and roofs.

(Prior code § 62-12.2)

15-8-600 Roof spaces.

Concealed roof spaces of combustible construction shall be divided into horizontal areas of not more than 3,000 square feet by construction providing fire resistance of not less than one-half hour.

(Prior code § 62-12.3)

15-8-610 Stairs.

When stairs are of wood or of combustible construction, the space between stair stringers shall be fire-stopped at top and bottom and at least once in the middle of each run, and fire-stopping shall also be provided between studs of adjoining partitions along and in line with the run of stairway.

(Prior code § 62-12.4)

15-8-620 Floors and roofs.

Floors and roofs constructed of combustible materials shall be fire-stopped at walls and partitions and where openings occur.

(Prior code § 62-12.5)

15-8-630 Chimneys.

Spaces between chimneys and wood framing shall be fire-stopped with approved noncombustible material.

(Prior code § 62-12.6)

15-8-640 Pipes and shafts.

Openings around exposed pipes or power shafting shall be filled with approved noncombustible material, or shall be closed off by close-fitting metal caps at the ceiling and floor line, and on each side of a wall or partition.

(Prior code § 62-12.7)

15-8-660 Air intakes in courts and yards.

Air intakes in courts and yards as described in Section 13-172-130(c) shall be of fire rated construction of at least one hour in construction Types II and IV; and fire rated construction of at least three hours in construction Types I and III.

(Added Coun. J. 4-29-98, p. 66679, § 3; Amend Coun. J. 5-20-98, p. 70121)

CHAPTER 15-12

FIRE-RESISTIVE MATERIALS AND CONSTRUCTION

15-12-010 Scope.

The provisions of this chapter shall govern the use and design of all materials and methods of construction with respect to required protection against fire exposure.

(Prior code § 65-1)

15-12-020 Performance standards.

The requirements of this section shall constitute the minimum functional performance standards for fire protection purposes. Such requirements shall not be deemed to decrease or waive any requirements of this Code with respect to safe load capacity, durability or other specified requirements.

(Prior code § 65-1.1)

15-12-030 Use of combustibles.

All materials and forms of construction that develop the fire resistance required by this Code shall be acceptable for fireproofing and construction purposes, except that all structural components shall be non-combustible in wall and roof assemblies of Type I, II and III buildings and in all floor and roof/ceiling assemblies of Type I and II buildings. The requirement regarding non-combustibility of two-hour rated assemblies shall not apply to interior walls and floors in construction Types III-A, III-B and IV-A.

(Prior code § 65-1.2; Amend Coun. J. 10-2-95, p. 8040; Amend Coun. J. 5-17-00, p. 32653, § 4)

15-12-040 Definitions.

(a) "Combustible material" means a material which will ignite when heated to a temperature at or below 1,200 degrees Fahrenheit.

(b) "Fire resistance", as applied to building materials and construction, means the ability to withstand fire or give protection from it for given periods under prescribed test conditions.

(c) "Fire-resistive rating" means the degree of fire resistance of a fabricated unit or assembly of units of construction, determined by the standard fire test expressed in hours or fractions of an hour.

(d) “Flame-spread rating” means the degree of flame resistance of materials used for interior finish and trim or for decorative purposes determined by the rate of flame spread in the standard tunnel test.

(e) “Noncombustible material” means a material which will not ignite when heated to a temperature of 1,200 degrees Fahrenheit.

(f) “Fire-retardant-treated wood” means lumber or plywood that has a Class 1 rating when tested in accordance with ASTM E-84, UL 723, or NFPA 255 for a period of 30 minutes and which, at no time during the period of the test, shows evidence of significant progressive combustion or experiences progress of the flame front more than 10 1/2 feet beyond the centerline line of burner. Each piece of fire-retardant-treated wood shall be identified at two-foot intervals by a label or a stamp of an approved agency acceptable to the building commissioner and the fire prevention bureau having an inspection service, and further by the marking of a continuous double line between the labels or stamps. Where fire-retardant-treated wood is to be subject to sustained high humidity or exposed to the weather, it shall be further identified to indicate there is no increase in listed fire hazard classification when subjected to “The Standard Rain Test” (ASTM D-2898-81).

(Prior code § 65-2; Amend Coun. J. 6-14-95, p. 2832; Amend Coun. J. 3-5-03, p. 104990, § 43; Amend Coun. J. 11-13-07, p. 14999, Art. II, § 1)

15-12-050 Accepted engineering practice.

Recognized Authoritative Agencies. The applicable test procedures of the following agencies are recognized as accepted engineering practice with respect to fire- resistive qualities of materials and assemblies:

American Standards Association (ASA);

American Society for Testing Materials (ASTM);

National Board of Fire Underwriters (NBFU);

National Bureau of Standards, Department of Commerce (NBS);

National Fire Protection Association (NFPA);

Underwriters' Laboratories, Inc. (UL).

(Prior code § 65-3)

15-12-060 Fire tests for building materials and construction.

(a) *Test Procedure.* Where fire-resistive ratings of building materials and construction are required in this Code, such fire-resistive ratings shall be determined by the test procedures and conditions of acceptance prescribed in the following documents:

Standard Methods of Fire Tests of Building Construction and Materials, ASTM Designation: E119-1958.

Fire-retardant wood ASTM E-84 (30 minutes) and ASTM 1-2898 (exposure to weather).

(b) *Approved Materials and Construction.*

(1) Materials and construction listed in either of the following documents for specific fire-resistant ratings shall be acceptable as meeting the requirements of this Code:

Fire Endurance of Open-Web Steel-Joist Floors with Concrete Slabs and Gypsum Ceilings – USDC – NBS – Building Materials and Structures, Report 141 – issued August 23, 1954. Combustible Contents in Buildings – USDC – NBS – Building Materials and Structures, Report 149 – issued July 25, 1957.

Fire-Resistance and Sound-Insulation Ratings for Walls, Partitions, and Floors – USDC – NBS – Technical Report on Building Materials 44.

National Building Code of the National Board of Fire Underwriters, 1955 Edition, Appendix A and December 1957 Amendments to the 1955 Edition of the National Building Code.

Fire-resistance ratings as listed in the Fire Resistance Design Manual, Tenth Edition, as published by the Gypsum Association, are incorporated by reference and may be referred to as herein listed.

(2) Nothing in this section shall preclude the use of other materials and construction meeting the required test standards.

(Prior code § 65-4; Amend Coun. J. 8-7-85, p. 18993)

15-12-070 Opening protective assemblies – Doors and shutters.

Doors and shutters required as opening protective assemblies shall comply with the provisions of Sections 15-12-080 to 15-12-150, inclusive.

(Prior code § 65-5)

15-12-080 Opening protective assemblies – Defined.

Opening protective assemblies as applied to the requirements for doors or shutters shall include such doors or shutters together with their frames, hardware and other accessories essential to the fire-resistive rating of the assembly.

(Prior code § 65-5.1)

15-12-090 Test procedure.

Where fire-resistive door and shutter assemblies are required by this Code, the fire-resistive values of such assemblies and their classification shall be determined by the test procedure and the conditions of acceptance prescribed in the following document: Methods of Fire Tests of Door Assemblies – ASTM Designation: E152-56T.

(Prior code § 65-5.2)

15-12-100 Test assemblies.

Tests shall be made upon complete full-size samples of the assembly, including hanging and operating hardware, frames, bucks and other anchorage.

(Prior code § 65-5.3)

15-12-110 Classification of doors and shutters.

Doors and shutters shall be classified in accordance with their fire-resistive qualities in accordance with requirements of this section.

(a) *Class A Doors and Shutters.*

(1) Class A doors and shutters shall be used for protection of openings in firewalls and shall be installed on both sides of walls.

(2) There shall be no glass panels in Class A doors and shutters.

(b) *Class B Doors and Shutters.*

(1) Class B doors and shutters shall be used where required elsewhere in this Code for protection of openings in vertical shafts and other openings.

(2) Class B doors may have an observation panel of standard wired glass having an exposed area not exceeding 100 square inches and a width or height not exceeding 12 inches.

(c) *Class C Doors.*

(1) Class C doors shall be used where required elsewhere in this Code for protection of openings between rooms or between rooms and corridors.

(2) Class C doors may have panels of standard wired glass. Exposed area of individual glass lights shall not exceed 1,296 square inches.

(d) *Class D and E Doors and Shutters.*

(1) Class D and E doors and shutters shall be used where required elsewhere in this Code for protection of openings in exterior walls.

(2) Glass lights for panels shall not be used in Class D doors. Panels of standard wired glass having an area not exceeding 720 square inches and a height not exceeding 54 inches may be used in Class E doors.

(Prior code § 65-5.4)

15-12-120 Maximum size of doors and shutters.

Openings required to be protected by fire doors or shutters shall not exceed the heights, widths and areas established in Table 15-12-120. (See Table 15-12-120.)

(Prior code § 65-5.5)

Table 15-12-120

Maximum Sizes of Fire Doors and Shutters

Type of Door	*Class of Door*	*Maximum Size of Opening Not to Exceed*		
		Area Sq. Ft.	*Height Ft.*	*Width Ft.*
Hollow metal, swinging, in pairs	A-B-C-D(1)-E(1)		10	8
Hollow metal, swinging, in pairs	D(2)-E(2)		10	6
Hollow metal, swinging, single	A-B-C-D-E		10	4
Hollow metal, sliding	B-C		8	8
Metal-clad, paneled, swinging, in pairs	B-C-D(1)-E(1)		8	8
Metal-clad, paneled, swinging, in pairs	D(2)-E(2)		8	6
Metal-clad, paneled, swinging, single	B-C-D-E		8	4

Sheet metal, sliding, single or in pairs	A-B-C-D(1)-E(1)	120	12	12
Sheet metal, swinging, in pairs	A-B-C-D(1)-E(1)		12	10
Sheet metal, swinging, in pairs	D(2)-E(2)		10	6
Sheet metal, swinging, single	A-B-C-D(1)-E(1)		12	6
Sheet metal, swinging, single	D(2)-E(2)		10	4
Steel, rolling or lift-up type	A-B-C-D(1)-E(1)	120*	12*	12*
Tin-clad, 3-ply, sliding	A	120	12	12
Tin-clad, 3-ply, swinging, in pairs	A		12	10
Tin-clad, 3-ply, swinging, single	A		12	6
Tin-clad, 2-ply, counter-balanced	B		10	8
Tin-clad, 2-ply, sliding, single	B-C-D(1)-E(1)		10	10
Tin-clad, 2-ply, swinging, in pairs	D(1)-E(1)		10	10
Tin-clad, 2-ply, swinging, in pairs	D(2)-E(2)		10	6
Tin-clad, 2-ply, swinging, single	B-C-D(1)-E(1)		10	6
Tin-clad, 2-ply, swinging, single	D(2)-E(2)		10	4
NOTES: (1) Class D and E doors, other than doors leading to fire escapes. (2) Class D and E doors leading to fire escapes.				
* Openings not exceeding 24 feet in width, 24 feet in height and 350 square feet in area shall be permitted when oversize openings are required for passage of motor vehicles, railroad cars and similar uses.				

15-12-130 Approved protective assemblies.

(a) Fire-resistive door and shutter assemblies for specific conditions of use in the “Fire Protection Equipment List”, Underwriters' Laboratories, Inc., January, 1959, shall be acceptable as meeting the requirements of this section.

(b) Nothing in this section shall preclude the use of other opening protective assemblies meeting the required test standards.

(Prior code § 65-5.6)

15-12-140 Identification.

Approved protective assemblies shall be properly identified by label as conforming to the requirements of this section.

(Prior code § 65-5.7)

15-12-150 Installation.

Installation of fire-resistive door and shutter assemblies shall comply with the requirements of the following document: Protection of Openings in Walls and Partitions – NBFU-80 – 1939.

(Prior code § 65-5.8)

15-12-160 Opening protective assemblies – Windows.

Windows required as opening protective assemblies shall comply with the provisions of Sections 15-12-170 to 15-12-250, inclusive.

(Prior code § 65-6)

15-12-170 Definition.

Opening protective assemblies as applied to the requirements for windows shall include sash, frames, hardware and other accessories essential to the fire- resistive rating of the assembly.

(Prior code § 65-6.1)

15-12-180 Test procedure.

Where fire-resistive windows are required by this Code, the fire-resistive values of such windows shall be determined by test procedure. The required time- temperature curve and method of testing shall be similar to that required for fire doors and shutters in Section 15-12-070. The duration of test on fire windows shall be not less than 45 minutes and shall include a hose-stream test.

(Prior code § 65-6.2)

15-12-190 Test assemblies.

(a) Test assemblies shall be truly representative as to material, workmanship of the construction and details, including installation, glass size, method of closing, hardware, trim and finish.

(b) The fire-resistive rating derived from the test shall be assumed to apply to all like assemblies smaller in dimension and area than the test specimen and to larger sizes not exceeding the area of the test specimen by more than 25 percent.

(Prior code § 65-6.3)

15-12-200 Conditions of acceptance.

The fire-resistance test shall not be regarded as successful unless the following conditions are met:

(a) The test assembly shall have remained securely in the opening during the fire exposure period and during the hose-stream test, except that small fragments of glass dislodged from the exposed surface by the hose stream shall not be considered a weakness. The fastening of ventilators or movable sections shall have remained secure.

(b) The test assembly shall have withstood the fire-endurance test without passage of flame; and shall have withstood the fire-endurance and hose-stream tests without the dislodgement of an excessive proportion of the glass area. A loss of approximately ten percent shall not be considered excessive.

(Prior code § 65-6.4)

15-12-210 Hollow metal windows.

(a) Hollow metal windows shall consist of reinforced hollow metal sections and may be of double- hung, counter-balanced, pivoted, stationary, tilting, hinged or projected sash.

(b) Hollow metal windows shall not exceed the following sizes:

(1) Single sash, other than casement, five feet by five feet;

(2) Double sash, other than casement, five feet by ten feet;

(3) Casements, single, three and one-half feet by ten feet;

(4) Casements, pairs, five feet by ten feet.

(c) Individual glass lights in windows shall not exceed 720 square inches in exposed area, 54 inches in vertical dimension, and 48 inches in horizontal dimension.

(Prior code § 65-6.5)

15-12-220 Solid section windows.

(a) Solid section windows shall be constructed of rolled steel sections and may be equipped with ventilators of the same construction of the projected, tilting, pivoted or hinged type.

(b) Windows shall not exceed the following sizes:

(1) Standard fire windows of inside angle glazed type shall not exceed 84 square feet in area. Neither the height nor the width shall exceed 12 feet; provided, that when installed with unprotected vertical steel mullions, the width shall not exceed seven feet.

(2) Lightweight casement type shall not exceed six and one-half feet in either dimension and, when installed with unprotected vertical steel mullions, the width shall not exceed three and one-half feet.

(3) Intermediate-weight casement types shall not exceed 50 square feet in area with neither dimension exceeding ten feet. When installed with unprotected steel mullions, the width shall not exceed six and one- half feet.

(4) Detention-type windows shall not exceed 84 square feet in area, with neither dimension exceeding 12 feet. When installed with unprotected vertical steel mullions, the width shall not exceed seven feet.

(c) Individual glass lights shall be glazed with standard wired glass and shall not exceed 720 square inches in exposed area, 54 inches in vertical dimension and 48 inches in horizontal dimension.

(Prior code § 65-6.6)

15-12-230 Other windows.

Windows constructed of a combination of hollow metal and solid section members, or a combination of hollow metal and plate steel members, shall conform to the requirements of hollow metal windows, Section 15-12-210.

(Prior code § 65-6.7)

15-12-240 Approved protective assemblies.

(a) Fire windows and accessory parts thereof approved for specific conditions of use in the list of “Fire Protection Equipment List”, Underwriters' Laboratories, Inc., January, 1959, shall be acceptable as meeting the requirements of this section.

(b) Nothing in this section shall preclude the use of other opening protective assemblies meeting the required test standards.

(Prior code § 65-6.8)

15-12-250 Identification.

Approved protective assemblies shall be properly identified by label as conforming to the requirements of this section.

(Prior code § 65-6.9)

15-12-260 Roof coverings.

Roof coverings shall comply with the provisions of Sections 15-12-270 to 15-12-310, inclusive.

(Prior code § 65-7)

15-12-270 Class A roof coverings.

Class A roof coverings shall be of material approved by the building commissioner after satisfactory evidence that it is effective against severe fire exposures. Under such exposures, Class A roof coverings shall not be readily flammable; shall not carry or communicate fires; shall afford a fairly high degree of heat insulation to the roof deck; shall not slip from position; shall possess nonflying brand hazard; and shall not require frequent repairs in order to maintain their fire-resistive properties.

(Prior code § 65-7.1; Amend Coun. J. 3-5-03, p. 104990, § 43; Amend Coun. J. 11-13-07, p. 14999, Art. II, § 1)

15-12-280 Class B roof coverings.

Class B roof coverings shall be of fire-resistive material, approved by the building commissioner after satisfactory evidence that it is effective against moderate fire exposures. Under such exposures, Class B roof coverings shall not be readily flammable; shall not readily carry or communicate fire, shall afford a moderate degree of heat insulation to the roof deck; shall not slip from position; shall possess no flying brand hazard: and shall require only infrequent repairs to maintain their fire-resistive properties.

(Prior code § 65-7.2; Amend Coun. J. 3-5-03, p. 104990, § 43; Amend Coun. J. 11-13-07, p. 14999, Art. II, § 1)

15-12-290 Class C roof coverings.

Class C roof coverings shall be of material approved by the building commissioner after satisfactory evidence that it is effective against light fire exposures. Under such exposures, Class C roof coverings shall not be readily flammable; shall not readily carry or communicate fire; shall afford at least a slight degree of heat insulation to the roof deck; shall not slip from position; and shall possess no flying brand hazard; but may require occasional repairs or renewals in order to maintain their fire-resistive properties.

(Prior code § 65-7.3; Amend Coun. J. 3-5-03, p. 104990, § 43; Amend Coun. J. 11-13-07, p. 14999, Art. II, § 1)

15-12-300 Approved roof coverings.

(a) Roof coverings which are classified as Class A, Class B or Class C in accordance with ASTM E108-2011 or UL 790-04, shall be acceptable as meeting the requirements of this section for each respective class of roof covering.

(b) Nothing in this section shall preclude the use of other roof coverings meeting the required test standards.

(Prior code § 65-7.4; Amend Coun. J. 3-29-17, p. 45477, § 6)

15-12-310 Identification.

Approved roof coverings shall be properly identified by label as conforming to the requirements of this section.

(Prior code § 65-7.5)

15-12-320 Interior wall and ceiling finish, floor covering, and trim.

Interior wall and ceiling finish, floor covering, and trim shall comply with the provisions of Sections 15-12-330 to 15-12-346, inclusive.

(Prior code § 65-8; Amend Coun. J. 6-27-90, p. 17610)

15-12-330 Test procedure.

All interior wall and ceiling finish and trim shall be classified in accordance with resistance to spread of flame. Rate of spread of flame shall be determined by the tunnel-type test methods established in the following documents:

(a) Bulletin of Research No. 32, Fire Hazard Classification of Building Materials. ULI, September, 1944;

(b) Tentative Outline for Fire Hazard Classification of Building Materials. ULI, July, 1947.

(Prior code § 65-8.1)

15-12-340 Classification – Interior wall, ceiling finish and trim.

Interior wall and ceiling finish and trim shall be classified in accordance with flame spread ratings as follows:

Classification	*Flame Spread Rating**	*Smoke Developed**
Class 1	200	0 to 25
Class 2	450	26 to 75

Class 3	450	76 to 266

(Prior code § 65-8.2; Amend Coun. J. 6-27-90, p. 17610)

* **Editor's note** – As set forth in Coun. J. 6-27-90, p. 17610. Data in these columns have been reversed. Future legislation will correct the provision if needed.

15-12-344 Classification – Interior floor coverings.

All interior floor coverings shall be classified in accordance with the critical radiant flux characteristic as established in the following document.

National Fire Protection Association Standard 253, 1984 (ASTME – 648).

(Prior code § 65-8.3; Added Coun. J. 6-27-90, p. 17610)

15-12-346 Classification – Materials used as floor coverings.

Classification of materials used as floor coverings shall be in accordance with the critical radiant flux characteristics as follows:

Classification	*Critical Radiant Flux*
A	0.45 watts per square centimeter or higher.
B	0.22 to 0.44 watts per square centimeter.

(Prior code § 65-8.4; Added Coun. J. 6-27-90, p. 17610)

15-12-350 Foam plastic insulation.

Foam plastics, where approved, shall have a smoke developed rating of not more than 450 when tested in accordance with ASTME 84-98. The products of combustion shall be no more toxic than those of untreated wood burned under similar conditions.

The use of foam plastics in or on walls, ceilings or roof assemblies shall be permitted when there is compliance with requirements as follows:

(a) When the plastic foam is installed within an assembly, it shall be protected from the interior of the building by at least a 15-minute thermal barrier (such as 1/2 inch gypsum board) or a wythe of masonry and the foam shall have a flame spread not higher than 75.

(b) When the plastic foam is installed on the exterior of the building as part of an exterior insulation and finish system, it shall be protected by a synthetic stucco coating or an approved non-combustible finish and the foam shall have a flame spread not higher than 25.

(c) Foam plastic insulation having a flame spread rating of 75 or less when tested in a thickness of four inches may be used for temperature-control applications in thickness up to ten inches; if the total floor area does not exceed 500 square feet, and providing the insulation is covered with an approved thermal barrier of material having a finish rating of not less than 15 minutes. Thermal barriers shall be installed in a manner that will assure they remain in place for 15 minutes. Areas that exceed the 500 square feet limit shall, in addition, be protected with an approved automatic sprinkler system.

(d) Foam plastic insulation having a flame spread rating of 25 or less when tested in a thickness of four inches, may be used for temperature-control applications up to a thickness of ten inches if the total floor area does not exceed 500 square feet, and providing the insulation is totally incased in a metal facing of not less than 0.032-inch aluminum or Number 26-gauge steel. Areas that exceed the 500 square feet limit shall, in addition, be protected with an approved automatic sprinkler system.

(e) Foam plastics having a flame spread of 75 or less may be used within a curtain wall panel when fully enclosed by a metal facing of not less than 0.032-inch aluminum or 26-gauge steel, and complying with code requirements contained in Chapters 13-60 and 13-76, and the interior surface of the panel is covered with an approved thermal barrier of material having a finish rating of not less than 15 minutes.

(Prior code § 65-9; Amend Coun. J. 5-17-00, p. 32653, § 4)

CHAPTER 15-16

FIRE PROTECTION EQUIPMENT

Article I. Fire Protection

Part 1. Sprinkler Systems

ARTICLE I. FIRE PROTECTION (15-16-010 et seq.)

PART 1. SPRINKLER SYSTEMS (15-16-010 et seq.)

15-16-010 Sprinkler systems.

Automatic sprinkler systems complying with the requirements of Article II of this chapter shall be installed where required by the provisions of Sections 15-16-020 to 15-16-080.

(Prior code § 64-1)

15-16-020 General requirements.

Automatic sprinkler systems shall be installed throughout every building having a floor area exceeding the maximum areas established in Section 13-48-050 of this Code.

(Prior code § 64-2)

15-16-030 Special requirements.

Automatic sprinkler systems shall be provided in the following buildings and areas:

(a) *Shops and Storerooms.* All rooms and spaces used as paint shops, wastepaper baling or storage, and other storage uses having a similar degree of combustibility, except in the following cases:

1. When such room or space is located in a single-family or two-family dwelling,

2. When such room or space does not exceed 1,000 square feet in area and is located in a one- story building;

(b) *Basements.* Basement space used for storage of combustible material, except rooms or spaces having an area not exceeding 2,500 square feet and enclosed with partitions providing fire resistance of not less than two hours;

(c) *Stage Blocks.* Every part of Type I stage block, including locations below each fly gallery, beneath the stage ceiling or roof, and above the proscenium opening and including also all workshops, storage rooms, property rooms and dressing rooms;

(d) *Garages.*

1. Any basement garage space having a capacity of more than three vehicles unless such garage is open to the atmosphere to a height of not less than 18 inches around 50 percent or more of its perimeter,

2. Garages having a storage capacity of 20 or more vehicles and located in buildings in which stories above such garage are designed or used for other occupancies,

3. All garages exceeding four stories in height,

4. Garages in buildings of institutional use;

(e) Basement spaces in any department store and all floors of department stores two stories or more in height;

(f) All buildings of Types II, IIIA and IIIB construction having unlimited areas as provided in Table 13-48-070 except buildings of low-hazard industrial or low-hazard storage occupancies;

(g) On or before January 1, 1956, in every existing or preordinance building used in whole or part as a men's cubicle hotel which does not comply with Section 13-64-020(a) of this Code;

(h) On or before December 31, 1963 in every existing, preordinance building and buildings hereafter erected, two stories or more in height, used in whole or in part, as Type I school, or used in whole as Type II school, and hospitals, infirmaries, nurseries, orphanages, sheltered-care homes, sanitoria and homes for the aged, as defined in Section 13-56-050 of this Code as Class B institutional units, and each of construction Type IIIA, IIIB, IIIC, IVA, IVB. Such installation shall include basement areas;

(i) In every building hereafter erected and used primarily as an exhibition area or in that portion of any building hereafter erected and used as an exhibition area;

(j) On or before December 31, 1970 in every existing building used primarily as an exhibition area or in that portion of any building used as an exhibition area;

(k) All buildings three stories or more in height, occupied as an open plan school. A story located below grade level shall be counted if used for other than building service purposes;

(l) On or before February 1, 1977 in every existing or preordinance building and buildings hereafter erected, used in whole or in part as a nursing home, as defined in Section 13-4-010. Such automatic sprinkler system shall be supervised;

(m) All intermediate care facilities for developmentally disabled – 15 or less persons;

(n) In every new and existing telephone exchange;

(o) On and after January 1, 2018, in every new high-rise building; and

(p) On and after January 1, 2020, in every new building containing four or more dwelling units.

(Prior code § 64-3; Amend Coun. J. 12-21-84, p. 12140; Amend Coun. J. 11-2-94, p. 58476; Amend Coun. J. 5-9-12, p. 27485, § 183; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 17; Amend Coun. J. 4-10-19, p. 100029, Art. VIII, § 13)

15-16-040 Hazardous use units.

General. A standard system of automatic sprinklers, meeting the requirements of Article II of Chapter 15-16 of this Code shall be installed in every building or part of a building, hereafter designed, erected, altered, or converted for the purposes of the following occupancies:

Asphalt tar, pitch, resin and paraffin heating rooms;

Drying rooms for articles or materials which give off explosive or flammable vapors during the drying process whether or not a collection and disposal system is provided for such vapors;

Fume or flammable compressed gas buildings of heavier timber or ordinary construction;

Grinding or dust-producing rooms;

Highly flammable material storage buildings and rooms; Highly toxic materials buildings and rooms;

Japanning or enameling rooms;

Nitrocellulose products building and rooms;

Paint mixing or spraying rooms;

Picker or shredder rooms;

Rooms for storage or baling of wastepaper;

Industrial properties with occupancies such as:

Artificial flowers;

Artificial leather;

Carpet linings;

Cotton batting;

Cotton clothing;

Cotton ragsorting;

Cotton waste;

Feather renovating or processing;

Shoddy mills;

Straw goods;

Woodworking with application of flammable finishes which produce explosive or flammable vapors under normal room conditions;

and other such occupancies as shall be determined to be in fact of high hazard by the fire commissioner due to the inherent characteristics of the material involved and consistent with the occupancies definitely fixed as hazardous use units; provided, however, that if the nonhazardous areas of any building in which such an occupancy occurs, are separated from the hazardous use area by a fire wall, it shall be permissible to omit such sprinkler system from the nonhazardous areas; and provided further, that where required under other paragraphs of this section, every floor area above the lowest floor area in which certain hazardous use units occur, shall be equipped throughout with a standard system of automatic sprinklers; and provided also, that no sprinkler system shall be required in any vault used for the storage of files, records and other nonhazardous documents.

Where Prohibited. No sprinkler system shall be permitted in any hazardous chemical room or in any hazardous chemical storage building, where the chemical has the ability to react with water to produce substances or violent chemical reactions which increase the hazard. When the presence of water will not add to the hazard, a standard sprinkler system shall be required in such hazardous chemical room or building.

Fume or Flammable Compressed Gas. No sprinkler system shall be required for any fume or flammable compressed gas building of Type IA, IB or IC construction, nor for any room intended for the storage and use of chlorine gas for no purpose other than the operation

of a water purification plant or refrigerating unit, nor for any unit of noncombustible construction used exclusively for the production of manufactured gas.

Highly Flammable Material Storage. Every fire area containing any highly flammable material storage room shall be equipped throughout the story containing such room and throughout every higher story with a standard system of automatic sprinklers; provided, however, that if such room is designed, erected, altered or converted for the purposes of storing in baled condition only, not more than 5,000 pounds of any highly flammable material as described under Section 15-28-410, then such a sprinkler system shall be required in such room only.

Nitrocellulose Products Rooms.

(1) *General.* Every fire area containing a nitrocellulose products room shall be equipped throughout the story containing such room and throughout every higher story, with a standard system of automatic sprinklers.

(2) *Film Examining and Repair Rooms.* Every room intended for the examination or repair of motion picture films shall be provided with not less than one automatic sprinkler head for 64 square feet of ceiling area, so spaced that the maximum distance between the adjacent heads and branch lines shall not exceed eight feet. Where nitrocellulose products are stored on shelves, there shall be one sprinkler head directly over the aisle in front of each section of shelving.

(3) *Receiving, Shipping and Distributing Rooms.* Every receiving, shipping or distributing room for nitrocellulose products shall be provided with not less than one automatic sprinkler head for each 64 feet of ceiling area, so spaced that the maximum distance between adjacent heads and branch lines shall not exceed eight feet.

(Prior code § 64-4; Amend Coun. J. 5-18-16, p. 24131, § 112)

15-16-041 Telephone exchanges.

Fire alarm systems required in telephone exchanges pursuant to subsection (d) of Section 15-16-110 shall be connected to a central station supervisory service.

(Added Coun. J. 11-2-94, p. 58476)

15-16-050 Highly flammable material storage.

Automatic sprinkler protection shall be required in every such room as required in Section 15-28-620. Such sprinkler system shall be so designed that the floor area covered by each sprinkler head shall not exceed 100 square feet. If piling of bales or loose highly flammable material exceeds 12 feet, such sprinkler system shall be hydraulically designed to provide a density of .20 to .30 gallons per minute per square foot over the maximum floor area which would be involved.

(Prior code § 64-5)

15-16-051 Public utility structures and technology centers.

Every public utility structure (as defined in Section 13-96-1080) and every technology center (as defined in Section 13-56-121) hereafter erected, and every existing public utility structure which repairs or alterations are made within a 12-month period to 50 percent or more of the electrical equipment contained therein, shall be provided with either a standard sprinkler system or a non-water based extinguishing system that complies with the requirements of Chapter 15-16. The type of fire suppression system installed in a public utility structure or technology center shall be indicated on a sign installed and prominently visible at the entrance to the structure. If a building is protected in whole or in part by a non-water based extinguishing system in lieu of a standard sprinkler system, the bonuses provided in this Code for installation of a standard sprinkler system shall not apply.

(Added Coun. J. 11-2-94, p. 58476; Amend Coun. J. 6-28-00, p. 36679, § 7; Amend Coun. J. 11-8-12, p. 38872, § 233)

15-16-060 Smoke alarm requirements.

Requirements for smoke alarms in residential buildings shall be as provided in Section 13-64-120.

(Prior code § 64-5; Amend Coun. J. 9-6-17, p. 55278, Art. VI, § 35)

15-16-070 Spray booths.

A standard installation of automatic sprinklers, complying with Article II of Chapter 15-16, shall be installed in every spray booth.

(Prior code § 64-6)

15-16-080 Standard fireproof vaults.

Every standard fireproof vault shall be equipped with a standard system of automatic sprinklers, with one standard automatic sprinkler head for each 64 square feet or fraction thereof.

(Prior code § 64-7)

PART 2. STANDPIPE SYSTEMS (15-16-090 et seq.)

15-16-090 General requirements.

(a) Standard inside standpipe systems complying with the requirements of Article II of Chapter 15-16 shall be provided:

(1) *High-rise Buildings.* In all buildings exceeding 80 feet in height with the following exceptions:

(A) Standpipes shall not be required in grain elevators or similar storage structures where such standpipes are ineffective owing to the type of structure and inaccessibility of hose connections.

(B) This section shall not apply to a building used as a business unit or storage unit in existence prior to January 20, 1950, which is equipped throughout with an approved system of automatic sprinklers or is a fire-resistive building of Type IA, IB or IC construction; provided, that a standpipe system complying with Section 15-16-1190 is also provided in the building.

(2) *Institutional Units.* In institutional units, standpipes shall be provided in all buildings more than four stories or 55 feet in height.

(3) *Stage Blocks.* In stage blocks, standpipes shall be provided on each side of the stage, on each tier of dressing rooms and within 50 feet of all property rooms, storerooms or workrooms.

(4) *Exhibition Areas.* In exhibition areas, standpipes shall be provided regardless of the height of the building and standpipe locations shall provide complete coverage of the fire area with 100-foot hose lengths and 30-foot hose streams.

(5) *New Buildings Greater Than 55 Feet.* For buildings first permitted after February 1, 2019, that are greater than 55 feet and not more than 80 feet in height, a manual dry standpipe shall be provided in each enclosed stairwell.

(b) For the purpose of determining standpipe requirements, the height of a building shall be determined in accordance with the provisions of Section 13-48-020.

(Prior code § 64-8; Amend Coun. J. 1-23-19, p. 94952, Art. II, § 1)

15-16-100 Hazardous use units.

A standard system of standpipes meeting the provisions of Article II of Chapter 15-16 of this Code shall be installed in every hazardous use unit which is more than 80 feet in height; provided, however, that such a standpipe system shall be installed in every cereal, feed, flour, grist or starch mill, malt house or similar building which is more than two stories in height.

(Prior code § 64-9)

PART 3. FIRE ALARM SYSTEMS (15-16-110 et seq.)

15-16-110 General requirements.

An approved fire alarm shall be provided as follows:

(a) A standard fire alarm meeting the requirements of this chapter and Article II of Chapter 15-16 shall be provided in the following occupancies:

(1) *Institutional:* Buildings two stories or less in height with a floor area which does not exceed 8,000 square feet shall be equipped with a Class I system. Buildings over two stories in height or with a floor area exceeding 8,000 square feet shall be equipped with a Class II system.

(2) *Type II Schools:* Buildings over one story in height shall be equipped with a Class I system.

(3) *Type I or Type III Schools:* Class I system.

(4) *Hotels:* Buildings of Types II, III or IV construction 80 feet or less in height shall be equipped with a Class I system except where 25 or fewer persons sleep above the second floor.

(5) *Single-room occupancy building:* New and existing single-room occupancy buildings two stories or more in height, which are not equipped with a complete automatic sprinkler system, shall be equipped with a Class I fire alarm. The approved standard Class I control equipment may cause microprocessor based program-controlled communication circuits when the control equipment is of a type tested and conforming to Underwriters Laboratories Standard 864-1991 for the intended use. The stored program (software) installed figuration for such systems shall be incapable of change, except that a manufacturer's authorized technician may make changes for proper system operation when such changes are approved by the fire commissioner. Any changes, repairs or maintenance on such systems shall be performed only by or under the direction of a licensed supervising electrician.

(6) *Dormitories:* Buildings two stories or more in height, except those where 25 or fewer persons sleep above the second floor, shall be equipped with a Class I system.

(7) Intermediate care facilities for the developmentally disabled – 15 or fewer persons, same as institutional uses.

(b) *Hotels:* Buildings of Type I construction over four stories but not over 80 feet in height shall be equipped with an approved fire alarm system including smoke detectors, heat detectors and waterflow alarm devices installed in accordance with NFPA 72-2013 and annunciated visually and audibly for each individual floor at a fire panel located near a main entrance to the building. A one-way voice communication system controlled from the fire panel location and meeting the requirements of Section 13-76-050(b) shall be provided. Use of the one-way voice communication system in a fire emergency by other than department of fire personnel shall be prohibited.

(1) The fire alarm system shall be zoned horizontally based on the system design, but in no case shall there be less than one zone per floor.

(2) The fire alarm system shall be monitored by an Underwriters' Laboratories, Inc. listed Central Station service or shall be a Proprietary Protective Signaling System installed in accordance with NFPA 72-2013.

(3) A fire panel consisting of fire alarm controls, annunciator panel, and one-way voice communications system controls shall be provided in a location approved by the fire commissioner.

(4) Plans for all systems to be installed shall be submitted to the fire commissioner for approval and systems used shall meet the approval of the fire commissioner.

(c) Notwithstanding any other provision of this Code to the contrary, the revisions to the requirements of this chapter contained in the amendatory ordinance of June 27, 1990, shall apply to existing schools and day care centers beginning July 1, 1991; the revisions to the requirements of this section contained in the amendatory ordinance of 2017 shall apply to existing schools and day care centers beginning July 1, 2018.

(d) The requirements of Section 15-16-110(5) of this Code shall be enforced against all single-room occupancy buildings effective June 30, 1995. All single- room occupancy buildings which will require installation of a Class I alarm system shall submit plans to the fire commissioner for approval of such system on or before January 1, 1995.

(e) *Telephone Exchanges.* An approved fire alarm system shall be provided in every new and existing telephone exchange. The fire alarm system shall comply with the requirements of Sections 15-16-140 and 15-16-1280 through 15-16-1510.

(Prior code § 64-10; Amend Coun. J. 12-21-84, p. 12140; Amend Coun. J. 9-8-86, p. 33558; Amend Coun. J. 6-27-90, p. 17610; Amend Coun. J. 5-4-94, p. 49750; Amend Coun. J. 11-2-94, p. 58476; Amend Coun. J. 5-9-12, p. 27485, § 184; Amend Coun. J. 5-18-16, p. 24131, § 113; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 18)

15-16-120 Class II standard fire alarm system.

A Class II standard fire alarm system may be installed in lieu of a Class I standard fire alarm system in any building, when in the opinion of the fire commissioner the number of people involved and the physical construction of such building makes a Class II standard fire alarm system acceptable. Class II standard fire alarm system shall comply with the provisions of Article II of this chapter.

(Prior code § 64-11; Amend Coun. J. 5-18-16, p. 24131, § 114)

15-16-130 Floor area and height.

In every building described in Section 15-16-110, as requiring a standard fire alarm system, the area of such building shall be the total area of the building and the height shall be the total height of the building, including the space used for occupancies other than for institutional, school, hotel, or single-room occupancies.

(Prior code § 64-12; Amend Coun. J. 5-4-94, p. 49750)

15-16-140 Automatic fire detectors, where required.

In every fire alarm system required in this Code, automatic fire detectors shall be installed as an integral part of a fire alarm system in rooms or portions of the building as follows:

(a) In every attic and in all rooms where flammable compressed gas or flammable liquid as described in Chapters 15-24 and 15-26 other than fuel oil for heating is stored or used; also in shops and storerooms where combustible material is stored or handled.

(b) In every building used in part as an institutional building, school, hotel, or single-room occupancy an automatic fire detector shall be installed in such portion or portions of the building used for purposes other than institutional, school, hotel, or single-room occupancy purposes, unless such institutional building, school, hotel, or single-room occupancy is separated from all other occupancies by a separation with a fire-resistive value as specified in Section 13-56-280. Such automatic fire detectors shall be installed, spaced and located in accordance with the recommendations, based upon actual tests, prescribed by a nationally recognized testing laboratory acceptable to the fire commissioner.

(c) In every storeroom, maintenance shop, fan room, mechanical equipment room, laundry, linen room, janitor closet, kitchen, storage area and dwelling unit of a dormitory of two or more stories in height. The automatic detectors provided in the dwelling units of dormitories shall be rate-of-rise type heat detectors with a smoke detector also installed in each unit in conformity with Sections 13-64-130 and 15-16-1370 of this Code.

(d) Fire alarm systems serving Type III schools, day care centers Class II, and those Type I schools operating as or containing a day care center Class I as defined in Section 13-4-010 shall include automatic detectors as follows:

1. Smoke detectors shall be installed at each floor level, including basements, of each interior stairwell up to and including one level above the level of the school or day care center, except in unoccupied attics.

2. Smoke detectors shall be installed in front of doors to stairwells from the school or day care center and at intervals of no less than 30 feet in all corridors within or serving the school or day care center.

3. Smoke detectors shall be located in all lounges, recreation areas and sleeping rooms.

4. Heat detectors shall be installed in boiler rooms, kitchens and combustible storage areas except where a sprinkler system with a flow alarm connected to the fire alarm system is installed in such rooms.

(e) In all two-story buildings occupied as open plan schools (a story located below grade level shall be counted, if used for other than building service purposes), approved automatic fire detectors shall be installed throughout the building and be interconnected to the school fire alarm system.

(f) In hotel buildings over four stories not equipped with an approved system of automatic sprinklers, electrical equipment rooms,

guestroom corridors and elevator lobbies shall be equipped with automatic smoke detectors installed in accordance with NFPA 72-2013.

(g) In single-room occupancy buildings, automatic heat detectors shall be installed in each single-room occupancy unit, in public corridors, and at each floor level in every interior stairwell. In single- room occupancy buildings, smoke detectors required by Section 13-196-100 of this Code need not be connected to the fire alarm system, but shall be permanently connected to the electrical wiring of the building.

(h) In every new and existing public utility structure as defined in Section 13-96-1080, smoke detectors shall be installed in all rooms and spaces containing any electric power or communication transformers, switches, capacitors, control panels, cables, cable racks or equipment racks. The smoke detectors shall be installed in accordance with the provisions of NFPA 72-2013, except that detector locations may vary from NFPA requirements when live electrical equipment would endanger personnel installing or maintaining detectors.

(i) Fire detectors shall be provided throughout every telephone exchange in accordance with NFPA 72-2013. Two different types of fire detectors shall be included in each alarm zone in buildings exceeding 1,600 square feet.

(Prior code § 64-13; Amend Coun. J. 9-8-86, p. 33588; Amend Coun. J. 6-27-90, p. 17610; Amend Coun. J. 8-4-93, p. 36644; Amend Coun. J. 5-4-94, p. 49750; Amend Coun. J. 11-2-94, p. 58476; Amend Coun. J. 5-9-12, p. 27485, § 185; Amend Coun. J. 5-18-16, p. 24131, § 115; Amend Coun. J. 11-9-16, p. 36266, § 31; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 19)

15-16-150 Substitution of sprinklers for heat detectors.

No automatic heat detector shall be required in any room or portion of a building which is equipped with an approved installation of automatic sprinklers and provided with a waterflow alarm which is connected to the fire alarm system. Provided, however, that the foregoing exception shall not apply to any intermediate care facility for the developmentally disabled – 15 or fewer persons.

(Prior code § 64-14; Amend Coun. J. 12-21-84, p. 12140; Amend Coun. J. 9-8-86, p. 33588)

PART 4. FIRE EXTINGUISHERS (15-16-160 et seq.)

15-16-160 General requirements.

Standard fire extinguishers shall be provided in accordance with the provisions of Sections 15-16-620 to 15-16-680 of this Code inclusive.

(Prior code § 64-15)

ARTICLE II. FIRE PROTECTION EQUIPMENT (15-16-170 et seq.)

PART 1. STANDARD SPRINKLER SYSTEMS (15-16-170 et seq.)

15-16-170 Definition of system.

A standard sprinkler system, for the purpose of this code, is hereby defined as an arrangement of piping installed in a building with outlets termed sprinklers distributed in such a manner that water can be discharged automatically in a spray directly from the sprinklers, for the purpose of extinguishing an incipient fire and protecting the building and its occupants and contents, with pumps, tanks and other equipment as necessary to provide an adequate supply of water to the sprinklers. Every sprinkler system required by this code shall comply with all the requirements hereinafter enumerated for such a system. Fire pumps, filling pumps, air compressors, sprinklers, hose and all equipment installed in connection with a standard sprinkler system shall be of a make, type and design which has been tested and listed by and which bears the label of a product testing laboratory which regularly tests fire protection equipment and conducts periodic inspection of the production of listed equipment or materials.

(Prior code § 91-1; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-180 Other definitions.

For the purposes of this chapter, other terms used hereinafter are hereby defined as follows:

"Air compressor." A device for supplying air under pressure to the pressure tanks of a sprinkler system or the cushion tank of a sprinkler system, or to an inside standpipe system or to a dry pipe sprinkler system.

"Automatic sprinkler." A sprinkler designed to open and discharge water when heated to a predetermined temperature.

"Capacity of tanks." The capacity of gravity tanks shall be the number of U.S. gallons available to supply the sprinkler system.

"Concealed sprinkler." A sprinkler which is recessed into the surrounding surface and provided with a cover plate.

Construction definitions.

"Obstructed construction." Construction where beams, trusses, or other structural members impede heat flow to or water distribution from automatic sprinklers in a manner that materially affects the ability of sprinklers to control or suppress a fire.

"Unobstructed construction." Construction where beams, trusses, or other structural members do not impede heat flow to or water distribution from automatic sprinklers in a manner that materially affects the ability of sprinklers to control or suppress a fire. Unobstructed construction may have horizontal structural members that are not solid, with openings that are at least 70 percent of the vertical side area and the depth of the member does not exceed the least dimension of the opening.

“Fire area.” The largest floor area, up to a maximum of 12,000 square feet, enclosed within the exterior walls of a building, if not divided into independent areas by fire walls, or the floor area of any such independent area, if so divided.

“Fire pump.” A device used for supplying water to a sprinkler system at the pressure required by the system.

“Fire pump, automatically controlled.” A fire pump which starts automatically when the pressure in the system drops to a predetermined point and stops automatically when the pressure in the system rises to a predetermined point.

“Gravity tank.” A wooden or metal elevated container holding water to supply a sprinkler system at gravity pressure.

“Hydraulically calculated system.” An automatic sprinkler system in which pipe sizes are selected on a pressure loss basis to provide a prescribed minimum water discharge density in gallons per minute per square foot over a specified area.

“N.F.P.A.” or “NFPA”. The National Fire Protection Association.

“Open sprinkler.” A sprinkler in which the discharge orifice is open at all times.

“Pressure maintenance pump.” A small pump under automatic control used to maintain pressure on the system to avoid frequent operation of the system fire pump.

“Pressure tank.” A tank holding water pressurized with air to supply a sprinkler system at a pressure greater than that due to gravity.

“Siamese connection.” A two or other multiple inlet fitting installed on the outside of a building and connected to the system main of a sprinkler system for the use of the fire department only, to supply water to the system.

“Sprinkler.” The outlet used in a sprinkler system to discharge water onto a fire.

Sprinkler system types:

(1) Wet pipe system – A system employing automatic sprinklers attached to a piping system containing water and connected to a water supply so that water discharges immediately from sprinklers opened by heat from fire.

(2) Dry pipe system – A system employing automatic sprinklers attached to a piping system containing air under pressure, the release of which from the opening of sprinklers permits the water pressure to open a valve known as a “dry pipe valve”. The water then flows into the piping system and out the opened sprinklers.

(3) Pre-action system – A system employing automatic sprinklers attached to a piping system containing air that may or may not be under pressure, with a detection system installed in the same area as the sprinklers. Actuation of the detection system opens a valve known as the pre-action valve which permits water to flow into the sprinkler piping system and to be discharged from any sprinkler that may be open.

(4) Deluge system – A system employing open sprinklers attached to a piping system connected to a water supply through a valve known as a deluge valve which is opened by the operation of a detection system installed in the same areas as the sprinkles. When this valve opens, water flows into the piping system and discharges from all sprinklers attached thereto.

(5) Combination dry pipe and pre-action sprinkler system – A sprinkler system employing automatic sprinklers attached to a piping system containing air under pressure with a detection system installed in the same areas as the sprinklers; operation of the detection system actuates tripping devices which open “dry pipe valves” simultaneously and without loss of air pressure in the system. Operation of the detection system also opens air exhaust valves at the end of the feed main which facilitates the filling of the system with water which usually precedes the opening of sprinklers. The detection system also serves as an automatic fire alarm system.

“Supervised.” When applied to an automatic sprinkler system, shall mean equipped with electrical devices which indicate the position of the valves controlling sources of water for the system to an office located on the premises which is continuously attended or to a listed central station alarm service.

“Tank heater.” A device for heating the water in a gravity tank, pressure tank, or tank riser to prevent the water in these portions of a sprinkler system from freezing.

“Water supply piping in a sprinkler system.” The piping from the sources of supply to the sprinkler heads. The different sections of the water supply piping are:

(1) Branch line. A horizontal pipe which conveys the water to the sprinkler heads.

(2) Cross main. The pipe supplying the branch lines, either directly or through risers.

(3) Feed mains. The pipes supplying risers and cross mains.

(4) Pump suction. A pipe which conveys the water from the city main or other sources of supply to the fire pump.

(5) System riser. A vertical pipe which conveys the water supply to feed mains or cross mains.

(6) Tank riser. The pipe which conveys the water from a gravity or pressure tank to the system main or sprinkler system.

“Water supply, two source.” A two source water supply shall mean two independent supplies of water from a combination of a city water main, gravity tank, or reservoir or two independently controlled city water mains.

(Prior code § 91-2; Amend Coun. J. 10-30-96, p. 31216, § 1; Amend Coun. J. 5-18-16, p. 24131, § 116)

15-16-190 Permit and fees.

Before the installation or alteration of a sprinkler system required by the provisions of this Code, a plan, setting forth all essential details of the sprinkler system, shall be submitted to the Fire Commissioner. The plans submitted shall include hydraulic calculations when calculated and the type of sprinklers to be used. Upon finding that the plan conforms to the requirements of the Code and after payment of the sprinkler permit fee hereinafter specified, said plan shall be approved by the Fire Commissioner.

The fees charged in connection with a sprinkler system shall be as follows:

If the plan does not conform to the requirements of the Code and a revised plan is submitted, the fee for each revised plan submission shall be $200.00. For the approval of the sprinkler plan and the initial inspection of a sprinkler system required by the provisions of this Code, a fee of $300.00 shall be charged for the first 100 sprinkler heads or less and an additional $100.00 shall be charged for each additional 100 sprinkler heads or fraction thereof. For the test of a fire pump used in connection with a sprinkler system, a fee of $31.50 for each 50 gallons pumping capacity per minute shall be charged with a minimum fee of $315.00. These fees shall not be required for any building used solely as a school operated by the Chicago Board of Education. Where a pump serves both a standpipe and a sprinkler system, only one pump fee shall be charged.

(Prior code § 91-3; Amend Coun. J. 12-15-92, p. 27387; Amend Coun. J. 10-30-96, p. 31216, § 1; Amend Coun, J, 11-16-11, p. 13798, Art. VIII, § 3; Amend Coun. J. 5-18-16, p. 24131, § 117; Amend Coun. J. 11-14-18, p. 90376, Art. V, § 4)

15-16-200 Installation certification.

After completing a sprinkler installation, the contractor shall submit to the fire commissioner a written certification that the system has been installed in accordance with the plans approved by the fire commissioner and tested in accordance with the provisions of Section 15-16-260. The form of such certification shall be as required in NFPA 13-2013.

(Prior code § 91-4; Amend Coun. J. 10-30-96, p. 31216, § 1; Amend Coun. J. 5-18-16, p. 24131, § 118; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 20)

15-16-210 Inspections.

Every standard sprinkler system now existent or which may hereafter be installed shall be inspected annually by an independent contractor licensed under the Illinois Fire Sprinkler Contractor Licensing Act and such inspections may be overseen by or in the presence of the fire commissioner. Whenever such annual inspection shows the standard sprinkler system to be in good working order and in compliance with this Code, the fire commissioner shall issue a certificate to that effect, and for each such inspection and certificate, a fee of $300.00 shall be charged. Buildings with multiple sprinkler system zones shall rotate the zone to be tested annually, insuring that the sprinkler system is operating properly. If a doubt exists regarding the capability of any component of a standard sprinkler system, the fire commissioner may order any test outlined in NFPA Standard 25, *Standards for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*, to determine the capability of that component.

(Prior code § 91-5; Amend Coun. J. 12-15-92, p. 27387; Amend Coun. J. 10-30-96, p. 31216, § 1; Amend Coun. J. 5-18-16, p. 24131, § 119)

15-16-220 Notice of defective conditions.

If an inspection or test discloses any condition such as defective parts, frozen tanks, closed valves or obstructed sprinklers, which would handicap the operation of the building's sprinkler equipment, the fire commissioner shall immediately be notified. Notice shall then immediately be sent by the fire commissioner to the building's owner or owners or to the owner's agent or to the person in control of the building containing such sprinkler systems, to remove or correct the defective condition as set forth in said notice within such time as may be specified by the fire commissioner in the notice.

(Prior code § 91-6; Amend Coun. J. 10-30-96, p. 31216, § 1; Amend Coun. J. 5-18-16, p. 24131, § 120)

15-16-230 Requirements for light hazard occupancies.

The following classes of occupancies, as defined in Chapter 13-56, when provided with sprinkler systems, may have such sprinkler systems designed in accordance with the light hazard classification of Sections 15-16-350, 15-16-370, and 15-16-600 of this code.

Class A-2 Multiple Dwellings;

Class B Institutional;

Class C Assembly;

Class E Business.

Areas of such occupancies used for storage, garage, building maintenance or shop purposes shall be sprinkled in accordance with the provisions of this code for industrial occupancies. In buildings of mixed occupancy the provision for light hazard sprinkler systems shall apply only to those portions of the building occupied by the above occupancies.

(Prior code § 91-7; Amend Coun. J. 10-30-96, p. 31216, § 1; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 21)

15-16-240 Requirements for extra hazardous occupancies.

The following classes of occupancy when provided with sprinkler systems shall have such sprinkler systems designed in accordance with the extra hazard classifications of Section 15-16-350 and the density requirements of Section 15-16-600 of this code.

The following industrial units – Class G-2:

Paper processing;

Plastics processing;

Plywood and particle board manufacturing;

Rubber reclaiming or milling;

Tire manufacturing;

Upholstering with plastic foam.

The following storage units – Class H-2:

Aircraft hangars;

Alcoholic beverages containing more than 20 percent alcohol;

Baled rags;

Flammable liquids;

Paper and paper products warehouse;

Furniture storage warehouse;

Freight warehouse;

Rubber tire storage.

The following hazardous use units:

Occupancies primarily involved in processing mixing, storing, and dispensing volatile flammable liquids;

Pyroxylin plastic manufacturing and processing;

Cotton picking and opening operations.

(Prior code § 91-8; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-250 Requirements for special systems.

All deluge, pre-action and combination dry pipe pre-action sprinkler systems shall be designed in accordance with NFPA 13-2013.

The area protected by a single pre-action valve shall not exceed 5,000 square feet except that in storage occupancies which are operated continuously at a temperature less than 32 degrees Fahrenheit a single pre- action valve may be used to protect an area up to 40,000 square feet. Each pre-action valve shall be trip tested annually as provided in NFPA 25-2014.

(Prior code § 91-9; Amend Coun. J. 10-30-96, p. 31216, § 1; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 22)

15-16-260 System tests.

Upon completion of the installation of a standard sprinkler system an acceptance test shall be performed by the installing contractor.

All portions of each system shall be tested for two hours at a cold water pressure of not less than 200 pounds per square inch if the normal pressure in the system does not exceed 150 pounds per square inch or at a pressure of not less than 50 pounds per square inch above the normal pressure, if such normal pressure is more than 150 pounds per square inch. Interior piping shall show no leaks. Underground piping shall show a leakage rate not greater than two quarts per hour per 100 gaskets or joints irrespective of pipe diameter.

Dry pipe systems, if tested during seasons of the year which will not permit the use of water, may be tested with air under a pressure of not less than 50 pounds per square inch.

Brine or other corrosive or toxic chemicals shall not be used for testing.

If the dry pipe valves are of the differential type, they shall be pumped up and allowed to stand 24 hours and shall show not more than one and one-half pounds per square inch loss of pressure during that period of time. A working test of each dry pipe valve shall be made before acceptance. When dry pipe valves are subjected to hydrostatic test pressures, the clapper of a differential type valve shall be held off its seat to prevent damaging the valve.

Fire pumps, air compressors, filling pumps and other equipment shall be tested for a period of two hours or such portion of this time as is necessary to show they are of the required capacities. Initial tests of fire pumps shall be made in the presence of a representative of the bureau of fire prevention and the installing contractor.

Every fire pump shall provide its rated capacity at its rated pressure. Fire pumps rated at less than 1,500 GPM shall furnish at least 150 percent of the rated capacity at 65 percent of its rated pressure. The pressure at the intake side of the pump shall not be less than five pounds per square inch under any flow rate.

Fire pumps shall be tested annually by an independent contractor licensed under the Illinois Fire Sprinkler Contractor Licensing Act. Such inspections shall be scheduled with, and may be overseen by or in the presence of, the fire commissioner.

(Prior code § 91-10; Amend Coun. J. 10-30-96, p. 31216, § 1; Amend Coun. J. 5-18-16, p. 24131, § 121)

15-16-270 Water supply requirements.

The water supply for sprinkler systems shall be taken from one or more of the following sources:

(a) *Gravity tanks*. Having a capacity sufficient to supply not less than 25 percent of the total number of heads in the largest fire area served for a period of not less than 20 minutes. The bottom of the tank shall be not less than 35 feet above the highest sprinkler connected thereto and the discharge from each sprinkler shall be calculated as 22 gallons per minute; the minimum capacity of the tank shall be 10,000 gallons.

(b) *Pressure tanks.* Having a capacity of not less than 4,500 gallons and not more than 9,000 gallons each, designed to be two-thirds full of water and one- third full of air at a pressure of not less than 75 pounds per square inch. Total water capacity of tanks in gallons shall be calculated as given in the gravity tank capacity section. The drop from the gravity tank shall be arranged to enter the line from the pressure tank at a level at least 35 feet below the bottom of the gravity tank and the gravity tank check valve shall be at this level when both gravity tank and pressure tank are used.

(c) Fire pumps, connected to a city water main, having a capacity sufficient to supply not less than 25 percent of sprinklers in the largest fire area except that no fire pump supplying sprinklers only need be larger than 1,500 gallons. Capacity of a fire pump shall be not less than 500 gallons per minute; however, a 250 gallons per minute sprinkler fire pump supplied by not less than a four-inch connection to the city water may be used in a school, an institutional unit, or a building used only as a residential unit which does not exceed four stories or 55 feet in height and which has less than 100 sprinkler heads in any sprinkler area. The discharge from each sprinkler head shall be calculated as 22 gallons per minute. The pressure shall be sufficient to provide 18 pounds per square inch at the highest sprinkler for a system not utilizing hydraulic design.

A fire pump may supply both a sprinkler system and an inside standpipe system; provided, however, the capacity of the pump is equal to the required capacity for the automatic sprinkler system and one-half the required capacity for the standpipe system. It shall be designed to meet the pressure requirements prescribed for the more severe service. The city connection shall be increased two inches if used to supply both domestic service and fire protection demands when the domestic service exceeds two inches.

(d) *City mains.* City water mains having sufficient volume and residual pressure in the main to supply 25 percent of the total number of sprinklers in the largest fire area to a maximum of 1,500 gallons per minute at a residual pressure of 18 pounds per square inch at the level of the highest sprinkler for a system not utilizing hydraulic design. The discharge shall be calculated as 22 gallons per minute.

(Prior code § 91-11; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-280 Use of pressure tank for other services.

Pressure tanks shall not be used for any purpose except to supply a sprinkler system, including hand hose attached to the system.

(Prior code § 91-12; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-290 Gravity tanks.

Gravity tanks shall be constructed and installed in accordance with the requirements of the Chicago Building Code in place at the time such construction or installation occurred. Provided, however, that gravity tanks constructed after September 10, 2014, shall be constructed and installed in accordance with N.F.P.A. Standard 22, *Standard for Water Tanks for Private Fire Protection*, 2013 Edition, as amended. Provided further, that all gravity tanks, regardless of the date of construction or installation, shall be maintained and disassembled in accordance with the latest edition of N.F.P.A. Standard 22, as amended.

(Prior code § 91-13; Amend Coun. J. 10-30-96, p. 31216, § 1; Amend Coun. J. 7-30-14, p. 86203, § 14)

15-16-300 Pressure tanks.

The materials and construction of tanks under pressure shall be in accordance with the American Society of Mechanical Engineers "Rules for the Construction of Unfired Pressure Vessels", Section VIII, dated 1986.

They shall be installed on steel or reinforced concrete supports, located so as to prevent sagging or vibration in the tanks and so as to distribute the load. Each tank shall be provided with a glass water column installed on one end of the tank at such a height that the center of the gauge glass shall be at the normal level of the water in the tank and equipped with automatic safety cocks.

(Prior code § 91-14; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-310 Fire pumps.

Fire pumps and auxiliary equipment, including controllers required to form complete pumping units, shall be of a type designed and developed for sprinkler service. The installation shall comply with NFPA 20-2013. The suction pipe shall be six inches for 500 and 750 gallons per minute pumps and eight inches for 1,000 and 1,500 gallons per minute pumps. The city connection shall be increased two inches if used for both domestic consumption and fire protection demands when the domestic service exceeds two inches.

In each case the pump used shall be selected to meet the conditions surrounding the installation. The pumping unit shall be designed to develop full capacity at its rated pressure. The design and installation of a pump shall be such that under any flow rate the intake pressure at the pump shall be not less than five pounds per square inch.

A fire pump shall be automatic in operation. A time delay device set for one minute for each ten horsepower of motor rating but not to exceed seven minutes shall be provided. A separate automatically controlled centrifugal pressure maintenance pump to avoid too frequent starting and stopping of the fire pump shall be provided.

(Prior code § 91-15; Amend Coun. J. 10-30-96, p. 31216, § 1; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 23)

15-16-311 Test manifold.

Each fire pump which supplies an automatic sprinkler system shall be provided with a discharge test manifold having one two and one-half inch corrosion resistant valve for each 250 gallons per minute of rated pumping capacity; however, no more than six valves need be provided. The discharge test manifold shall be located on an outside wall in a location which will permit safe discharge and drainage of water.

(Added Coun. J. 10-30-96, p. 31216, § 1)

15-16-320 Supply to tanks.

A gravity tank used for a sprinkler system shall be supplied with water by a filling pump having a capacity such that the tank can be filled in less than eight hours.

The pressure tanks shall be supplied with water by a filling pump having a capacity such that the tank can be filled in not mom than four hours and with air by an air compressor having a capacity of not less than 20 cubic feet of free air per minute if of 7,500 gallon capacity or over and 16 cubic feet of free air per minim if under 7,500 gallon capacity. Where the sprinkler system is equipped with both gravity and pressure tanks, one filling pump may be provided for both. Any storage tank used for fire protection purposes when supplied from the city water system shall conform to the piping provisions governing fill lines and overflow pipes for storage tanks prescribed in Chapter 11-8 of this code.

(Prior code § 91-16; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-330 Filling pipe.

The filling pipe to the gravity tank of any system shall be not less than two inches in diameter.

The water filling pipe to the pressure tanks shall be not less than one and one-half inches in diameter; it shall be run separately from the source of supply with a bronze seat check valve and a renewable disc angle valve provided in the pipe near the tank, the angle valve being placed between the check valve and the tank. The air supply pipe shall be not less than one inch in diameter and shall have a bronze seat check valve and renewable disc angle check valve provided in the pipe near the tank with the angle valve between the tank and check valve. The air supply pipe shall be connected to the tanks above the water level in the tanks.

(Prior code § 91-17; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-340 Small equipment.

Filling pumps, air compressors, tank heaters and other small equipment shall be installed as necessary for each system and shall be of the capacity required.

(Prior code § 91-18; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-350 Location and arrangement of sprinklers.

Sprinklers shall be provided throughout the entire premises, except in rooms used solely as electrical equipment rooms containing generators, transformers, or switchboards (unless such equipment is located in a public utility structure). Sprinkles may be omitted from rooms or areas containing materials which react violently to the application of water.

Freezers, if under 200 square feet in floor area, need not have sprinklers installed.

They shall be installed inside of show windows, within stairwells, under stairs, under projections extending below the ceiling and under balconies, galleries, ducts and other constructions having a width of more than 48 inches. Sprinklers shall be installed in concealed spaces enclosed wholly or partly by combustible construction. In combustible spaces in floors or ceilings, where there is a variation in height, sprinklers shall be installed up to the point where the spaces between the upper and lower joists is less than six inches.

In residential occupancies sprinklers may be omitted from closets having an area less than 20 square feet.

In vertical shafts, having combustible walls, a sprinkler shall be provided inside the shaft for each 200 square feet of the combustible surface, or fraction thereof, in addition to sprinklers installed at the top of the shaft. Sprinklers inside the shaft shall be staggered at alternate floor levels.

Sprinklers shall be installed throughout telephone exchanges except in rooms housing switching, toll, main distribution frame, power, auxiliary power or switchboard equipment.

All sprinklers shall be installed in the appropriate horizontal or vertical position as specified by testing conducted by a product testing laboratory which regularly tests fire protection equipment for the specific manufacture and model sprinkler.

The maximum distance between branch lines or between sprinklers on a branch line shall not exceed 15 feet except that in extra hazard occupancies the spacing between branch lines and sprinklers shall not exceed 12 feet. The distance from sprinklers to walls shall not exceed one-half of the allowable distance between sprinklers except that in light hazard occupancies, rooms having a floor area of less than 800 square feet a sprinkler may be located nine feet from any single wall provided that the area limitations given below are not exceeded. Automatic sprinklers designed to be installed in the upright or pendant position shall be located not less than four inches from a wall.

The maximum protection area per sprinkler shall not exceed the areas specified in Table 15-16-350. Ordinary hazard spacing shall be

used except as provided for at light hazard, Section 15-16-230, and extra hazard, Section 15-16-240 of this code.

Table 15-16-350

Maximum Area Per Sprinkler

(in square feet)

	Light Hazard	*Ordinary Hazard*	*Extra Hazard*	*Storage in Excess of 12 Feet in Height*
Unobstructed construction	225	130	100	100
Non-combustible obstructed construction	225	130	100	100
Combustible obstructed construction	168	130	100	100

The maximum floor area on any one floor to be protected by sprinklers supplied by any one sprinkler system riser shall not exceed 52,000 square feet except that in extra hazard occupancies the maximum area shall be 25,000 square feet provided that the area may be increased to 40,000 square feet when the system is hydraulically calculated.

When sidewall sprinklers are installed in rooms exceeding ten feet in width, sprinklers shall be installed on both sides of the room except that in light hazard occupancies sprinklers shall be installed on both sides of the room when the width of the room exceeds 14 feet. Sidewall sprinklers may be installed in occupancies other than light hazard occupancies only when the sidewall sprinklers are listed for use in other than light hazard occupancies.

Horizontal sidewall sprinklers may be installed in light hazard occupancies with smooth ceiling construction to protect areas consistent with their listing.

Under unobstructed construction, the distance between the sprinkler deflector and the ceiling shall be a minimum of one inch and a maximum of eight inches provided that sprinklers designed to be installed recessed into or flush with the ceiling deflectors may be closer than one inch. Under obstructed construction the sprinkler deflector shall be located not more than six inches below the structural members and not more than 22 inches below the ceiling or roof.

When sprinklers are installed with the deflector above the bottom of a vertical obstruction, the minimum horizontal separation of a sprinkler from a vertical obstruction which shall be not less than 12 inches when the obstruction has a vertical dimension greater than one inch but less than four inches. The minimum separation from a vertical separation shall be 24 inches when the obstruction has a vertical dimension greater than four inches.

Stocks of all kinds shall be so arranged and maintained as to not obstruct any sprinkler and in no case extend above a level of 18 inches below the deflector of any sprinkler.

Concealed sprinklers shall be equipped with cover plates which operate at a temperature of not greater than 135 degrees Fahrenheit. Such cover plates shall have a non-painted metallic, brass or chrome finish.

(Prior code § 91-19; Amend Coun. J. 11-2-94, p. 58476; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-351 Display booths.

Sprinklers may be omitted from structures erected and used as temporary display booths situated within any assembly occupancy having at least 500,000 square feet devoted exclusively for use as an exhibition hall. Temporary display booths shall comply with the following requirements:

(1) *Height and Area:*

a. Total height of a temporary display booth shall not exceed 30 feet above floor level and total stories shall not exceed two.

b. Temporary display booths of two stories shall be open and uncovered at the second story.

c. Temporary display booths shall not exceed 5,000 square feet in area.

(2) *Construction:*

a. All wood materials used in construction of a temporary display booth shall comply with NFPA 703 (1992 ed. or later), Chapter 2, *Standard for Fire Retardant Impregnated Wood*.

b. All non-wood materials used in the construction of a temporary display booth shall be non- combustible as defined under Section 15-12-040(e) of this code.

(3) *Fire Prevention and Detection:*

a. Scenery and decorations used within temporary display booths shall comply with combustibility standards at Sections 15-4-580 through 15-4-620 of this code.

b. Temporary display booths shall comply with the smoke alarm and fire extinguisher requirements in Section 13-84-351.

c. Temporary display booth diagrams required to be filed with the fire commissioner under Section 15-4-690 shall identify each temporary display booth having greater than one story.

d. Temporary display booths shall, in addition to the number and location requirements for exhibition area fire guards in Section 15-4-640 of this code, be patrolled by one fire guard for each booth in excess of one story in height at all times during which the show or exhibition is closed for business.

(Added Coun. J. 9-15-93, p. 37767; Amend Coun. J. 10-30-96, p. 31216, § 1; Amend Coun. J. 5-18-16, p. 24131, § 122; Amend Coun. J. 9-6-17, p. 55278, Art. VI, § 36)

15-16-360 Sprinklers.

Only new sprinklers shall be installed in sprinkler systems. Listed corrosion-resistant sprinklers shall be installed in locations where chemical or corrosive vapors exist. Damaged sprinklers shall be replaced.

Sprinklers shall be designed to open at temperatures from 135 to 165 degrees Fahrenheit in locations where the ceiling temperature does not exceed 100 degrees Fahrenheit. Where the ceiling temperature exceeds 100 degrees Fahrenheit, the temperature ratings of sprinklers shall be in accordance with the following table:

Maximum Ceiling Temperature	*Sprinkler Temperature Rating*	*Sprinkler Temperature Classification*
150 F	175 to 225 F	Intermediate
225	250 to 300	High
300	325 to 375	Extra high
375	400 to 475	Very extra high
475	500 to 575	Ultra high

Sprinklers installed under skylights shall be of the intermediate temperature classification.

Intermediate classification sprinklers may be used throughout industrial and storage occupancies.

(Prior code § 91-20; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-370 Sprinkler piping.

(a) The sprinkler piping system shall consist of mains from the sources of sprinkler supply, risers, branches and sprinkler lines. Where a fire pump is a source of supply, it shall include the connection from the city main or other source to the suction of the pump. If a fire pump takes suction from any source except a city main, provisions shall be made which will prevent the entrance of any foreign or injurious matter to the system. There shall be no connection from the sprinkler system by which the supply in any other system might be contaminated. In addition to the sources of supply inside of the building, there shall be one or more siamese connections at points outside the building, in accordance with Section 15-16-390, connected directly to the main for the use of the city fire department.

Sprinkler system components and hardware shall meet the requirements of NFPA 13-2013. All pipe fittings shall be designed to withstand the working pressure involved, but not less than 175 P.S.I. water pressure.

Connected to the system main there shall be one or more independent system risers to supply all the sprinklers in the building or in each section of a building which is divided into sections by fire walls. They shall be securely fastened in place and adequately protected against mechanical injury and freezing.

Each riser shall be of sufficient size to supply the greatest number of sprinkler heads served by it in any story. If an independent riser is provided to supply the sprinklers in a stair, or other tower, which is not provided with adequate fire stops between floors, such risers shall be of sufficient size to supply all heads in the tower.

The size of connections from the water supplies to the system main shall be not less than the size of the largest system riser. The sizes of mains and distributing pipes shall be based on the following, except as provided in Section 15-16-600 of this code:

Size of Pipe in Inches	*Maximum Number of Sprinklers*	
	Steel	*Copper*
1	2	2
1 1/4	3	3
1 1/2	5	5
2	10	12
2 1/2	20	25
3	40	45
3 1/2	65	75

4	100	115
5	160	180
6	275	300
8	400	425

There shall be not more than eight sprinklers on a sprinkler line.

Buildings having slatted floors or large unprotected floor openings without adequate fire stops shall be considered as one room.

The sprinkler piping shall be so installed that there will not be any circulation in any portion of the system except that gridded or looped patterns of sprinkler piping may be used in hydraulically calculated sprinkler systems.

Connections for purposes other than fire protection shall not be taken from any part of the sprinkler piping.

When sprinklers installed above and below a ceiling are supplied from a common set of branch lines, such branch lines shall not exceed eight sprinklers above and eight sprinklers below the ceiling. The number of sprinklers fed by three-inch pipe and smaller shall be determined as per the following table:

Size of Pipe in Inches	*Maximum Number of Sprinklers*	
	Steel	*Copper*
1	2	2
1 1/4	3	3
1 1/2	7	7
2	15	18
2 1/2	30	40
3	60	65

Pipe larger than three inches shall be in accord with the previous table in this section, based on the larger count of sprinklers either above or below the ceiling.

In occupancies listed in Section 15-16-230, piping supplying sprinklers may be sized according to the following table:

Size of Pipe in Inches	*Maximum Number of Sprinklers*	
	Steel	*Copper*
1	2	2
1 1/4	3	3
1 1/2	5	5
2	10	12
2 1/2	30	40
3	60	65
3 1/2	100	115
4	Unlimited but system shall not exceed 52,000 square feet	

(b) Effective January 1, 2018, the hydraulic calculation method shall be required, except the pipe schedule method shall be permitted for the following:

(1) Addition or modifications to existing pipe schedule systems.

(2) New systems of 5,000 ft^2 or less.

(Prior code § 91-21; Amend Coun. J. 10-30-96, p. 31216, § 1; Amend Coun. J. 5-11-05, p. 47844, § 1; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 24)

15-16-380 Piping supports.

All sprinkler piping shall be substantially supported from the building structure which must support five times the weight of the water-filled sprinkler piping plus 250 pounds applied at the point of support. Sprinkler piping shall be supported independent of ceiling sheathing. Wood plugs shall not be used in concrete to support sprinkler piping. The minimum size rod acceptable to support sprinkler piping shall be three-eighths inch in diameter except that three-sixteenths inch may be used in U-hook hangers.

Sprinkler piping or hangers shall not be used to support nonsystem components.

(Prior code § 91-22; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-390 Siamese connections.

At least one siamese connection shall be provided for every sprinkler system having more than ten sprinklers. At least one siamese connection shall be provided on each street exposure where the building is located closer than 100 feet to the curb to a limit of two street exposures. One siamese connection will be permitted in the case of two adjacent street exposures whose combined length is not greater than 250 feet. If any street exposure is more than 200 feet long, there shall be two siamese connections at least 200 feet apart for such exposure. When a building is so situated that it has no street frontages the siamese connection shall be located at the main entrance.

Hose threads shall fit the couplings of the city fire department; they shall be protected with a cap securely attached to the connection.

Each siamese connection shall be connected directly to the system main through a four-inch pipe with straightway or silent check valve in the connection; there shall be no other valves in the pipe connection. Each connection shall be drained between the check valve and the outside hose coupling. For a sprinkler system having a single riser less than four inches in diameter the pipe between the exterior hose connection and the riser may be the same size as the riser. When the single sprinkler riser is three inches or less in diameter a single two and one-half inch hose connection may be provided.

Where the sprinkler system has a single riser, the siamese connection shall be connected on the system side of the gate valve in the riser for a wet system or between the dry valve and the gate valve for a dry system. Where a sprinkler system has two or more risers the siamese connections shall be connected on the supply side of the gate valve so that with any riser shut off the supply will be into the remaining risers. At each siamese connection, there shall be a flat rectangular metallic plate attached to the siamese connection or the building near the connection on which shall be the word “SPRINKLERS” and a description of the area or floors protected in letters not less than one inch in height and not less than one-fourth-inch face.

Siamese connections shall be located not less than 12 inches nor more than five feet above the grade at the building line. Siamese connections shall be located so that immediate access can be made by the fire department. Obstructions on, before, or around siamese connections shall not be permitted.

(Prior code § 91-23; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-400 Valves.

All parts of the system shall be provided with indicating type valves so that any portion of the system can be taken out of service for repairs or in an emergency without interfering with the operation of the remainder of the system. Each system shall be provided with a gate valve so located as to control all sources of water supply except siamese connections.

Each floor and level of a building shall be provided with a separate control valve for that floor or level.

All valves in connections to water supplies and in supply pipes to sprinklers shall be outside screw and yoke or other indicating type except the valve at the connection to the city main.

Check valves shall be installed in all sources of water supply. They shall be straightway, wafer style, or silent pattern installed in horizontal piping unless of a type designed for installation in a vertical position.

A control valve shall be installed on each side of each check valve unless otherwise herein provided.

Where a gravity tank is located on a tower in a yard, the gate valve on the tank side of the check shall be of the outside screw and yoke type; where located on top or inside of a building both gate valves shall be of this type.

Where pressure tanks serve as a source of supply, a check valve shall be provided near the tank; no valve need be provided between the check valve and the tank.

Where a city main serves as a source of supply, no valve except the city gate valve need be provided on the street side of the check valve.

All siamese connections shall be connected to the system on the discharge side of all city control valves; the check valve shall be located as far as possible from the source of supply.

Valves controlling water supplies for sprinklers shall be located within building stairwells or in other locations where readily accessible. They shall not be located within a space occupied by an individual tenant unless the valve controls sprinklers located only within that space.

All valves in supply pipes to sprinkler systems shall be secured open. All valves shall be plainly marked to indicate the area controlled.

(Prior code § 91-24; Amend Coun. J. 10-30-96, p. 31216, § 1; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 25)

15-16-410 System drainage.

All sprinkler pipes and fittings shall be so installed that they can be completely drained. On wet pipe systems, sprinkler pipes may be installed level. In dry pipe systems and portions of pre-action systems subject to freezing, branch lines shall be pitched at least one- half inch per ten feet and mains shall be pitched at least one-quarter inch per ten feet.

Drain pipes for system risers and mains shall be not less in size than given in the following table:

Size of Riser or Main	*Size of Drain*

Two inches or less	3/4 inch
Less than four inches but greater than 2 inches	1 1/4 inches
Four inches or greater	Two inches

Where sectional or floor control valves are provided, they shall be provided with a drain sized as shown in the above table to drain that portion of the system controlled by the sectional valve.

Where installed underground, drains shall be galvanized with galvanized fittings or other corrosion resistant material. Where exposed to the weather they shall be fitted with hoods or elbows turned down to prevent stoppage with ice.

Drain pipes shall be so arranged as not to expose any portion of the sprinkler system to frost and shall be so connected that they will not overflow domestic or other piping. Direct connection shall not be made between sprinkler drains and sewers.

On wet systems all piping for sprinklers in excess of 20 which may be trapped, shall have a separate drain valve and drain connection; piping for 20 or less sprinklers shall be provided with non-ferrous drain plugs except the drop to an individual sprinkler head. On dry pipe systems, piping for sprinklers in excess of 20 which are trapped shall be equipped with a drain consisting of two one-inch valves separated by a 12-inch length of two-inch in diameter pipe. Where fewer than 20 sprinklers are trapped the drain may consist of a valve not smaller than one-half inch.

(Prior code § 91-25; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-420 Hand hose connections.

Hand hose to be used for fire protection only may be attached to sprinkler pipes. The pipe and valve supplying the hose shall be not less than one inch and not larger than one and one-half inch. The hose shall not be larger than one and one-half inch. The nozzle orifice shall not be larger than one-half inch except that an adjustable spray nozzle may be used. Hand hose shall not be connected to pipe less than two and one-half inches unless the system has been hydraulically designed to include the water discharged from the hose at the point where the hose is connected to the system. Hand hose shall not be connected to a dry system.

(Prior code § 91-26; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-430 Protection against freezing.

All equipment and piping, normally containing water, shall be protected against freezing.

(Prior code § 91-27; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-440 Protection against corrosion.

All piping shall be protected against corrosion. Sprinkler heads located in places where subject to corrosion shall be especially designed or protected against such corrosion.

Where pipe is used underground, the pipe shall be protected against corrosion.

(Prior code § 91-28; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-450 Test pipes.

A test pipe of not less than one inch diameter, with a smooth bore corrosion resistant outlet giving a flow equivalent to one sprinkler of a type having the smallest orifice installed in the system, shall be provided on wet sprinkler systems. This test pipe shall be connected to the end of the most remote branch line at the highest level of the system. There shall be a separate test pipe for each system. A test valve, which is not exposed to freezing, shall be provided to allow use of the connection.

A test pipe as provided above shall be installed in each dry sprinkler system. The test valve shall be equipped with a brass plug or a nipple and cap.

(Prior code § 91-29; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-451 Test pipes for high-rise buildings.

In high-rise buildings the test pipe for a sprinkler system may be placed at the water flow switch or the valve controlling the sprinklers for an individual floor or portion of a floor. The test connection shall be a listed sight test connection utilizing an orifice equivalent to a sprinkler of a type having the smallest orifice used in the system. The test connection shall terminate at a drain capable of accepting full flow of one sprinkler under system pressure.

(Added Coun. J. 10-30-96, p. 31216, § 1)

15-16-460 Dry pipe systems.

A dry pipe system shall be permitted only where heat is not adequate to prevent freezing of water in all or sections of a system. If the sprinklers in such unheated spaces are 25 percent or less of the total number of sprinklers required on a system having a total of 100 or more sprinklers, only such 25 percent or less shall be on the dry system and the remainder shall be on the wet system.

The dry pipe system shall be isolated from the water supplies (or from the wet portion of the system, if a combined wet and dry pipe system) by a dry pipe valve located at an accessible point as near as practicable to the dry system, adequately protected against

mechanical injury and freezing.

(Prior code § 91-30; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-470 Dry pipe system capacity limits.

No more than 500 sprinklers shall be controlled by one dry pipe valve. The capacities given below for various sizes of pipe shall be used to calculate the capacity of a system.

Capacity Per Foot of Pipe		
Diameter	*Gallons*	
	Schedule 40	*Schedule 10*
1 in.	.045	.049
1 1/4 in.	.078	.085
1 1/2 in.	.106	.115
2 in.	.174	.190
2 1/2 in.	.248	.283
3 in.	.383	.433
3 1/2 in.	.513	.576
4 in.	.660	.740
5 in.	1.040	1.144
6 in.	1.501	1.649
8 in.	2.66	2.776

Gridded dry pipe systems shall not be permitted.

(Prior code § 91-31; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-480 Quick opening devices.

Dry pipe valves controlling systems having a capacity of more than 500 gallons shall be provided with a quick opening device. The quick opening device shall be located as close as possible to the dry pipe valve while providing protection to the restriction orifice and other operating parts against submergence in water resulting from system drainage or priming. A soft disc globe or angle valve shall be installed in the connection between the dry pipe valve and the quick opening device. A check valve shall be provided also in the connection between quick opening device and the intermediate chamber of the dry pipe valve to prevent the escape of water if the dry valve should trip with the quick opening device disconnected. If the quick opening device requires a pressure feedback from the intermediate chamber, a valve type that will clearly indicate whether it is opened or closed shall be permitted in place of the check valve.

(Prior code § 91-32; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-490 Non-freezing systems.

Sprinkler piping in small unheated areas exposed to frost shall be filled with pure glycerine solution only. The total number of sprinklers in such areas shall not exceed 20. A durable sign or metal tag shall be firmly attached to the solution filling connection plainly marked “THE CITY CODE REQUIRES THE USE OF A PURE GLYCERINE SOLUTION ONLY”.

The sprinklers on the piping filled with glycerine shall be below the interface between the water and antifreeze solutions provided that sprinklers may be located above the interface between the water and the antifreeze when a check value with a one-thirty-second inch hole in the clapper is provided in a U-loop. A water control valve and two small solution test valves shall be provided.

(Prior code § 91-33; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-500 Gauges.

There shall be provided dial spring pressure gauges in each sprinkler system on the riser above and below the alarm valve if so equipped, at the system main drain; at each main drain associated with a floor control valve; at the pressure tanks and in each independent pipe from the air supply to dry pipe systems.

Gauges shall be graduated from zero to a pressure approximately double the normal working pressure of the system to which they are connected. Pressure gauges shall have a connection to the sprinkler system not less than one-quarter inch. Each gauge connection shall be equipped with a shutoff valve and provision for draining.

(Prior code § 91-34; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-510 Relief valves.

A brass relief valve not less than one and one-half inches in size shall be installed at the filling pump, set to relieve pressures ten

percent in excess of the pressure at the pump when the pressure tank is under normal working pressure.

A brass relief valve not less than three-fourths inch in size set to relieve pressures ten percent in excess of the normal pressure shall be installed in the air pipe between the check valve and the air compressor.

(Prior code § 91-35; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-520 Painting or finishing.

No part of any sprinkler shall be painted except to indicate the temperature rating of the sprinkler. No sprinkler shall be encumbered. Only the painting or coating applied to the sprinkler by the manufacturer shall be permitted.

(Prior code § 91-36; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-530 Alarms.

Whenever any sprinkler system is installed under this code which has more than ten sprinklers, a local alarm system shall be connected to the sprinkler system. There shall be provided an alarm on each system which is wholly or partially wet, consisting of an alarm valve or a listed flow indicating device and necessary attachments; they shall be of a design which will initiate a water flow signal if there is a flow of water through them equal to the flow from one sprinkler head.

The alarm on a dry pipe system shall include an alarm attachment to each dry pipe valve. Where two or more dry pipe valves are in the same frost-proof enclosure, the same alarm may serve all dry pipe valves in each enclosure. The attachments for either wet or dry systems shall include a water motor gong or electric bell on the outside of the building above a fire department siamese connection and inside bells and other electrical equipment hereinafter described.

Alarm, dry pipe, pre-action, and deluge valves shall be fitted with an alarm bypass test connection for the electric alarm switch, water motor gong or both. This pipe connection shall be made on the water supply side of the valve and provided with a control valve and drain for the alarm piping.

Water motor gongs shall be located as near the alarm valves or dry pipe valves as possible; piping shall be galvanized or brass and shall be installed to drain. A sign shall be placed near the outside bell where readily visible and shall bear the following:

"SPRINKLER ALARM

WHEN BELL RINGS

CALL

FIRE OR POLICE DEPARTMENT"

Electrically operated alarm attachments shall be installed in accordance with NFPA 72-2013. Outside electric alarm devices shall be listed for outdoor use.

All water flow alarm devices on automatic sprinkler systems installed in open plan schools shall be interconnected to the city fire alarm system.

(Prior code § 91-37; Amend Coun. J. 10-30-96, p. 31216, § 1; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 26)

15-16-540 Spare sprinklers.

A supply of at least six spare sprinklers shall be provided in a readily accessible location at the main sprinkler control valve or valves. The spare sprinkler shall include all of the types and temperature ratings used in the system.

(Prior code § 91-38; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-550 Reserved.

Editor's note – Coun. J. 10-30-96, p. 31216, § 1, repealed § 15-16-550, pertaining to fire pumps for open sprinkler system.

15-16-560 Reserved.

Editor's note – Coun. J. 10-30-96, p. 31216, § 1, repealed § 15-16-560, pertaining to arrangement of open sprinkler system.

15-16-570 Reserved.

Editor's note – Coun. J. 10-30-96, p. 31216, § 1, repealed § 15-16-570, pertaining to sprinkler heads for open sprinkler system.

15-16-580 Reserved.

Editor's note – Coun. J. 10-30-96, p. 31216, § 1, repealed § 15-16-580, pertaining to piping for open sprinkler system.

15-16-590 Reserved.

Editor's note – Coun. J. 10-30-96, p. 31216, § 1, repealed § 15-16-590, pertaining to siamese connections for open sprinkler system.

15-16-600 Hydraulically calculated sprinkler systems.

Hydraulically calculated sprinkler systems shall be acceptable. Pipe friction losses shall be determined by the Hazen and Williams friction loss formula. The design area shall be the hydraulically most remote area. All sprinklers shall discharge at a flow rate at least equal to the design density times the area covered per head. The equivalent pipe length method shall be used for all fittings, valves,

strainers and any other parts.

The “C” factor in the Hazen and Williams formula shall be as follows:

Pipe	*“C” Factor*
Unlimited cast or ductile iron	100
Black steel (dry and pre-action systems)	100
Black steel (wet and deluge systems)	120
Galvanized	120
Cement lined cast or ductile iron	140
Copper	150

The design densities and area shall not be less than the following:

Occupancy	*Density*	*Area*
Class A and B	.10 GPM square feet	1,500 square feet
Class C, D and E	.12	1,500 square feet
Class F, G and H with ceiling heights to 14 feet	.20	2,000 square feet
Class F, G and H with ceiling heights over 14 feet	.25	2,500 square feet
Class I and those occupancies listed in Section 15-16-240	.30	2,500 square feet

For dry pipe sprinkler systems the area of application shall be increased 30 percent.

In buildings with mixed occupancies the design density and area of application for the different occupancies shall be applied to each occupancy. In buildings of Class A, B, C, D, or E occupancy class those areas used for storage or building maintenance shop purposes shall be sprinkled on the basis of an industrial occupancy. Spaces used for heating, ventilation, and air conditioning equipment shall have a density of .15 GPM/square feet over an area of 1,500 square feet.

Sprinkler systems using sprinklers with discharge orifices other than one-half inch in diameter shall be hydraulically calculated.

A safety factor, not less than five pounds per square inch, shall be provided between the calculated pressure requirement of a system and the water pressure available in the city water main supplying a hydraulically calculated system. The available city water pressure shall be determined by a water flow test at the site of the building conducted within the previous 12 months. The factor of safety shall be applied to the city pressure which is available at a flow of 1,000 gallons per minute or the calculated flow required for the sprinkler system whichever is greater.

(Prior code § 91-44; Amend Coun. J. 10-30-96, p. 31216, § 1)

15-16-601 Residential sprinklers.

Sprinkler systems installed in residential units pursuant to Section 13-160-050(m)(3) shall be installed as follows:

(A) Sprinklers shall be installed in all rooms of each dwelling unit except in bathrooms less than 55 square feet in area, closets less than 24 square feet open, carports and porches, and attics, crawl spaces or other concealed spaces not used or intended for storage or living spaces.

Sprinklers shall be installed in entrance foyers and enclosed attached garages.

(B) Only sprinklers listed for residential occupancy shall be used.

(C) When the sprinkler system serves more than one dwelling unit and is equipped with a fire pump, the fire pump and all associated controls shall be located in a room which is accessible without passing through an individual dwelling unit. The room shall be identified as the fire pump room.

A fire pump supplying a system which serves more than one dwelling unit shall be equipped with a bypass not less than one and one-half inches in diameter consisting of two control valves positioned on either side of a check valve.

Each sprinkler system which serves more than one dwelling unit shall be equipped with a siamese connection conspicuously located on the street frontage. Such siamese connection may have one hose connection.

A fire pump which supplies a sprinkler system which serves more than one dwelling unit shall be equipped with a test valve located on the discharge side of the pump.

(D) Pipe shall comply with Section 15-16-370.

(Added Coun. J. 10-30-96, p. 31216, § 1)

15-16-610 Retroactivity.

The provisions of Sections 15-16-170 to 15-16-600, both inclusive, shall apply to all automatic sprinkler systems hereafter installed in any preordinance buildings, existing buildings and buildings hereafter constructed and shall also apply to any automatic sprinkler systems installed prior to the passage of this ordinance which were not installed in accordance with approved plans and permits; provided, however, that existing high-rise buildings subject to the requirements of Sections 13-196-205 or 13-196-206 may deviate from these provisions to the extent permitted by Section 13-196-207.

(Prior code § 91-44.1; Amend Coun. J. 10-30-96, p. 31216, § 1; Amend Coun. J. 12-15-04, p. 39962, § 8)

15-16-611 Carbon dioxide extinguishing systems.

Carbon dioxide extinguishing systems required by this code shall be installed in accordance with N.F.P.A. Standard Number 12, *Standard on Carbon Dioxide Extinguishing Systems* (1993 edition). A local application of carbon dioxide system may be used to protect individual generators, transformers or equipment enclosures.

(Added Coun. J. 11-2-94, p. 58476; Amend Coun. J. 10-30-96, p. 31216, § 1)

PART 2. STANDARD FIRE EXTINGUISHERS (15-16-620 et seq.)

15-16-620 Definitions.

As used in this chapter:

"Service" where used in reference to fire extinguishers, means the charging, filling, maintaining, recharging, refilling, repairing and testing of fire extinguishers.

"Serviceman" means a person licensed by the City of Chicago to charge, fill, maintain, recharge, refill, repair and test fire extinguishers.

"Standard fire extinguisher" means a portable fire extinguisher which bears the label of approval of a national testing laboratory acceptable to the fire commissioner.

(Prior code § 91-45; Amend Coun. J. 5-18-16, p. 24131, § 123)

15-16-630 Classification and rating.

The classification and rating of fire extinguishers and their installation shall be in the manner prescribed in NFPA 10-2013.

(Prior code § 91-46; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 27)

15-16-640 Where required.

Standard fire extinguishers shall be provided on every floor, basement and subbasement of all buildings and structures as specified in the aforementioned NFPA ten with the following exceptions:

(1) *Single-Family and Two-Family Dwellings.* Fire extinguishers shall not be required in single-family and two-family dwellings.

(2) *Multiple Dwellings.* Fire extinguishers shall not be required in multiple dwellings not exceeding three stories in height and having a floor area not exceeding 3,000 square feet.

(3) *Business, Mercantile, Industrial and Storage Units.* Fire extinguishers shall not be required in one story buildings of business, mercantile, industrial or storage occupancy, having a floor area not exceeding 3,000 square feet.

(4) *Stage Blocks.* In stage blocks, one 2A-rated and one C-rated fire extinguisher shall be provided on each side of the stage, on each gallery above the stage level, on the gridiron and in accessible places below the stage.

(5) *Projection Rooms.* In motion picture projection rooms, one 2A-rated and one C-rated fire extinguisher shall be provided.

(6) *Open Air Assembly Units.* In open air assembly units, one 2A-rated fire extinguisher and labeled as an antifreeze type if the ambient temperature ever falls below 40 degrees Fahrenheit shall be provided for each 10,000 capacity or fraction thereof.

(7) Not less than one 2A-rated fire extinguisher shall be located within every assembly room having a capacity of 300 persons or more, except that such extinguisher may be located in a corridor within 15 feet of a doorway to such assembly room.

(8) Only dry chemical fire extinguishers shall be installed where grain bleaching processes employing sodium peroxide and sulphur are carried on, wherever calcium carbide is present and wherever the introduction of water would create an added hazard.

(9) Only fire extinguishers having a Class B rating shall be installed in dry cleaning rooms and spaces where flammable liquids are present.

(10) In hazardous chemical rooms, the nature of the chemical contents of such rooms shall determine the extinguisher requirements.

(11) Only fire extinguishers having a Class C rating shall be installed for use upon fires in electrical equipment.

(12) *Lumberyards.* Portable fire-extinguishing equipment suitable to the fire commissioner shall be provided at convenient conspicuous locations in open yards so located that the travel distance to the nearest unit does not exceed 75 feet. Where necessary,

extinguishing agents shall be protected against freezing.

(13) Fire extinguishers in exhibition areas shall be provided at all hose cabinets as required in Section 15-16-090(e).

(Prior code § 91-47; Amend Coun. J. 5-18-16, p. 24131, § 124)

15-16-650 Multiple requirements.

Where more than one classification and rating of extinguisher is required by this Code for an area or room, an extinguisher having a multiple classification and rating may be used in lieu of separate extinguishers having only a single classification.

(Prior code § 91-48)

15-16-660 Installation.

Every required or nonrequired fire extinguisher, when installed, shall be fully charged and ready for immediate use. Where an extinguisher is likely to be obscured by piles of stock, lumber or otherwise, a sign shall be installed and maintained which will mark the location of such extinguisher in a manner legible at a distance of at least 50 feet.

(Prior code § 91-49)

15-16-670 Inspection and tests.

Fire extinguishers shall be inspected regularly and kept in good condition, ready for immediate use at all times. All extinguishers shall be maintained as specified in NFPA 10-2013.

(Prior code § 91-50; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 28)

15-16-680 Tags to be attached.

Every standard fire extinguisher shall have attached thereto a tag which clearly indicates the dates of charging, filling, maintenance, recharging or refilling, as applicable, with the signature of the person performing the work, and the license number of the serviceman. The color and form of the tag shall be determined by the fire commissioner; provided, however, that the color used for any one year shall be different from the color used for the previous year. The tag shall have clearly imprinted thereon in numerals no less than one-half inch in height the year for which it is issued.

Every such fire extinguisher which has passed the hydrostatic pressure test as herein required shall be tagged as required in NFPA 10-2013.

(Prior code § 91-51; Amend Coun. J. 5-18-16, p. 24131, § 125; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 29)

15-16-690 Licensing of servicemen.

Every fire extinguisher serviceman shall be licensed in accordance with the provisions of Chapter 15-4.

(Prior code § 91-52)

15-16-700 Violation – Penalty.

Any person who violates any provisions of Sections 15-16-620 to 15-16-690 shall be fined not more than $200.00 for each offense.

(Prior code § 91-52.1)

PART 3. STANDARD INSIDE STANDPIPE SYSTEMS (15-16-710 et seq.)

15-16-710 Definition of system.

A standard inside standpipe system, for the purposes of this code, is hereby defined as a system of piping installed in a building with hose outlets located in such a manner that water can be discharged in streams through hose attached to such hose outlets, for the purpose of extinguishing a fire and so protecting the building and its contents, with pumps, tanks and other equipment necessary to provide an adequate supply of water to the hose outlets. Every inside standpipe system required by this code shall comply with all the requirements hereinafter enumerated for such a system. Fire pumps, air compressors, valves, hose and all other equipment installed in connection with a standard inside standpipe system, except for pressure maintenance pumps, shall be of a make, type and design which has been tested and listed by and which bears the label of a product testing laboratory which regularly tests fire protection equipment and conducts periodic inspection of the production of listed equipment or materials.

(Prior code § 91-53; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-720 Where standpipe system required.

Standard inside standpipe systems complying with the requirements of Sections 15-16-710 to 15-16-1190 shall be provided in all buildings exceeding 80 feet in height with the exceptions listed in Section 15-16-090(d) of this code.

(Prior code § 91-53.1; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-730 Other definitions.

For the purpose of Part 3 of Article II of this chapter, other additional terms used hereinafter are hereby defined as follows:

“Fire pump.” A device used for supplying water to an inside standpipe system at the pressure required by the system.

“Pressure maintenance pump.” A small centrifugal pump under automatic control used to maintain pressure on the system to avoid frequent operation of the fire pump.

“Siamese connections.” A two or other multiple inlet fitting installed on the outside of a building and connected to the standpipe main of an inside standpipe system for the use of the fire department only, to supply water to the system.

Water supply piping in an inside standpipe system. The sections of the piping are:

(1) *Pump suction.* The pipe which conveys the water from the city main or other source of supply to the fire pump.

(2) *Standpipe main.* The pipe which conveys the water from the fire pump to the standpipe risers.

(3) *Standpipe risers, or standpipe.* A vertical pipe which extends upward through a building and conveys the water from the standpipe main to the hose outlets

“Zone.” A portion of a standpipe system which supplies water to a number of consecutive stories in a building.

(Prior code § 91-54; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-740 Permit fees.

Before the installation or alteration of an inside standpipe system required by the provisions of this Code, a plan, setting forth all essential details of the inside standpipe system, shall be submitted to the Fire Commissioner. Such plan shall include hydraulic calculations. Upon finding that the plan conforms to the requirements of the Code and after payment of standpipe permit fees hereinafter specified, said plan shall be approved by the Fire Commissioner.

The fees charged in connection with an inside standpipe system shall be as follows:

If the plan does not conform to the requirements of the Code and a revised plan is submitted, the fee for each revised plan submission shall be $200.00. For the approval of the standpipe plan and the initial inspection of the inside standpipe system required by the provisions of this code, a fee of $300.00 shall be charged for the first standpipe riser and $100.00 for each additional standpipe riser. For the test of a fire pump used in connection with an inside standpipe system, a fee of $31.50 for each unit of pumping capacity of 50 gallons per minute or fraction thereof shall be charged with a minimum permit fee of $315.00.

(Prior code § 91-55; Amend Coun. J. 12-15-92, p. 27387; Amend Coun. J. 10-30-96, p. 31261, § 1; Amend Coun. J. 5-18-16, p. 24131, § 126; Amend Coun. J. 11-14-18, p. 90376, Art. V, § 5)

15-16-750 Installation certification.

After completing a standpipe system installation, the contractor shall submit to the fire commissioner a written certification that the system has been installed in accordance with the plans approved by the fire commissioner.

(Prior code § 91-56; Amend Coun. J. 10-30-96, p. 31261, § 1; Amend Coun. J. 5-18-16, p. 24131, § 127)

15-16-760 Types of systems.

Inside standpipe systems may be:

(a) Wet, in which the pipes are kept filled with water.

(b) Dry, in which a portion of the piping nearest the hose outlets normally is kept filled with air under pressure and so arranged that the operation of an outlet will automatically admit water to the system. Dry systems shall be used only when a wet system is impractical on account of a deficiency of heat in the area in which piping is located.

(c) Manual dry, in which a permanent water supply is not attached to the system, and which requires water from a Fire Department pumper to be pumped into the system through the Fire Department connection in order to meet the system demand. Manual dry systems shall be used only as provided in Section 15-16-090(a)(5).

(Prior code § 91-57; Amend Coun. J. 10-30-96, p. 31261, § 1; Amend Coun. J. 1-23-19, p. 94952, Art. II, § 2)

15-16-770 Sources of water supply.

The water supply for inside standpipe systems shall be taken from a source sufficient to provide a minimum pressure of 65 pounds per square inch with 500 gallons per minute flowing at the highest hose outlet. The total water supply capacity shall be not less than 500 gallons per minute for the first standpipe and 250 gallons per minute for each additional standpipe riser, but no standpipe system need have a capacity greater than 1,500 gallons per minute. The water supply shall be capable of providing the required flow for not less than one-half hour.

(Prior code § 91-58; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-780 Fire pumps.

Where fire pumps are used to meet the water supply requirements, the minimum capacity of such pumps shall be 500 gallons per minute at a pressure of not less than 100 pounds per square inch. However, no one pump need have a capacity of more than 1,500 gallons per minute.

(Prior code § 91-59; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-790 Use for other services.

An inside standpipe system and a sprinkler system may be connected to the same water supply; provided, however, the water supply is of sufficient capacity for the automatic sprinkler system plus one-half of the standpipe demand. It shall provide sufficient pressure for the more severe demands.

An individual riser used to supply both hose connections and automatic sprinklers shall be calculated to deliver the sprinkler demand as determined in Sections 15-16-270 or 15-16-600 plus 250 gallons per minute for a hose stream but not less than 500 gallons per minute.

(Prior code § 91-60; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-800 Fire pump requirements.

Pumps shall be of a centrifugal type. Pumps and auxiliary equipment, including controllers, required to form complete pumping units shall be of a type designed and developed for fire protection service and listed by a product testing laboratory which regularly tests fire protection equipment and conducts periodic inspection of the production of listed equipment. Pumps and controllers shall be plainly marked to show the manufacturer, model designation, pump capacity and pressure, and controller electrical rating.

Where pumps or controllers are provided to service more than one area or zone, pumps and controllers shall be identified as to the area or zone served by permanent signs.

Each pump shall be installed in accordance with N.F.P.A. Standard 20, *Standard for the Installation of Centrifugal Fire Pumps* , 1993 Edition except as herein modified.

(Prior code § 91-61; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-810 Pumps supplied from city main.

If the supply is taken from a city main, the pumping unit shall be designed to develop its full capacity at its rated pressure; provided, however, that if it is the source of supply for an upper standpipe system in a building having multiple systems, it may take its suction from the discharge of the fire pump for the system immediately below, but all piping shall be arranged so that pressure from the higher pressure system cannot be delivered to the lower pressure system.

(Prior code § 91-62; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-820 Fire pump auxiliary equipment.

Pumps shall be designed for automatic starting and stopping. Control shall be by means of a pressure- activated switch having independent high and low calibrated adjustments in the control circuit. The switch shall be responsive to water pressure in the fire protection system. Each controller shall have its own individual pressure sensing line. The pressure sensing line connection for each pump shall be made between that pump's discharge check valve and discharge control valve. There shall be no shutoff valve in the pressure sensing line.

A time delay device set for one minute for each 10 horsepower of motor rating to a maximum of seven minutes continuous operation after each start shall be provided. A separate automatically controlled pressure maintenance pump shall be provided.

(Prior code § 91-63; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-830 Pressure-control devices.

All pressure-controlling and pressure-limiting devices installed in connection with a fire pump shall be designed for operation over a minimum range of zero to 300 pounds per square inch.

(Prior code § 91-64)

15-16-840 Pump suction piping.

The suction pipe size to a fire pump shall be six inches for 500 and 750 gallons per minute pumps and eight inches for 1,000 and 1,500 gallons per minute pumps. This pipe shall be directly connected to the city main or suction source free from any meter (except a detector meter installed in a bypass around a check valve). The city connection shall be increased two inches if used for both domestic consumption and fire protection demands when the domestic service exceeds two inches in diameter.

(Prior code § 91-65; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-850 Requirements for auxiliary drive.

Diesel or natural gas driven electric generators or direct diesel or natural gas fueled engines shall be installed on fire pumps directly serving floors located over 400 feet above grade.

(Prior code § 91-66; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-860 Piping arrangement.

The piping system shall consist of mains from the sources of supply, risers, branches and other piping to the hose outlets; it shall include the connection from the city main or other source to the suction of the pump. In addition to the source of supply inside of the building, there shall be one or more siamese connections at points outside of the building directly connected to the main for the use of the city fire department. The standpipe main from the source of supply shall be located in the lowest story of the building and shall be completely looped, without dead ends, when the building height exceeds 500 feet.

(Prior code § 91-67; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-870 Piping design.

All piping used in standpipe systems shall be of materials and pressure ratings as specified in Sections 2-2.1 to 2-2.4, both inclusive, of N.F.P.A. Standard 14, *Standard for the Installation of Standpipe and Hose Systems*, 1993 Edition. Pipe fittings used in standpipe systems shall meet the requirements of Sections 2-3.1 and 2-3.3 of the above referenced N.F.P.A. Standard 14.

(Prior code § 91-68; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-880 Piping drains.

All piping shall be provided with drains. Each riser shall be provided with a drain valve not less than two inches in size at the lowest point on the system side of the riser control valve. A valve used for a hose connection may be used to drain a standpipe riser when it is located at the low point of a riser. Drains shall discharge at a point where a floor drain or other adequate means exist to allow safe discharge and removal of water drained from the system.

Drain valves shall be identified by a durable sign indicating the floors or zone served.

(Prior code § 91-69; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-890 Risers.

Connected to the standpipe main there shall be one or more independent standpipe risers to supply all the hose outlets in the building.

(Prior code § 91-70; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-900 Arrangement of risers.

The number of risers shall be determined by the floor area of the building; they shall be arranged so that all portions of the floor in all stories can be protected by fire hose not more than 100 feet long if the hose valve is located in a properly enclosed stairwell, and 75 feet if not; this length of hose shall extend to within 30 feet of the outside wall if the space is not divided into rooms or into the room farthest from the standpipe to which the hose is connected if the space is so divided. In spaces not subdivided by permanent partitions, allowance shall be made for future intervening furnishings and work station cubicles.

(Prior code § 91-71; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-910 Location of risers.

Risers shall be located in or adjacent to the stair enclosures except on the ground floor. Where the number of risers, as required in Section 15-16-900, is greater than the number of stair enclosures, additional risers may be located at other accessible locations as approved by the fire commissioner and adequately protected against mechanical injury.

(Prior code § 91-72; Amend Coun. J. 10-30-96, p. 31261, § 1; Amend Coun. J. 5-18-16, p. 24131, § 128)

15-16-920 Size of risers.

Risers shall be not less than four inches in diameter for 13 or less stories; six inches for 15 additional stories and eight inches for all additional stories. Risers may be sized according to hydraulic calculation but in no case shall a riser be less than four inches in diameter. The flow rates used in hydraulic calculations shall be not less than required in Section 15-16-790. Main shall be of not less size than the largest riser.

(Prior code § 91-73; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-930 Fire department hose connections.

A two and one-half-inch fire department hose connection and valve shall be provided in each story on each required riser (except at street grade) and above the roof; the connections and valves shall be protected against mechanical damage. Additional fire department connections with valves shall be connected to the main if necessary to service basements or other stories with hose of the length prescribed in Section 15-16-900. All hose threads shall fit the couplings of the Chicago fire department.

(Prior code § 91-74; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-940 Hose valve design.

The two and one-half-inch hose valves for the use of the fire department, as hereinbefore prescribed, shall be of the gate or angle type and shall be located at such a height that the center line of the valve shall be not less than three feet nor more than six feet above the floor and so installed that the water will flow through the valve without kinking or bending the hose. Valve bodies shall be constructed of non-corrodible material and rated for not less than the pressure which exists in the standpipe. Hand wheels on all two and one-half-inch hose valves shall be of solid construction of malleable iron, cast iron, brass or bronze and shall be not less than five inches in diameter. Each two and one-half inch outlet shall be provided with a lugged cap to protect the threads of the valve, attached to the valve by a chain not less than six inches long.

(Prior code § 91-75; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-950 Hand hose connections.

A one and one-half-inch hose connection and valve shall be provided adjacent to each fire department hose valve, except at the connection above the roof if this is exposed to freezing. All hose threads shall fit the couplings of the Chicago fire department.

(Prior code § 91-76; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-960 Hand hose valve design.

The one and one-half-inch hose valve shall be of the gate or angle type. Where the pressure is not greater than 300 pounds the entire valve, except hand wheel, shall be of brass of standard or extra heavy weight; where the pressure is greater than 300 pounds, the valve, except the hand wheel, shall be of extra heavy brass. Hand wheels shall be of cast or malleable iron, brass or bronze.

(Prior code § 91-77; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-970 Equipment at hose outlets.

There shall be attached to each one and one-half inch hose valve not more than 100 feet of one and one- half inch approved fire hose if the control valve is located in a properly enclosed stairwell and 75 feet if not provided with an approved nozzle; the minimum length of hose permitted with one pair of couplings shall be 50 feet. This hose shall be hung on a semi-automatic rack so constructed that the hose can be quickly laid without having it catch in the rack or fall to the floor, that the water will be held back by the hose when on the rack, and that one person can operate the rack which shall swing freely in the direction of the pull and means for holding the nozzle shall be arranged so that it can be easily removed. Racks shall be installed in a suitable cabinet or shall have a cover which will protect the hose from injury, from moisture, dust and other causes. The one and one-half inch valve and hose shall not be required on the standpipe when the building is fully protected by an automatic sprinkler system complying with the requirements of this chapter.

(Prior code § 91-78; Amend Coun. J. 10-30-96, p. 31261, § 1; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 30)

15-16-971 Identification of hose valves.

Where the two and one-half inch valve is located in a cabinet, such cabinet shall bear the words “Fire Hose Valve” in letters not less than three inches high of a color which contrasts with the color of the cabinet.

(Added Coun. J. 10-30-96, p. 31261, § 1)

15-16-980 Pressure reducing devices.

Where the pressure at nozzles is more than 65 pounds per square inch, the one and one-half inch hose valve shall be provided with a device or disc to limit the pressure to 90 pounds so that the nozzle can be safely handled by one person.

(Prior code § 91-79; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-990 Domestic use prohibited.

Connections for domestic supply shall not be taken from any part on the inside standpipe system.

(Prior code § 91-80; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1000 Multiple systems.

An interior standpipe system required in a building, the top floor of which is more than 275 feet above grade, exclusive of space used for sprinkler, elevator, ventilation and other building machinery, shall be separated into two or more zones, each of which shall include a fire pump, pressure maintenance pump, and all other equipment and piping necessary for a complete inside standpipe installation. The lowest system shall serve the portion up to and including the story the floor of which is 275 feet or less above grade. Above 275 feet systems shall be provided to serve zones of not more than 20 stories each.

(Prior code § 91-81; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1010 Express risers.

In a building having a top floor which is more than 275 feet above grade, individual zones, as required by this Code, shall be supplied by two or more separate risers from the zone fire pump located in the lowest story of the building, known as an express riser, except that the number of express risers shall not exceed the number of risers serving that zone; or by individual fire pumps located on the lowest floor of each zone taking suction under head from a tank automatically filled by two or more risers from the adjacent lower zone. Such a tank shall have a capacity sufficient to supply the largest pump in the zone at its rated capacity for at least 30 minutes but not less than 10,000 gallons.

(Prior code § 91-82; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1020 Siamese connections required.

At least one siamese connection shall be provided on each street exposure to a limit of two street exposures, except that one siamese connection will be permitted in the case of two adjacent street exposures whose combined length is not greater than 250 feet. If any exposure is more than 250 feet long, there shall be two siamese connections for such exposure no closer than 200 feet apart. All siamese connections shall be located not less than 12 inches nor more than five feet above grade at the building line. Hose threads shall fit the couplings of the city fire department; they shall be provided with caps securely attached to the connection.

(Prior code § 91-83; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1030 Check valves for siamese.

Each siamese connection shall be connected direct to the system through a four inch pipe with a straightway or silent type check valve in the connections; there shall be no other valves in the pipe connection. Each connection shall be drained between the check valve and

the outside hose coupling.

(Prior code § 91-84; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1040 Arrangement of siamese connections.

Where the inside standpipe system has a single riser, the siamese connection shall be connected on the system side of the gate valve in the riser. Where the system has two or more risers, the siamese connections shall be connected on the supply side of the gate valve so that with any riser shutoff the supply will be into the remaining risers. All piping shall be arranged to connect into the system by the most direct route as required by this code.

At each siamese connection, there shall be provided a flat square metallic plate attached to the siamese connection or the building near the connection on which shall be placed the word “Standpipe” if there is a single system, or the words “Low Level Standpipe: Basement (Or Subbasement): to Floor” or “High Level Standpipe: Floor to Floor” or other suitable marking if there is more than one system.

When a siamese connection serves both automatic sprinklers and a standpipe system the siamese connection shall be so identified.

(Prior code § 91-85; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1050 Valves.

All parts of the system shall be provided with indicating valves so that any portion can be taken out of service for repairs or in an emergency without interfering with the operation of the remainder of the system. Each system shall be provided with a gate valve so located as to control all sources of water supply except siamese connections. All valves in connections to water supply and from main to risers shall be outside screw and yoke pattern or other indicating type.

Check valves shall be installed in all sources of water supply including both suction and discharge side of the fire pump; they shall be straightway pattern or silent type installed in horizontal or vertical piping according to the valve's listing. A gate valve shall be installed on each side of each check valve unless otherwise noted.

All valves shall be rated for pressures not less than the maximum pressure developed at the point in the system where the valve is installed including the shutoff pressure of the fire pump.

All valves, including test and drain valves, shall have a durable sign attached indicating their function or area controlled.

A diagram drawn to scale showing the city connection, fire pump, siamese connections, standpipe main, risers and all valves shall be permanently posted in a conspicuous location in the pump room.

Gate valves controlling water supplies for main and risers shall be located where readily accessible. Valves shall not be located within concealed spaces.

All valves in mains and risers shall be secured open.

(Prior code § 91-86; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1060 Reserved.

Editor's note – Coun. J. 10-30-96, p. 31261, § 1, repealed § 15-16-1060, pertaining to steam piping.

15-16-1070 Test manifold and wall hydrants.

Each standpipe system supplied by a fire pump shall be provided with a discharge test manifold or wall hydrant having one two and one-half inch individually valved hose connection for each 250 gpm of rated pump capacity. The discharge test manifold shall be located on an outside wall in allocation which will permit the safe discharge and drainage of water.

(Prior code § 91-88; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1080 Gauges.

There shall be provided on the discharge side of each fire pump a pressure indicating gauge with indications from zero to double the working pressure of the system. A suitable compound pressure and vacuum indicating gauge shall also be provided on the suction of each fire pump.

(Prior code § 91-89; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1090 Painting and identification of pipe.

All suction piping to the fire pump and all discharge piping, except standpipe risers, shall be painted red or identified as fire protection system piping at intervals of not less than 15 feet.

(Prior code § 91-90; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1100 Protection against freezing.

All portions of inside standpipe systems, normally filled with water and exposed to frost and freezing temperatures, shall be protected against freezing.

(Prior code § 91-91; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1110 Dry pipe system.

A dry pipe system shall be permitted only in a building, or a portion of a building, which is unheated.

The dry pipe system shall be isolated from the water supply, or from the wet portion of the system, if a combined wet and dry pipe system, by one or more dry pipe valves located at accessible points as near as practicable to tin dry system, adequately protected against mechanical injury and against freezing; piping shall be arranged so that each standpipe riser shall be provided with an independent dry pipe valve.

The valves shall automatically control the flow of water; they shall be constructed and installed so that under normal conditions, the portion of the piping in unheated spaces will remain dry. The operation of a hose valve will permit water to flow into the piping to supply water at the hose valve.

An instruction sheet giving full directions for the maintenance and operation of the dry pipe valve and the safe minimum and maximum air pressure to be maintained on the dry pipe valve shall be permanently posted in a conspicuous place near each dry pipe valve. A permanent sign shall be posted at each hose valve on a dry standpipe system reading “DRY STANDPIPE – AIR UNDER PRESSURE”.

(Prior code § 91-92; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1115 Manual dry pipe system.

A manual dry pipe system shall be permitted only as provided in Section 15-16-090(a)(5).

A manual dry pipe system shall comply with Sections 15-16-870 through 15-16-890, 15-16-920 through 15-16-940, 15-16-971, and 15-16-1020 through 15-16-1040, except that no hose connection shall be required above the roof.

A permanent sign shall be posted at each hose valve on a manual dry standpipe system and at the Fire Department connection reading “MANUAL DRY STANDPIPE.”

(Added Coun. J. 1-23-19, p. 94952, Art. II, § 3)

15-16-1120 Buildings under construction.

For all buildings requiring a standpipe system, there shall be installed during construction a standpipe system which will protect the building during construction. The standpipe shall be installed when the building height reaches 80 feet. When the height of the building reaches 300 feet, fire pumps shall be installed and in service. This may be part of the permanent installation or may be an independent temporary system. If a temporary system, it shall consist of a main to which shall be connected not less than one-half the number of risers required for the permanent system and supplied through not less than one-half the number of siamese connections located where easily accessible with a check valve at each siamese and risers carried up through the building provided with two and one-half inch valves with fire department thread located in each story. These connections shall be accessible and protected with non-corrodible lugged caps attached to the riser with a chain not less than eight inches long. Outlets shall be in accessible locations and installed so that hose can be attached without kinking or bending.

In buildings under construction the standpipe risers shall be extended so that the top hose connection is not more than two floors below the highest construction level. Risers shall be capped and kept closed at the top.

(Prior code § 91-93; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1130 Buildings being demolished.

In all buildings or structures which are being reduced in height, wrecked or demolished and which are equipped with inside standpipe systems, the work of demolition shall proceed in such a manner that the systems will be maintained in an operative condition with the top of the risers not more than two stories below the top of the main structural supports of the building, or until the structural supports have leached a height of less than 40 feet above the street grade.

Siamese connections shall not be removed until the lowest section of the risers has been removed.

(Prior code § 91-94; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1140 Alarms.

Each standpipe shall be provided with a flow indicating device connected to operate a local alarm sounding device inside the main lobby at the fire command panel.

(Prior code § 91-95; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1150 Test method.

Each new fire pump shall be given an acceptance test for one hour and shall deliver its rated capacity at the required speed and net pressure. Pumps rated at less than 1,500 gpm shall deliver 150 percent of the rated capacity at 65 percent of its rated pressure. The test shall not cause the bearings in the pump or on its motor, engine or turbine to become excessively heated. On electric driven fire pumps, there shall be no increase in the temperature of the electric wiring, electric windings of the motor and electric current carrying devices on the control panel other than as noted on the ratings of the various equipment.

Automatic operation of the fire pump shall be verified by a pressure drop in the system. The test shall include manual starting and stopping of the pump.

All electric wiring to the fire pump motor including the controller, emergency power supply, and pressure maintenance pump shall be

completed prior to the acceptance test. The pressure at the intake side of the pump shall not be less than five pounds per square inch under any flow rate.

An acceptance test shall be performed on any pump in which the impeller is replaced or repaired.

All such tests shall be performed by an independent contractor licensed under the Illinois Fire Sprinkler Contractor Licensing Act in the presence of the fire commissioner.

(Prior code § 91-96; Amend Coun. J. 10-30-96, p. 31261, § 1; Amend Coun. J. 5-18-16, p. 24131, § 129)

15-16-1160 Annual test required.

An annual test shall be made of each fire pump during which time water shall be discharged from the highest hose outlet of each riser. At least one riser shall be flowed for five minutes. Each fire pump shall deliver its rated capacity at its rated pressure through a test manifold or wall hydrant for a period of at least ten minutes. All such tests shall be performed by an independent contractor licensed under the Illinois Fire Sprinkler Contractor Licensing Act in the presence of the fire commissioner. A fee of $31.50 for each 50 gallon pumping capacity per minute shall be charged for each fire pump tested, with a minimum fee of $315.00 for each fire pump tested. The aforestated fees shall not be assessed with respect to any building used solely as a school operated by the Chicago Board of Education.

(Prior code § 91-97; Amend Coun. J. 7-13-94, p. 53399; Amend Coun. J. 10-30-96, p. 31261, § 1; Amend Coun, J, 11-16-11, p. 13798, Art. VIII, § 3; Amend Coun. J. 5-18-16, p. 24131, § 130; Amend Coun. J. 11-14-18, p. 90376, Art. V, § 6)

15-16-1170 Inspection.

It shall be the duty of the fire commissioner to cause an inspection to be made of all standpipe systems at least once every year by an independent contractor licensed under the Illinois Fire Sprinkler Contractor Licensing Act. Such inspections shall be schedule with, and may be overseen by or in the presence of, the fire commissioner. If such inspection discloses any violations of, or variation from, the requirements of this Code pertaining to standpipes or standpipe systems, or any defective conditions which would handicap the operation of the standpipe system, notice shall be sent to the owner or agent in control of the building containing such standpipe system to remove or correct such defective conditions within such time as shall be set forth in said notice. It shall be the duty of the building owner to pay the comptroller an inspection fee of $50.00 for each standpipe, other than a manual dry standpipe, inspected in connection with such annual inspection.

(Prior code § 91-98; Amend Coun. J. 12-15-92, p. 27387; Amend Coun. J. 10-30-96, p. 31261, § 1; Amend Coun. J. 11-16-11, p. 13798, Art. I, § 11; Amend Coun. J. 5-18-16, p. 24131, § 131; Amend Coun. J. 1-23-19, p. 94952, Art. II, § 4)

15-16-1180 Retroactivity.

The provisions of Sections 15-16-710 to 15-16-1180, both inclusive, shall apply to existing buildings including pre-ordinance buildings and buildings hereafter constructed but no existing building shall be required to make any alteration in its standard inside standpipe system, if originally installed in accordance with approved plans and permits, by reason of amendments to this code adopted after passage of this ordinance.

(Prior code § 91-99; Amend Coun. J. 10-30-96, p. 31261, § 1)

15-16-1190 Existing buildings.

Existing buildings which require standpipes under Section 15-16-090(d) only, shall use the following design requirements to comply with this code:

1. Such building is equipped with one four-inch inside standpipe riser where the ground area of the building does not exceed 20,000 square feet and an additional four-inch inside standpipe riser where the ground area of the building is over 20,000 square feet.

2. Each such standpipe riser is equipped, in the basement and on each floor level, with a one and one- half inch connection with 75 feet of hose attached, and also a two and one-half inch valve and connection provided with standard Chicago fire department thread.

3. In such buildings, equipped throughout with an approved system of automatic sprinklers, sprinkler risers, which are not less than four inches in diameter, may be used in lieu of inside standpipe risers.

4. Such building is equipped with a siamese pumper connection.

5. The standpipe or sprinkler risers are maintained wet at all times.

6. The piping, fittings and equipment used in connection with such risers shall be capable of withstanding the water pressure required for fire extinguishment.

7. The location and equipment of such risers are approved by the fire commissioner.

(Prior code § 91-100; Amend Coun. J. 10-30-96, p. 31261, § 1; Amend Coun. J. 5-18-16, p. 24131, § 132)

PART 4. STANDARD FIRE ALARM SYSTEMS (15-16-1200 et seq.)

15-16-1200 Definition of system.

The words “standard fire alarm system” where used in this Code, are hereby defined to mean a manually operated fire alarm system equipped with automatic detectors, if required, as hereinafter defined. Such system shall be installed in a building for the purpose of notifying the occupants and/or employees of said building of conditions due to fire or other causes which necessitate that the building be

vacated immediately by the occupants. All equipment and devices used in the installation of such a system shall be tested by and bear the label of approval of a nationally recognized testing laboratory acceptable to the fire commissioner and the bureau of electrical inspection. The workmanship, equipment and quality of installation shall conform to the requirements of Title 14E.

(Prior code § 91-101; Amend Coun. J. 5-18-16, p. 24131, § 133; Amend Coun. J. 9-6-17, p. 55278, Art. II, § 50)

15-16-1210 Where required.

Standard fire alarm systems complying with the requirements of Sections 15-16-1200 to 15-16-1510, both inclusive, shall be provided in the occupancies described in Sections 15-16-110 to 15-16-150, both inclusive of this Code.

(Prior code § 91-101.1)

15-16-1220 Other definitions.

As used in this chapter: "Annunciator" means a visual device, which must be manually reset, indicating the particular zone on which an alarm-sending station or automatic detector has operated and indicate the location of the zone.

"Automatic detector" means a device or assembly which operates upon either an increase in temperature, the sensing of an abnormal amount of smoke or combustion products, or the sensing of a flame and activates the alarm-sounding devices.

"Automatic fire detection system" means a system using automatic detection devices or assemblies to activate alarm sounding devices.

"General alarm" means an alarm sounded on all alarm-sounding devices throughout the building.

"Presignal alarm" means an alarm sounded on the presignal alarm-sounding devices only.

"Zoned-type fire alarm system" when used in connection with fire alarm or fire detection systems means a system having two or more separate, distinct, supervised alarm sending circuits serving separate areas of a building.

(Prior code § 91-102)

15-16-1230 Installation certification.

After completing a fire alarm system installation, the contractor shall submit to the fire commissioner a written certification that the system has been installed in accordance with the plans approved by the fire commissioner.

(Prior code § 91-103; Amend Coun. J. 5-18-16, p. 24131, § 134)

15-16-1240 Classification of systems.

All fire alarm fire detection systems shall be divided into two classes as follows:

Class I – Noncoded, closed circuit, general alarm systems;

Class II – Coded, closed circuit, presignal and general alarm systems.

(Prior code § 91-104)

15-16-1250 Class I system.

A Class I standard fire alarm system shall be a noncoded closed circuit fire alarm system which shall be so installed and arranged that the operation of an alarm-sending station will automatically actuate all signaling devices and sound a continuous general alarm throughout the building until the alarm-sending station has been restored to its original condition.

(Prior code § 91-105)

15-16-1260 Class II system.

A Class II standard fire alarm system shall be coded, closed circuit, presignal fire alarm system which shall be so installed and arranged that the initial operation of an alarm-sending station will sound, at least four times, the code of that alarm-sending station on the presignal alarm-sounding devices only. Presignal alarm-sounding devices shall be installed not to alert all the occupants of the building but to notify those in authority and certain occupants that a fire or emergency exists in the building. Such presignal alarm-sounding devices shall be located at the telephone switchboard, in the engine room, general offices and in such other places in the building where the members of the fire brigade, employees or attendants work or assemble. Every alarm-sending station of a Class II standard fire alarm system shall be equipped so that a coded, general alarm can be sounded by the use of keys, plugs or similar devices which shall, at all times, be available to persons with authority to sound a general alarm. In every building where a Class II standard fire alarm system is installed there shall be on duty at all times two adults charged with the responsibility of sounding a general alarm.

(Prior code § 91-106)

15-16-1270 Fire detectors, where required.

For automatic fire detector requirements, see Chapter Article I of Chapter 15-16 of this Code.

(Prior code § 91-107)

15-16-1280 Alarm-sounding devices.

Alarm-sounding devices shall be provided of such type and shall be so distributed that they can be heard clearly throughout the

building except on systems serving only a Type III school in a building not otherwise requiring a system in which case they may be located only in the spaces occupied by the Type III school. At least one such sounding device shall be installed on each floor and in the basement. Alarm- sounding devices shall consist of approved bells, gongs, whistles, horns or chimes.

When presignal alarm-sounding devices are installed in patient areas of hospitals and nursing homes, they shall be of such a type so as to be unidentifiable to patients as a fire alarm. The lowest part of all alarm-sounding devices, except trouble bell, shall be located at least eight feet above the floor.

(Prior code § 91-108; Amend Coun. J. 9-8-86, p. 33588)

15-16-1290 Visual alarms.

Visual alarm devices may be used to supplement the sounding alarm devices but shall not be installed as substitutes for sounding alarm devices in a building for the deaf; visual alarm devices shall be required in addition to sounding alarm devices. All visual alarm devices shall operate when an alarm is sounded.

(Prior code § 91-109)

15-16-1300 Manual alarm-sending stations.

Manual alarm-sending stations shall be so located that from any part of the building not more than 100 feet will have to be traversed to reach an alarm-sending station. There shall be at least one such alarm-sending station on each floor and in each basement.

(Prior code § 91-110)

15-16-1310 Manual alarm-sending stations – Penal institutions.

In penal institutions, manual alarm-sending stations may be located solely at designated guard stations; provided, that:

a. The building is sprinklered in accordance with provisions of this chapter;

b. Smoke detectors are installed within the return air duct of the ventilation systems serving all occupied areas that automatically activate the presignal alarm and shut down the air handling units;

c. Guards are on duty 24 hours a day with one guard present at the designated guard stations at all times;

d. Two guard stations are present on every level of the building;

e. The maximum travel distance from any point in the building to a guard station or a building exit does not exceed 250 feet.

(Prior code § 91-110.1; Added Coun. J. 3-20-85, p. 14411)

15-16-1320 Accessibility of alarm-sending stations.

Alarm-sending stations shall be located in the natural path of exit in a readily accessible location except in schools where the alarm-sending station may be located inside classrooms provided a sign with six- inch high letters is mounted in the corridor above the door of the classroom indicating the location of the sending station, and the classroom door has a breakaway glass panel with dimensions not less than 12 inches on a side so located that the classroom door can be unlocked without a key.

(Prior code § 91-111)

15-16-1330 Instructions.

The manner of operation of alarm-sending stations shall be standardized throughout each system and shall be clearly described in instructions which shall be permanently attached to each alarm-sending station. Every alarm-sending station shall be so installed and equipped that it can be tested without sounding a general alarm.

(Prior code § 91-112)

15-16-1340 Key-operated alarm-sending stations.

In a mental or penal institution, alarm-sending stations may, with the approval of the fire commissioner, be of the type requiring a key to activate the station; provided, however, the corridor of the area served by such a station has an automatic fire detection system. Such stations shall be limited to those areas of these occupancies which are accessible to unattended residents.

(Prior code § 91-113; Amend Coun. J. 5-18-16, p. 24131, § 135)

15-16-1350 Type III schools.

Alarm-sending stations shall be required on fire alarm systems serving only a Type III school in a building not otherwise requiring a system within the space occupied by the Type III school.

(Prior code § 91-113.1; Amend Coun. J. 6-27-90, p. 17610)

15-16-1360 Tests.

Each alarm-sending station shall be tested at least once each month. Every standard fire alarm system shall be tested at least once a year. This test shall include the operation of all alarm-sounding devices and connections to city fire alarm boxes where such a connection is required by this Code.

(Prior code § 91-114)

15-16-1370 Connecting fire-detection devices to system.

Where automatic fire detectors are required by this Code in occupancies also required to have a standard fire alarm system, activation of either the automatic fire detectors or the manual alarm-sending station shall cause a general alarm to be sounded, except that smoke detectors in the dwelling units of dormitories, installed in accordance with Section 15-16-140, are not required to be connected to the standard fire alarm system nor are they required to sound a general alarm.

(Prior code § 91-115; Amend Coun. J. 8-4-93, p. 36644)

15-16-1380 Zoned systems.

A zoned-type fire alarm system, with zones not exceeding 20,000 square feet or serving more than one floor, shall be required under any one of the following conditions:

(a) When the building exceeds four stories in height;

(b) When any side of the building is 200 feet or more in length;

(c) When the system has more than eight manual alarm-sending stations;

(d) When more than ten automatic detectors are connected to the standard fire alarm system, unless the alarm system serves only a Type III school occupying only the first floor of a building;

(e) When the ground floor area of the building exceeds 20,000 square feet.

(Prior code § 91-116; Amend Coun. J. 3-15-91, p. 31145)

15-16-1390 Annunciators – Where required.

An annunciator shall be required on any system having more than one zone.

(Prior code § 91-117)

15-16-1400 Location of annunciators.

An annunciator, where required by this Code, shall be placed in a conspicuous location either inside or outside of and within 20 feet of the main entrance to the building. The annunciator shall indicate the zone from which an alarm has originated by means of a translucent rectangle which is electrically illuminated from behind when an alarm is received from the zone. The zone shall be identified by opaque lettering on the rectangular indicator which describes the location of the zone within the building. The lettering shall not be less than one-fourth inch in height. Provided however, that the annunciator may indicate by means of a diagram of the building with the zones identified by a light on the diagram corresponding to the area served by the zone. The diagram used must meet with the approval of the fire commissioner.

A separate indicator shall be provided for each zone. When a sprinkler system is also installed in a building requiring a fire alarm annunciator, sprinkler waterflow alarms shall be provided with an indicator on the annunciator separate from other zones. Indication on the annunciator shall be continuous until manually reset.

(Prior code § 91-118; Amend Coun. J. 5-18-16, p. 24131, § 136)

15-16-1410 Exit instructions posted for coded systems.

Instruction cards describing in detail the code employed and specifying the exit or exits to be used in any emergency shall be posted in conspicuous locations in buildings equipped with a Class II standard fire alarm system as follows:

(a) *In Institutional Buildings.* At each sending station, at the head nurse's desk on each floor, at the telephone switchboard, in the general office, engine room and in rooms where attendants work or assemble;

(b) *In Schools.* At each sending station, in the auditorium, engine room and general office;

(c) *In Hotels and Dormitories.* At each sending station at the switchboard, in the office, engine room, workrooms and in public assembly rooms.

(Prior code § 91-119)

15-16-1420 Trouble signal.

The supervising circuit shall be provided with a trouble bell arranged to ring continuously in case of energy failure, an open circuit or a ground in the fire alarm circuit. The trouble bell shall be located so that, in the opinion of the fire commissioner, it will be within audible range of some responsible person in the building. The trouble bell circuit shall be provided with a silencing switch in such a manner that the act of silencing the bell by operation of the switch automatically and positively transfers the trouble bell to a red lamp near the trouble bell. Immediately adjoining each trouble bell, there shall be a sign clearly identifying it as a trouble bell. Where a standard fire alarm system has more than one trouble bell, each identification sign required by this section shall also indicate the portion of the system connected to each bell.

(Prior code § 91-120; Amend Coun. J. 5-18-16, p. 24131, § 137)

15-16-1430 City fire alarm box, where required.

Except as provided otherwise in Section 15-16-1460, a city fire alarm box shall be located within a distance of 100 feet from the principal entrance of every institutional building or theater and every assembly unit other than a theater having a capacity of more than 1,000 persons, any day care center operating between the hours of 9:00 p.m. and 6:00 a.m., every type III school having a capacity of 100 children, every type I school operating as or containing a day care center class I, and every existing or preordinance building and every building thereafter erected, two stories or more in height, used in whole or in part as a type I school with 100 or more occupants or used in whole as a type II school. The fire alarm systems required for such building under this Code shall be directly connected to the city fire alarm box or to a central station service as provided in Section 15-16-1460. However, the requirements of this section shall not apply to a type III school if not in operation between the hours of 9:00 p.m. and 6:00 a.m., or a type I school operating as or containing a day care center class I if not in operation between the hours of 9:00 p.m. and 6:00 a.m., where all rooms occupied by the day care facilities and programs have a direct exterior exit.

(Prior code § 91-121; Amend Coun. J. 6-27-90, p. 17610; Amend Coun. J. 11-19-97, p. 57848, § 5)

15-16-1440 Connection to city fire alarm box – Where required.

Only those standard fire alarm systems in occupancies listed in Section 15-16-1430 shall be directly connected to a city fire alarm box except that the height and population limits need not apply.

(Prior code § 91-122)

15-16-1450 Multiple system connections prohibited.

The standard fire alarm system of not more than one building shall be directly connected to any one city fire alarm box. This requirement shall not apply to any building which was permitted to be connected to a common city fire alarm box prior to July 1, 1971.

(Prior code § 91-123)

15-16-1460 Central station service.

In lieu of providing a city fire alarm box with a direct connection from the building fire alarm system to the city fire alarm box, as required in Section 15-16-1430, an Underwriters' Laboratories listed central station supervisory service may be connected to the building fire alarm system. Where such a service is used, the fire commissioner shall be furnished with a current certificate of contract for the central station service and be notified within 24 hours of discontinuance of the service.

(Prior code § 91-124; Amend Coun. J. 5-18-16, p. 24131, § 138)

15-16-1461 Fire alarms required by Section 13-96-1100.

The fire alarm systems required by Section 13-96-1100 shall be connected either to a central station service as provided in Section 15-16-1480 or to a city fire alarm box.

(Added Coun. J. 11-2-94, p. 58476)

15-16-1470 Telephone intercom system required in theaters.

There shall be installed and maintained in every theater intercommunicating systems of telephones with stations on each floor of public space, on each side of the stage, in the engine room and boiler room, in the manager's office, and in the projection room.

(Prior code § 91-125)

15-16-1480 Alarm summons.

It shall be the duty of every owner, manager or person in control of any church, school, theater, hospital, hotel, department store, public assembly unit, institutional building, or building used for a nursery, hospital, infirmary, asylum, or home for aged, blind, insane or dependent persons, to summon the Chicago Fire Department immediately upon the discovery of fire in any such building.

(Prior code § 91-126)

15-16-1490 Repairs.

Any fire alarm system which fails to function properly shall be repaired and placed in good operating condition within 24 hours.

(Prior code § 91-127)

15-16-1500 False alarms.

If within any 48-hour period the operation of any automatic fire detector causes two or more false alarms on a fire alarm system directly connected to a city fire alarm box, the property owner or tenant shall be required to have the system adjusted, repaired or replaced within 24 hours.

(Prior code § 91-128)

15-16-1510 Reserved.

Editor's note – Coun. J. 4-10-19, p. 100029, Art. XXI, § 23, repealed § 15-16-1510, which pertained to approval of plans.

PART 5. SPRINKLER SYSTEMS – ADDITIONAL PROVISIONS (15-16-1520 et seq.)

15-16-1520 Conflicting provisions.

Sprinkler systems in intermediate care facilities for the developmentally disabled – 15 or less shall comply with the general requirements for sprinkler systems established in Sections 15-16-170 to 15-16-610, inclusive, of this Code, except to the extent that said general provisions conflict with the provisions of Sections 15-16-1530 to 15-16-1570, inclusive. In the event of such a conflict, the provisions of Sections 15-16-1520 to 15-16-1570, inclusive, shall control.

(Prior code § 91-130; Added Coun. J. 12-21-84, p. 12140)

15-16-1530 Compartment defined for standard dwelling systems.

The following definition applies only to standard dwelling sprinkler systems:

"Compartment" means a space which is completely enclosed by walls and a ceiling. The compartment enclosure may have openings to an adjoining space if the openings have a minimum lintel depth of eight inches from the ceiling.

(Prior code § 91-131; Added Coun. J. 12-21-84, p. 12140)

15-16-1540 Listing required – Exception – Testing.

Only listed residential sprinklers shall be used. Listing may be waived for tanks, pumps, hangers, waterflow detection devices and water-control valves except that water-control valves shall be of the indicating type. Unlisted devices shall be submitted to the fire commissioner for approval.

All systems shall be tested for leakage at normal system operating water pressure. If a fire department pumper connection is provided, tests shall be performed in accordance with Section 15-16-260.

(Prior code § 91-132; Added Coun. J. 12-21-84, p. 12140; Amend Coun. J. 5-18-16, p. 24131, § 139)

15-16-1550 Permitted water supplies – Water quantity.

The following water supplies complying with Chapter 11-8 are permitted:

(a) Connection to city main with an approved automatically operated pump;

(b) An elevated tank;

(c) A pressure tank installed in accordance with NFPA 13-2013, and NFPA 22-2013;

(d) A stored water source with an approved automatically operated pump.

When stored water is used as the sole source of supply, the minimum quantity shall equal the water demand rates times ten minutes.

(Prior code § 91-133; Added Coun. J. 12-21-84, p. 12140; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 31)

15-16-1560 Specific requirements.

Each system shall have a control valve, a system drain one-half inch or larger, and a test connection with valve on the system side of the control valve.

A pressure gauge and liquid level indicator shall be installed to indicate air pressure and water quantity in water supply pressure tanks.

Pipe or tube used in sprinkler systems shall be of materials specified in Section 15-16-370 of this Code.

Schedule ten steel pipe may be joined with mechanical groove couplings approved for service with grooves rolled on the pipe by an approved groove- rolling machine for branch lines only.

Fittings used in sprinkler systems shall be of materials specified in NFPA 13-2013.

Fittings shall be supported from structural members in accordance with Section 15-16-380 of this Code. Piping laid on open joist or rafters shall be secured to prevent lateral movement.

Listed residential sprinklers shall be used. The basis of such a listing shall be tests to establish the ability of the sprinklers to control residential fires under standardized fire test conditions. The standardized fire shall be based on a residential array of furnishings and finishes.

The sprinklers shall have fusing temperatures not less than 35 degrees Fahrenheit above maximum expected ambient temperature.

Joints for the connection of copper tubing may be soldered in accordance with ASTM B32-08 (2014), 95-5 or 50-50.

Operated, damaged or painted sprinklers shall be replaced with sprinklers having the same performance characteristics as original equipment.

Local waterflow alarms shall be provided on all sprinkler systems.

(Prior code § 91-134; Added Coun. J. 12-21-84, p. 12140; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 32)

15-16-1570 Positioning – Number – Piping specifications – Water demand.

Application rates, design areas, areas of coverage, positioning, and minimum design pressures shall be in accordance with the listings of the specific residential sprinklers used.

The number of design sprinklers includes all sprinklers within a compartment to a maximum of two sprinklers.

The water demand for the system shall be determined by multiplying the design discharge per manufacturer's listing by the number of design sprinklers.

Sprinklers shall be positioned so that the discharge is not obstructed by beams or light fixtures.

When tests are performed which show that sprinklers are positioned so that discharge is not obstructed, sprinklers shall be installed in accordance with the test results.

Piping shall be sized hydraulically in accordance with the methods described in NFPA 13-2013 and as modified in this section. A sufficient number of calculations shall be made to insure adequate pipe sizing for the various design discharges for which the residential sprinkler is listed.

Minimum size shall be one-inch for copper and steel.

Pressure drop in water meters shall be based on the meter manufacturer's data.

Piping configurations may be looped, gridded, straight run or combinations thereof.

Sprinklers shall be installed in all areas except as follows:

(a) Sprinklers may be omitted from bathrooms not exceeding 55 square feet in area with noncombustible plumbing fixtures.

(b) Sprinklers may be omitted from closets where the least dimension does not exceed three feet and the area does not exceed 24 square feet and the walls and ceiling are surfaced with noncombustible materials.

(c) Sprinklers may be omitted from open attached porches.

(d) Sprinklers may be omitted from carports, garages, and similar structures if separated in accordance with Sections 13-56-280 or 13-96-290 of this Code.

(e) Sprinklers may be omitted from attics which are not used or intended for living purposes or storage.

(Prior code § 91-135; Added Coun. J. 12-21-84, p. 12140; Amend Coun. J. 9-6-17, p. 55278, Art. VII, § 33)

CHAPTER 15-20

EXPLOSIVES AND FIREWORKS

Article I. Explosives

Article II. Fireworks

ARTICLE I. EXPLOSIVES (15-20-010 et seq.)

15-20-010 Definitions.

"Explosives" means any chemical compounded or mechanical mixture which is commonly used or intended for the purpose of producing an explosion, or which contains any oxidizing and combustible units, or other ingredients, in such proportions, quantities or packing that an ignition by fire, by friction, by concussion, by percussion, or by detonator of any part of the compound or mixture may cause such a sudden generation of highly heated gases that the resultant gaseous pressures will be capable of producing destructive effects on contiguous objects or of destroying life or limb articles subdivided as follows:

(a) *Unlawful Explosives.* The manufacture, storage, sale, transportation or use of the following explosives is hereby prohibited:

1. Liquid nitroglycerine, except for medicinal purposes;

2. Explosives containing chlorate of potash, perchlorate of potash, and picric acid, except as used in blasting caps; provided, however, that any explosive containing chlorate of potash may be sold if it first conforms to the following test: Such mixture must be able to withstand a glancing blow inflicted with a rawhide mallet on soft wood without in any manner exploding, and also such mixture must be made so as not to reduce the chlorate;

3. Nitroglycerine dynamite containing over 60 percent of nitroglycerine, or gelatine dynamite equal in strength to over 75 percent of nitroglycerine dynamite;

4. Blasting caps containing less than nine and one-half grains of explosive mixture, at least 80 percent fulminate of mercury and 20 percent chlorate of potash, or its equivalent detonating strength;

5. Any fulminate of mercury in a dry condition;

6. Any fulminate of other metals in any condition except as a component of articles not otherwise prohibited;

7. Any fireworks which combine an explosive and a detonator;

8. Nitrocellulose in a dry and uncompressed condition in quantity greater than ten pounds net weight in one package;

9. Explosive compositions that ignite spontaneously or undergo marked decomposition, rendering the products or their use more hazardous, when subjected to 48 consecutive hours or less to a temperature of 167 degrees Fahrenheit;

10. New explosives until approved by the Interstate Commerce Commission or Department of Transportation, except that permits may be issued to educational, governmental or industrial laboratories for instructional or research purposes;

11. Explosives condemned by the Interstate Commerce Commission or Department of Transportation;

12. Explosives not packed or marked in accordance with the requirement of the Interstate Commerce Commission or Department of Transportation;

13. Explosives containing an ammonium salt and a chlorate.

(b) *Authorized Explosives.* Black powder high explosives not otherwise prohibited by the foregoing subparagraph, blasting caps, smokeless powder, wet fulminate or mercury, ammunition for cannon and small arms, explosive projectiles, railway torpedoes and flares, marine and highway flares, detonating fuses, primers, fuses and safety squibs. Such explosives may be stored or used in accordance with the provisions of this Code.

(Prior code § 125-1)

15-20-020 Licenses, certificates of fitness and bonds.

For licensing provisions, certificate of fitness requirements, permits and bonding requirements, see Chapter 15-4.

(Prior code § 125-2)

15-20-030 General transportation requirements.

(a) No explosives shall be transported in any vehicles through the public ways of the city unless such vehicle is in charge of two competent persons each holding a certificate of fitness for such purpose. Said certificate of fitness shall be issued only to employees of a person duly licensed to transport or sell explosives in the city.

(b) Any mechanically propelled vehicle used for the transportation of explosives shall be in good condition for service, and shall have an enclosed wooden body completely fire-protected on the outside. The motor, fuel tank, carburetor, electric wiring and exhaust, shall be separate from the body of the vehicle. Internal combustion engines shall be separated not less than two feet from the outer wall of the body in which explosives are to be carried. All such vehicles must be constructed and maintained in accordance with specifications of, and subject to the approval of, the fire commissioner, who shall inspect or cause to be inspected all such vehicles at least once every six months. Mechanically driven vehicles must be equipped with such a device or devices as will not permit a speed in excess 15 miles per hour.

(c) No metal tools or other pieces of metal shall be carried within a vehicle carrying explosives, except in a separate tool box.

(d) No blasting caps or electric blasting caps or other combustible material shall be transported in the same vehicles with other explosives.

(e) A vehicle carrying explosives shall have motive power amply able to draw the load, and it shall avoid stoppages other than to load and unload, and no unnecessary stops or stands shall be made.

(f) Vehicles carrying explosives must not be left standing unless absolutely necessary, and then only when the brakes are set and motors stopped.

(g) No explosives shall be left in a vehicle unless such vehicle is in charge of an employee with a certificate of fitness, and no vehicle loaded with explosives shall be left unattended.

(h) Every vehicle carrying more than five pounds of explosive substances referred to in Section 15-20-010 shall display upon an erect pole at the front end of such vehicle and at such height that it shall be visible from all directions a red flag with the word “Danger” printed, stamped or sewn thereon in white letters at least six inches in height, or in lieu of such flag the word “Explosives” must be painted on or attached to the rear end and each side of such vehicle in letters at least four inches in height.

(i) Vehicles carrying explosives shall comply with Sections 15-24-1150 to 15-24-1210, inclusive. Wherever the phrase flammable liquids is used, it shall mean explosives and wherever the phrase truck, tank truck, semitank truck, or tank vehicle is used, it shall mean vehicles on which explosives are transported. The truck shall meet applicable Department of Transportation and/or Interstate Commerce Commission regulations and all requirements of the Municipal Code of the City of Chicago.

(j) No intoxicated person shall be permitted on a vehicle carrying explosives.

(k) No smoking within ten feet of a vehicle loaded with explosives shall be permitted.

(l) No person shall carry or transport in or upon such vehicle any explosives in excess of 2,000 pounds.

(m) No person in charge of a vehicle carrying explosives shall deliver them except in original and unbroken packages, nor at any place other than a duly authorized magazine and to the person in charge thereof.

(n) Each vehicle shall carry an approved water- type fire extinguisher thereon of not less than two and one-half gallons capacity.

(Prior code § 125-3; Amend Coun. J. 5-18-16, p. 24131, § 140)

15-20-040 Public conveyances prohibited.

No person shall carry or transport on any public conveyance or on any railroad car running from point to point in the city, any black powder, guncotton, giant powder, dynamite, nitroglycerine, fulminate of mercury, or any other explosives.

(Prior code § 125-4)

15-20-050 Blasting operations.

(a) In blasting, it shall be unlawful to use a quantity of explosive exceeding in disruptive force the equivalent of one pound in weight of 40 percent dynamite for each two feet depth of hole that is above or less than ten feet below the curb; and the equivalent of one pound in weight of 60 percent dynamite, for each two feet depth of hole that is more than ten feet below the curb.

(b) Frozen or partly frozen explosives shall not be placed in drill holes. Frozen cartridges, if not capped, must be returned to the thawing apparatus to be thawed. The removal of a primer from a frozen cartridge is hereby prohibited.

(c) In tamping drill holes, wooden rammers only shall be employed. Tamping by strokes is forbidden, and only direct application of pressure permitted.

(d) Blasts, except as hereinafter provided, shall be fired by the application of some form of electrical current only. In blasting in stone quarries, it shall be permissible to fire blasts by the application of time fuses.

(e) In case of an explosion not carrying away the entire drill hole, but leaving the lower part intact, it is prohibited to begin drilling from the bottom of the old drill hole.

(f) In order to insure the safety of surrounding property and persons, no larger charge shall be used than is necessary to properly start the object it is intended to wreck or blast, and excavating contiguous to any structure shall be so carried on as not to cause damage to such structure. Weak walls or other supports of such structure must be shored up. The blasting of decomposed or soft rock is hereby

prohibited.

(g) Before any blast shall be fired, except in tunnels, the rock to be blasted shall be covered on the top and sides with timber and covered with stout metal matting or some other equally serviceable material to prevent the debris from flying.

(h) When necessary, competent men carrying red flags shall be placed at a reasonable distance from the blasts on all sides to give warning at least three minutes in advance.

(Prior code § 125-5)

15-20-060 Reserved.

Editor's note – Coun. J. 9-11-13, p. 59869, § 7, repealed § 15-20-060, which pertained to small arms ammunition.

15-20-070 Thawing of explosives.

All thawing of frozen dynamite or other explosives by means of artificial heat from any source, is prohibited within the city limits.

(Prior code § 125-7)

15-20-080 Transportation by vessel or railroad car.

No explosives shall be landed at the piers or elsewhere in the city, or transported to a vessel lying at a pier, unless the explosives contained in the vessel making delivery are in charge of a duly certified employee of a person licensed to transport or sell explosives within the city limits. No explosives shall be landed at any pier in the city unless for immediate loading into wagons for distribution to consumers for use within 48 hours and for which orders have been previously received, or for immediate transportation by railway to points beyond the city limits; and explosives received at railway stations within the city limits shall be promptly discharged and removed to such storage as the provisions of this chapter prescribe. Explosives received at any railway or freight stations within the city limits, for reshipment to points beyond the city limits, shall be promptly transferred; provided, however, that no explosives received for shipment shall remain at any railway or freight station for a period exceeding 48 hours. Every railroad car containing explosives within the city limits must be placarded on sides and ends with standard explosive placards as prescribed by the Interstate Commerce Commission regulations for explosives and other dangerous articles.

(Prior code § 125-8)

15-20-090 Labeling of packages.

Each package containing an explosive must have the name and brand of the manufacturer marked thereon, and must be marked conspicuously as prescribed by the Interstate Commerce Commission for explosives and other dangerous articles.

(Prior code § 125-9)

15-20-100 Explosive cartridges.

All boxes in which explosive cartridges containing nitroglycerine are packed must be lined with a suitable material that is impervious to liquid nitroglycerine. Cardboard cartons closed at the bottom and made of strong and flexible material that is impervious to nitroglycerine may be used as a lining. At least one- fourth of an inch of dry sawdust or wood pulp or similar material must be spread over the bottom of the box before inserting the cartridges, and all the vacant space in the top must be filled with this material. The cartridges must be so arranged in the boxes that when they are transported with the boxes top side up all cartridges will be on their side and never on their ends.

No explosive cartridge sold shall be larger than four inches in diameter and eight inches long. Packages of explosives shall not contain more than 50 pounds.

(Prior code § 125-10)

15-20-110 Magazines.

No explosives shall be stored in any building other than a magazine except as provided in Section 15-20-060.

Magazines for the storage of explosives shall be constructed as required in Sections 15-20-120 and 15-20-130.

(Prior code § 125-11)

15-20-120 Definitions.

Magazine. A building, or part of a building, designed, intended or used for the storage of an explosive or fireworks, other than building which is otherwise classified under this chapter.

(a) *First-class Magazine.* Every magazine which contains more than 100 pounds of explosive or fireworks and has a content of not more than 2,500 pounds of explosives or fireworks.

(b) *Second-class Magazine.* Every magazine of a size which will contain not more than 100 pounds of explosives or fireworks.

(Prior code § 125-12)

15-20-130 Construction requirements.

First-class Magazines. Any first-class magazine for the storage of explosives shall not exceed one story, or 15 feet in height, and such

magazine shall not have any basement or any mezzanine. Every first-class magazine shall be constructed of noncombustible materials and shall have exterior walls of solid brick masonry; provided, however, that walls may be constructed of good sheathing and wood studs with all space between the studs filled with dry sand for a thickness of not less than five and one-half inches and covered on the outside surface with noncombustible materials. There shall be no openings in any walls except a doorway which shall be provided with noncombustible materials. There shall be no openings in any walls except a doorway, which shall be provided with a noncombustible or metal-clad door.

Second-class Magazines. Any second-class magazine shall be constructed of noncombustible materials; provided, however, that the walls and roof may be of wood, metal-clad on the outside surface or covered with fire-retarding roof coverings.

(Prior code § 125-13)

15-20-140 Safety clearances.

Without Barricades. Every magazine for explosives shall be isolated by a safety clearance according to capacity as follows:

Capacity of Magazine (Pounds)	*At Surface of Ground (Feet)*
100 or less	100
101 to 500, inclusive	400
501 to 1,000, inclusive	600
1,001 to 1,750, inclusive	800
1,751 to 2,500, inclusive	1,000

Such capacity shall be confined to the cubic contents allowable for such quantity of the particular type of commercial explosives for which a permit or license has been issued, in accordance with the provisions of this Code regulating such use. Every magazine for fireworks shall be isolated by a safety clearance of not less than one-half the safety clearance required by this paragraph for explosives, for any like given quantity in pounds.

With Barricades. Whenever a magazine for explosives is screened by natural features of the ground, or by an artificial mound of solid earth of such height that any straight line drawn from the top of any side wall of such magazine to any point 25 feet above the nearest lot lines, or the highest point of any building within the radius to be protected, will pass through such intervening earth barrier, then such minimum required horizontal safety clearances required by the first paragraph of this section may be reduced 50 percent; provided, however, that for every one foot such magazine is depressed below the street grade at a quarry or other pit, such minimum required horizontal safety clearance may be reduced ten feet; provided further, that such lateral safety clearance shall be not less than 25 feet in any case.

(Prior code § 125-14)

15-20-150 Supervision of magazines.

All magazines shall at all times be in the care of a competent employee whose duty it shall be to see that no unauthorized person has access to them. Said employee shall have no other duty that will interfere with his careful supervision of such magazine or thaw house, and shall have a certificate of fitness as a magazine keeper.

All magazines shall be painted bright red, with the words “Magazine – Danger” painted thereon in white letters on a black background. Such letters shall be at least six inches high.

Only persons who hold certificates of fitness, or other authorized persons, shall be permitted to have access to magazines, which shall be kept securely locked when not open for the introduction or removal of explosives or for inspection by duly authorized officers of the city.

(Prior code § 125-15)

15-20-160 Danger signs.

All exterior walls of every magazine shall be painted bright red. The words “Magazine – Danger” shall be painted in a conspicuous position on the front wall of every magazine.

(Prior code § 125-16)

15-20-170 Sales to minors.

It is hereby declared to be unlawful for any person to sell, deliver, or give to any person under 18 years of age any black powder, dynamite, nitroglycerine, guncotton or other explosive.

(Prior code § 125-17)

15-20-180 Seizure of explosives kept unlawfully.

If it shall be found that any of the explosives mentioned in Section 15-20-010 are being kept in any building, structure or premises, or in any vehicle or on board of any vessel within the city in violation of any of the provisions of this chapter, any such explosives so kept shall be immediately seized and removed to such place as the fire commissioner may direct.

It is hereby made the duty of the members of the police department to assist in making such seizure when requested so to do by the fire commissioner, and to assist in the removal of such explosives to such place as may be designated by the fire commissioner.

(Prior code § 125-18; Amend Coun. J. 5-18-16, p. 24131, § 141)

15-20-190 Restrictions.

(a) No person shall have more than 1,000 electrical detonators in stock at any time.

(b) Chlorides calculated as potassium chloride must not exceed one-fourth of one percent.

(c) Any explosive mixture containing chlorate of potash offered for sale must contain no free acid or substance liable to produce free acid.

(d) Any explosives containing chlorate of potash or nitre compounds shall be subject to the British heat test.

(e) It shall be unlawful to sell, transport, or use leaky dynamite (leaking nitroglycerine).

(f) The keeping or storing of nitrocellulose in a dry condition in quantities greater than ten pounds in one place is hereby prohibited.

(g) The use of frozen or partly frozen cartridges and the breaking or cutting of them or drilling them for caps is hereby prohibited.

(h) Blasting powder, black powder, sporting powder, rifle powder, all military smokeless powder, and low blasting explosives shall be packed in metal cased containing not more than 25 pounds.

(Prior code § 125-19)

15-20-200 Manufacture of explosives prohibited.

No person shall manufacture, assemble, or mix anywhere within the city any black powder, guncotton, giant powder, dynamite, nitroglycerine, fulminate of mercury, or other explosives of similar nature.

(Prior code § 125-20)

ARTICLE II. FIREWORKS (15-20-210 et seq.)

15-20-210 Definitions.

"Fireworks" means and includes any explosive composition, or any substance or combination of substances, or article prepared for the purpose of producing a visible or audible effect of a temporary exhibitional nature by explosion, combustion, deflagration or detonation, and shall include blank cartridges, toy cannons in which explosives are used, the type of balloons which require fire underneath to propel the same, firecrackers, torpedoes, skyrockets, roman candles, bombs, sparklers or other fireworks of like construction and any fireworks containing any explosive compound, or any tablets or other device containing any explosive substances, or containing combustible substances producing visual effects; provided, however, that the term "fireworks" shall not include snake or glowworm pellets; smoke devices; trick noisemakers known as "party poppers", "booby traps", "snappers", "trick matches", "cigarette loads", and "auto burglar alarms"; or toy pistols, toy canes, toy guns, or other devices in which paper caps containing twenty-five hundredths grains or less of explosive compound are used, providing they are so constructed that the hand cannot come in contact with the cap when in place for the explosion, and toy pistol paper caps which contain less than twenty-hundredths grains of explosive mixture.

(Prior code § 125-21; Amend Coun. J. 4-9-86, p. 29168; Amend Coun. J. 6-29-05, p. 52456, § 1; Amend Coun. J. 10-6-05, p. 57715, § 1; Amend Coun. J. 9-5-07, p. 6884, § 1; Amend Coun. J. 11-8-12, p. 38872, § 234; Amend Coun. J. 10-31-18, p. 87187, § 1)

15-20-220 Prohibitions.

No person shall have, keep, store, use, manufacture, assemble, mix, sell, handle or transport any fireworks; provided, however, that nothing in this chapter shall be held to apply to the possession or use of signaling devices for current daily consumption by railroads, vessels and others requiring them or to the possession, sale or use of normal stocks of flashlight compositions by photographers or dealers in photographic supplies; and provided further, that the fire commissioner may issue permits for the display of fireworks as hereinafter provided.

(Prior code § 125-22; Amend Coun. J. 5-18-16, p. 24131, § 142)

15-20-221 Penalties.

(a) Any person who violates any provision of Section 15-20-220 having, keeping, storing or transporting fireworks shall be subject to a fine of not less than $200.00 and not more than $500.00 for each offense; each day of a continuing violation shall constitute a separate and distinct offense. Prosecutions for such violations shall be civil.

(b) Any person who violates any provision of Section 15-20-220 by using, selling, assembling, mixing or manufacturing fireworks shall be guilty of a misdemeanor, and shall be subject to a fine of not less than $250.00 and not more than $500.00, or incarceration for not less than ten and not more than 30 days, or both. Each day of a continuing violation shall constitute a separate and distinct offense.

(Added Coun. J. 6-9-99, p. 5376)

15-20-230 Advertising restrictions.

No person shall advertise fireworks in the city or cause such advertisements to be made. This prohibition applies to all advertising of fireworks within the city, regardless of where such fireworks are sold or offered for sale, and regardless of whether the sale itself is legal

under the laws of other jurisdictions. This prohibition against firework advertising "within the city" shall apply to advertising on any sign or billboard located in the city, in any newspaper or other publication which is published in the city and has a circulation primarily within the city, by broadcast on any radio or television station that is located in the city, and by handbill or circular distributed in the city. This section does not prohibit sending direct solicitations or advertisements solely to persons possessing a public display permit under Section 15-20-240 below.

"Advertise" as used in this section includes not only placing an advertisement, but also accepting an advertisement for publication and printing, publishing, or displaying it by any of the media set forth above.

Any person violating any of the provisions of this section shall be fined not less than $200.00 nor more than $500.00 for each offense. Each day that a violation of this section continues shall be considered a separate and distinct offense.

(Prior code § 125-23; Amend Coun. J. 5-2-95, p. 166)

15-20-240 Display in public places.

The fire commissioner may, upon due application, issue a permit to a properly qualified person for giving a display of fireworks in the public parks or other public open places. The applicant shall give written notice to the alderman of the ward adjacent to the public park or other public open space ten days prior to the date of application for such permit. No permit shall be issued unless the applicant attaches written consent of the alderman of the affected ward to the application. Such permits shall impose such restrictions as in the opinion of the fire commissioner may be necessary to safeguard life and property in each case.

(Prior code § 125-24; Amend Coun. J. 12-13-95, p. 13845; Amend Coun. J. 5-18-16, p. 24131, § 143)

15-20-250 Exemptions.

Nothing contained in this part of this chapter dealing with fireworks shall be construed as applying to the transportation of any article or thing shipped in conformity with the regulations prescribed by the Interstate Commerce Commission, nor as applying to the military or naval forces of the United States.

(Prior code § 125-25)

15-20-260 Permit and permit fees.

For permit and permit fee requirements, see Sections 15-4-550 through 15-4-570 of this Code.

(Prior code § 125-26; Amend Coun. J. 11-21-17, p. 61913, § 13)

15-20-270 Unlawful fireworks in motor vehicle – Impoundment.

(a) The owner of record of any motor vehicle that contains any illegal fireworks shall be liable to the city for an administrative penalty of $500.00 plus any towing and storage fees applicable under Section 9-92-080. Any such vehicle shall be subject to seizure and impoundment pursuant to this section. This subsection shall not apply: (1) if the vehicle used in the violation was stolen at that time and the theft was reported to the appropriate police authorities within 24 hours after the theft was discovered or reasonably should have been discovered; (2) if the vehicle is operating as a common carrier and the violation occurs without the knowledge of the person in control of the vehicle; (3) if the owner proves that the presence of the fireworks was permissible pursuant to Section 15-20-250; or (4) if the only illegal fireworks present in the vehicle are sparklers.

(b) Whenever a police officer has probable cause to believe that a vehicle is subject to seizure and impoundment pursuant to this section, the police officer shall provide for the towing of the vehicle to a facility controlled by the city or its agents. Before or at the time the vehicle is towed, the police officer shall notify any person identifying himself as the owner of the vehicle or any person who is found to be in control of the vehicle at the time of the alleged violation, of the fact of the seizure and of the vehicle owner's right to request a vehicle impoundment hearing to be conducted under Section 2-14-132 of this Code.

(c) The provisions of Section 2-14-132 shall apply whenever a motor vehicle is seized and impounded pursuant to this section.

(Added Coun. J. 6-9-99, p. 5378; Amend Coun. J. 12-15-99, p. 21529, § 1; Amend Coun. J. 9-5-07, p. 6884, § 2)

CHAPTER 15-24

FLAMMABLE LIQUIDS

Article I. General Regulations

Article XI. Underground Storage Tank Violations

15-24-1230 Underground tank storage.

ARTICLE I. GENERAL REGULATIONS (15-24-010 et seq.)

15-24-010 Licenses and permits.

For licensing and permit requirements, see Chapter 15-4. For special exit requirements, see Chapter 13-112 of this Code.

(Prior code § 129.1-1)

15-24-020 Definitions.

(a) "Closed container" means a container so sealed by means of a lid or other device that neither liquid nor vapor will escape from it at ordinary temperatures.

(b) "Container" means any can, bucket, barrel or drum intended for portable use.

(c) "Flashpoint of the liquid" means the minimum temperature at which it gives off vapor sufficient to form an ignitable mixture with the air near the surface of the liquid.

For a liquid which has a viscosity of less than 45 Saybolt Universal Seconds (SUS) at 100 degrees Fahrenheit, does not contain suspended solids, and does not have a tendency to form a surface film while under test, the procedure specified in the Standard Method of Test for Flashpoint by Tag Closed Tester (ASTM D-56-70) shall be used.

For a liquid which has a viscosity of 45 SUS or more at 100 degrees Fahrenheit, or contains suspended solids, or has a tendency to form a surface film while under test, the Standard Method of Test for Flashpoint by Pensky-Martens Closed Tester (ASTM D-93-71) shall be used, except that the methods specified in Note 1 to Section 1.1 of ASTM D-93-71 may be used for the respective materials specified in the Note.

For a liquid that is a mixture of compounds that have different volatilities and flashpoints, its flashpoint shall be determined by using the procedure specified in the above paragraphs on the liquid in the form it is shipped. If the flashpoint as determined by this test is 100 degrees Fahrenheit or higher, an additional flashpoint determination shall be run on a sample of the liquid evaporated to 90 percent of its original volume, and the lower value of the two tests shall be considered the flashpoint of the material.

(d) Flammable Liquids. All flammable liquids shall be divided into three classes according to flashpoint as follows:

Class I. Liquids with a vapor pressure less than 40 pounds per square inch absolute at 100 degrees Fahrenheit and a flashpoint below 100 degrees Fahrenheit, 38 degrees centigrade as determined by the herein-required test.

Class II. Liquids with a vapor pressure less than 40 pounds per square inch absolute at 100 degrees Fahrenheit and a flashpoint above that for Class I and below 140 degrees Fahrenheit, 60 degrees centigrade, as determined by the herein-required test.

Class III. Liquids with a flashpoint above that for Class II and below 200 degrees Fahrenheit, 93 degrees centigrade. Flammable liquids shall include but not be limited to:

Class I

Ether

Carbon bisulfide

Gasoline

Naphtha

Benzol

Collodion

Acetone

Ethyl alcohol

Amyl acetate

Toluol

Ethyl acetate

Methyl acetate

Amyl alcohol

Turpentine

Class II

Kerosene

Fuel Oil No. 1

Class III

Fuel Oil No. 2

Aniline

Creosole

Any fluid, manufactured liquid or fluid commodity, such as paint, varnish or lacquer, dryer or cleaning solution or polishing liquid which contains flammable liquid, shall be classed in accordance with this section according to the flashpoint of the mixture.

When artificially heated to temperatures equal to or higher than their flashpoints, Class II and III liquids shall be subject to the applicable provisions for Class I liquids. The provisions of this chapter for Class I flammable liquids shall be applied to high flashpoint liquids when heated to temperatures equal to or higher than their flashpoints even though these same liquids would be outside the scope of this chapter when they are not heated.

(e) "Process area" shall mean that location where flammable liquids are processed or stored as a part of current production.

(f) "Safety can" shall mean a container, not over five-gallon capacity, having a spring closing lid and spout cover, tested and approved by a recognized testing agency.

(g) "Anti-syphon valve" shall mean a valve designed to prevent the syphoning of liquid from a tank in the event of an interruption in the discharge pump or pump suction.

(Prior code § 129.1-2; Amend Coun. J. 5-2-95, p. 73)

15-24-030 Warning signs.

Every building or room or aboveground tank for the use or storage of flammable liquids, shall have the words "Flammable – Keep Fire Away" painted in a conspicuous position on the outside thereof, with letters plainly legible, bright red letters on a white background with letters not less than six inches high and with the principal strokes thereof not less than three-fourths inch in width.

(Prior code § 129.1-3)

15-24-040 No smoking.

No person shall smoke in that part of any premises where flammable liquids are stored, handled or used.

(Prior code § 129.1-4)

15-24-050 Unattended coin-operated dispensing devices.

The installation and use of unattended coin- operated or self-service dispensing devices for Class I liquids is prohibited except as permitted by regulations issued by the commissioner of business affairs and consumer protection.

(Prior code § 129.1-4.1; Amend Coun. J. 11-19-08, p. 47220, Art. V, § 5)

15-24-060 Heating.

Heating in rooms and buildings used for the storage and handling of Class I flammable liquids shall be by steam, hot water or approved electrical heaters installed in accordance with Title 14E. Fire walls shall surround all boilerrooms, furnace rooms and other rooms containing exposed fire, electric dynamos, motors, switches or other spark-producing devices.

(Prior code § 129.1-5; Amend Coun. J. 9-6-17, p. 55278, Art. II, § 52)

15-24-070 Drains.

There shall be no floor drains or other connections to the city sewer system from a tank or tank manhole or any room or compartment in which flammable liquids are stored or used, except where fuel oil is stored having a capacity of 550 gallons or less.

(Prior code § 129.1-5.1)

15-24-080 Use for illumination prohibited.

No system of artificial lighting and no lamp, torch or other device for illumination, which employs any Class I flammable liquid shall be installed in any new or existing building.

(Prior code § 129.1-6)

15-24-090 Portable appliances.

It shall be unlawful to use gasoline stoves, portable gasoline lamps, gravity gasoline torches, or stoves inside of any completed building in the city.

(Prior code § 129.1-7)

15-24-100 Oily rags and waste.

For oily rags and waste disposal, see Section 15-4-960 of this Code.

(Prior code § 129.1-8; Amend Coun. J. 6-14-95, p. 2841)

15-24-110 Discharge into sewers.

For sewer restrictions, see Section 13-168-940 of this Code.

(Prior code § 129.1-9)

15-24-120 Workmen's clothes lockers.

For workmen's clothes locker requirements, see Section 15-4-980 of the code.

(Prior code § 129.1-10)

15-24-130 Grounding of equipment.

All moving equipment, metal floors and railings, pumps, motors and machinery, in a hazardous use unit used for explosive hazard materials shall be permanently and safely grounded to guard against static electricity sparks.

(Prior code § 129.1-11)

15-24-140 Electrical equipment.

Explosion-Proof Motors. When electric motors are required in any room containing explosive or flammable vapor or atmosphere, such motors shall be of types approved, for use in hazardous locations, as required by the electrical regulations of this Code.

Other Motors. Any electrical motor, other than an explosion-proof motor, shall be located in a separate building, or separated by a standard fire wall from any room or hazardous use unit containing explosive or flammable vapor or atmosphere.

Switches and Control Devices. Every electric switch or other control device in any room required by the first paragraph to have explosion-proof motors, shall be of a type approved for use in the presence of explosive or flammable vapor or atmosphere.

(Prior code § 129.1-12)

15-24-150 Open flame devices.

No open flame or fire, no torch or other open light, no forge, stove, furnace, oven, boiler or similar device in which heat is operated or used and no electrical or similar device producing an exposed spark shall be permitted in any hazardous use building or room containing explosive or flammable vapor or atmosphere.

(Prior code § 129.1-13)

15-24-160 Exemption from safety clearances.

Any building, or group of buildings, used exclusively for the purpose of handling, distributing or storage of flammable liquids shall be exempt from the safety clearance requirements of this chapter with respect to any other building or structure, or storage tank within the same group and used for similar purposes, except as provided by Section 15-24-260 for clearance between tanks.

(Prior code § 129.1-13.1)

ARTICLE II. TANK STORAGE (15-24-170 et seq.)

15-24-170 Aboveground tanks.

Aboveground tanks for flammable liquids shall be constructed throughout of open hearth steel or of wrought iron of a thickness in accordance with the following requirements:

Less than 1,100 gallons capacity

Capacity (gallons)	*Minimum Thickness of Material (U.S. standard gauge)*
1 to 60, inclusive	18
61 to 350, inclusive	16
351 to 560, inclusive	14
561 to 1,100, inclusive	12

Any tank built in accordance with the Underwriters' Laboratories Standard 142 shall be acceptable. No open tank shall be used. Nothing in this chapter shall be construed as prohibiting the use of concrete tanks for the storage of liquids heavier than 35 degrees Baume gauge. All concrete tanks shall be constructed in accordance with the requirements of Chapter 13-136 of this Code.

Horizontal Tanks Containing Over 1,100 Gallons. Tanks having a diameter of six feet or less shall be made of not less than three-sixteenths inch steel. Tanks having a diameter of more than six feet and not exceeding 11 feet, six inches shall be made of not less than one-fourth inch steel.

Vertical Tanks Containing Over 1,100 Gallons. Vertical tanks having more than 1,100 gallons capacity shall be so constructed of such material and so arranged as to have a factor of safety of not less than two and five-tenths. The minimum thickness of the shell or bottom shall be not less than three-sixteenths inch. The minimum thickness of roofs shall be not less than one- eighth inch. The tensile strength of the steel plate and the shearing strength of rivets shall be in accordance with the requirements of Chapter 13-148 of this Code. Tanks shall be riveted, welded or brazed and shall be caulked and made tight in a workmanlike manner. The top of tanks shall be securely fastened to top ring with joints having the same tightness as the joints between the rings. All iron or steel tanks shall be thoroughly coated on the outside with a heavy protective paint. Roofs or tops of tanks shall have no unprotected openings and shall be firmly and permanently joined to the tank, and all joints shall be riveted and caulked, brazed or welded.

Pressure Tanks. Pressure tanks shall be riveted, welded or brazed and shall be fastened, caulked or otherwise made tight so as to sustain safely a hydrostatic test at a pressure not less than double the pressure at which the tank is to be used. The top of the tank shall be securely fastened to the top ring with joints of equal tightness to the bottom rings. Tanks shall be covered with heavy protective paint. All pipe connections shall be made through flanges or metal reinforcement securely riveted, welded or bolted to the tank and made thoroughly tight. Pressure tanks, including top, sides and bottom, shall be constructed entirely of metal. All openings in such tanks shall be gas-tight except the breather vent. Emergency vents shall be actuated on pressure tanks before the pressure exceeds 1.25 times the working pressure. The size of these vents shall be the same size as the relief valve.

Foundations and Grounding. All tanks shall be electrically grounded by resting directly upon moist earth or shall be electrically grounded to permanent moisture. No insulated connections shall be permitted. All steel work for reinforced concrete tanks shall be interconnected and grounded as herein provided for tanks. Tanks more than one foot above the ground shall have foundations and supports of noncombustible material. No combustible material shall be permitted under or within ten feet of any aboveground storage tank; provided, however, that nothing in this chapter shall be construed as prohibiting wooden cushions under tanks. Unprotected steel is prohibited as a means of supporting tanks when such tanks are located 50 feet or less from loading or unloading points, buildings or storage of combustible substances or materials. Over 50 feet, unprotected steel saddles are allowed if less than 12 inches high at the lowest point.

Dikes. Every aboveground storage tank containing flammable liquids shall be diked. Every group of tanks containing flammable liquids of Classes II and III may have a total capacity of, but shall not exceed 60,000 barrels within a single dike, and a barrel shall mean a volume of 42 U.S. gallons. Every tank containing flammable liquids of Class I shall be individually diked. Each dike shall have a capacity of not less than one and one-fourth times the combined capacity of the tank or tanks it surrounds. Earth dikes shall be firmly and compactly built of good earth or clay, from which stones, vegetable matter or other foreign material have been removed, and shall have a flat section at top not less than three feet wide and a slope at one to one (45 degrees) on both sides. Earth dikes shall be not less than four feet high on the inside and in no case higher than one-fourth the height of the tank when said tanks exceed 16 feet. Embankments or dikes shall be continuous with no openings for pipe or roadway. Underground piping shall be laid well below the foundation of embankments. The provision of this section shall not apply to fuel oil tanks installed in connection with heating equipment where the aggregate capacity of the tanks does not exceed 550 gallons. Electrical equipment within diked areas shall be of explosion-proof types. Provided, however, that diking of tanks within the area of Lake Calumet, bounded on the north by Slip No. 2, on the east by Stony Island Avenue, extended on the south by the Entrance Basin, and on the west by the Anchorage Basin of Lake Calumet, which area shall be authorized only as a planned development in accordance with the provisions of the Chicago Zoning Ordinance, may comply either with the foregoing provisions of this paragraph or with N.F.P.A. Flammable and Combustible Liquids Code 30 (1993), when such diked area is protected by an approved fire protection system.

Capacity Limits. The capacity of any aboveground tank containing flammable liquids of Class I shall not exceed 15,000 gallons. The total capacity of tanks in any storage yard for the storage of Classes I and II flammable liquids shall not exceed 750,000 gallons, and the total capacity of tanks in any storage yard used exclusively for the storage of Class III flammable liquids shall not exceed 1,500,000 gallons; except that 1) in the area of Lake Calumet, bounded on the North by Slip No. 2, on the east by Stony Island Avenue, extended on the south by the Entrance Basin, and on the west by the Anchorage Basin of Lake Calumet, which area shall be authorized only as a planned development in accordance with the provisions of the Chicago Zoning Ordinance, tanks of 2,300,000 gallons or less capacity, containing flammable liquids of Classes I and II or tanks of 4,200,000 gallons or less capacity containing flammable liquids of Class III with no limitations on storage yard capacity, shall be permitted (crude oil or any other flammable liquids subject to boilover characteristics, and refining of any flammable liquid are prohibited in this area); and 3) at Chicago Midway Airport, aboveground storage tanks containing a total storage capacity of not greater than 2,000,000 gallons of Class II flammable liquids per storage yard shall be permitted (crude oil or any other flammable liquids subject to boilover characteristics, and refining of any flammable liquid, are prohibited in this area).

(Prior code § 129.1-14; Amend Coun. J. 7-13-94, p. 53151; 2-7-96, p. 15463; Amend Coun. J. 6-27-01, p. 62535, § 1)

15-24-180 Vents.

Vents for Underground Flammable Liquid Storage Tanks.

(a) Every underground storage tank containing flammable liquids at atmospheric pressure and having a capacity of more than 100 gallons, shall have a galvanized vent opening so located that the discharge point is outside of any building higher than the fill pipe. Vent pipes from tanks storing Class I, II flammable liquids, and for Class III flammable liquids in tanks containing heaters or hot wells shall be so located that the discharge point is outside of the building, higher than the fill pipe opening, and not less than 12 feet above the adjacent ground level. Vent pipes shall terminate in a weatherproof hood. Vent pipes two inches or less in nominal inside diameter shall not be obstructed by devices that will cause a back pressure exceeding working pressure of the tank, and outlets shall be three feet measured horizontally or vertically from any window or door opening or any other building opening and shall not be trapped under eaves or other obstructions. If the vent pipe is less than ten feet in length or greater than two inches in nominal inside diameter, the outlet shall be provided with an Underwriters' Laboratories, Inc. listed vacuum and pressure-relief device, or there shall be an approved flame arrester located in the vent line at the outlet. In no case shall the flame arrester be located more than 15 feet from the outlet end of the

vent line, except any underground gasoline tank installed after the passage of this ordinance shall be piped and equipped for vapor recovery. The vent terminal shall be a minimum of 12 feet or higher above the adjacent ground level and in no case less than three feet higher than the transport truck or tank that will supply such tank. The size of the vent shall be in accordance with paragraph (d) of this section. The outlet shall be provided with an Underwriters' Laboratories, Inc. listed vacuum and pressure-relief device. In no case shall the static head, including the relief device pressure-imposed on the tank, be greater than the working pressure of the tank. The fill pipe shall be of the tight seal type and piped below the suction pipe or pump inlet. No manifolding of vents, syphons, equalizers or other connection to any other tank shall be permitted. Overflow protection shall be provided by piping an extension into the tank to enable the contents of the delivery hose and the vapor recovery hose to flow right back into the storage tank. A dry break adapter and lock-type cap shall be provided with every tank and the recovery hose shall be full sized to the tank truck. No gauging opening shall be permitted, and the fill pipe may be utilized as a gauging opening and shall be kept locked when said tank is not being filled or gauged.

(b) When wire screen is used as a flame arrester, it shall be of noncorrosive wire screen not less than 30 mesh per inch. The screens on such openings shall be at the outer end of vent pipe and so arranged that it can be removed for cleaning purposes.

(c) Where a pump is used with a tight seal fill, the vent shall not terminate on or above any roof.

(d) Vent openings and vent pipes for underground Class I, II and III flammable liquid tanks shall be of ample size to prevent pressure in the tank during filling but not smaller than the pipe size as specified below:

Capacity of Tank *U.S.Gallons*	*Diameter of Vent, Iron Pipe Size (inches)*
500 or less	1-1/4
501 to 3,000	1-1/2
3,001 to 10,000	2
10,001 to 20,000	2-1/2
20,001 to 35,000	3
35,001 to 50,000	4

Tanks over 50,000 gallons shall have, in addition to the four-inch vent required for the first 50,000 gallons, an additional vent or vents installed as required by the capacity in the above table.

(Prior code § 129.1-15)

15-24-190 Enclosed tank vents.

(a) Vent pipes for enclosed storage tanks for fuel oil in connection with oil-burning equipment, and diesel oil in connection with emergency diesel-driven equipment shall be located so that the discharge point is outside of the building, and terminate in a weatherproof hood higher than the fill pipe opening. When such tanks contain heaters or hot wells, the opening of the vent pipe shall not be less than 12 feet above the adjacent ground level. Flame arresters shall be required for two and one-half inch and three inch vent pipes. Where a pump is used with a tight seal fill, the vent shall not terminate on or above any roof.

(b) Vent openings and vent pipes shall be of ample size to prevent pressure in the tank during filling but not smaller than the pipe size as specified below:

Capacity of Tank *U.S.Gallons*	*Diameter of Vent, Iron Pipe Size (inches)*
500 or less	1-1/4
501 to 3,000	1-1/2
3,001 to 10,000	2
10,001 to 20,000	2-1/2
20,001 to 25,000	3

Vents for Aboveground Flammable Liquid Tanks. Every aboveground flammable liquid tank shall have a vent opening for emergency and normal venting capacity not less than specified in Table 15-24-190(b).

A. Normal venting capacity requirements shall be obtained without exceeding the operating pressure or vacuum which may be applied regularly to a tank without causing physical damage or permanent deformation to the tank.

Inbreathing (vacuum relief) venting capacity requirement for maximum movement out of a tank shall be equivalent to 560 cubic feet of free air per hour for each 4,200 gallons per hour of maximum emptying rate, including gravity flow rate to other tanks, for flammable liquids of any flashpoint. Venting capacity requirement for thermal inbreathing for a given tank capacity for flammable liquids of any flashpoint shall be as shown in Column 2 of Table 15-24-190(a) of this section.

Outbreathing (pressure relief) venting capacity requirement for maximum flammable liquids movement into a tank and resulting evaporation:

(a) Class II and III flammable liquids shall be equivalent to 600 cubic feet of free air per hour for each 4,200 gallons per hour of maximum filling rate.

(b) Class I flammable liquids shall be equivalent to 1,200 cubic feet of free air per hour for each 4,200 gallons per hour of maximum filling rate.

Venting capacity requirement for thermal outbreathing, including thermal evaporation, for a given tank capacity:

(a) Class II and III flammable liquids shall be as shown in Column 3 of Table 15-24-190(a) and in no case shall be less than one and one-fourth inch nominal inside diameter.

(b) Class I flammable liquids shall be as shown in Column 4 of Table 15-24-190(a) and in no case shall be less than one and one-half inch nominal inside diameter. (See Table 15-24-190(a).)

B. *Emergency Venting Capacity Requirements.* Every aboveground storage tank shall have some form of construction or device that will relieve excessive internal pressure caused by exposure fires, as follows:

In a vertical tank the construction referred to above may take the form of a floating raft, lifter roof, or a weak roof-to-shell seam. The weak roof-to-shell seam (maximum three-sixteenths-inch single fillet weld) shall be constructed to fail preferential to any other seam. Where entire dependence for emergency relief is placed upon pressure-relieving devices, the total venting capacity of both normal and emergency vents shall not be enough to prevent rupture of the shell or bottom of the tank if vertical, or of the shell or heads if horizontal. The total capacity of both normal and emergency venting devices shall not be less than that derived from Table 15-24-190(b). Such device may be a self-closing manhole cover, or one using long bolts that may permit the cover to lift under internal pressure, or a self-closing gauge hatch, or an additional or large relief valve or pressure vacuum valve or valves, or an open vent. The wetted area of the tank shall be calculated on the basis of 55 percent of the total exposed area of a sphere or spheroid, 75 percent of the total exposed area of a horizontal tank and the first 30 feet above grade of the exposed shell area of a vertical tank.

Table 15-24-190(a)

THERMAL VENTING CAPACITY REQUIREMENTS

(Expressed in Cubic Feet of Free Air Per Hour – 14.7 Pounds Per Square Inch Absolute at 60° F)

*Tank Capacity**			*Inbreathing (Vacuum) All Stocks*	*Outbreathing (Pressure)*	
(Barrels)		*(Gallons)*		*Flashpoint 100° For Above*	*Flashpoint Below100°F*
	1		2	3	4
60		2,500	60	40	60
100		4,200	100	60	100
500		21,000	500	300	500
1,000		42,000	1,000	600	1,000
2,000		84,000	2,000	1,200	2,000
3,000		126,000	3,000	1,800	3,000
4,000		168,000	4,000	2,400	4,000
5,000		210,000	5,000	3,000	5,000
10,000		420,000	10,000	6,000	10,000
15,000		630,000	15,000	9,000	15,000
20,000		840,000	20,000	12,000	20,000
25,000		1,050,000	24,000	15,000	24,000
30,000		28,000	17,000	28,000	
35,000		31,000	19,000	31,000	
40,000		34,000	21,000	34,000	
45,000		37,000	23,000	37,000	
50,000		40,000	24,000	40,000	
60,000		44,000	27,000	44,000	
70,000		48,000	29,000	48,000	
80,000		52,000	31,000	52,000	
90,000		56,000	34,000	56,000	
100,000		60,000	36,000	60,000	

120,000		68,000	41,000	68,000	
140,000		75,000	45,000	75,000	
160,000		82,000	50,000	82,000	
180,000		90,000	54,000	90,000	
* Interpolate for intermediate sizes.					

Table 15-24-190(b)

VENTING CAPACITY

Wetted Area Versus Cubic Feet Free Air Per Hour

(14.7 psi and 60° F)

Wetted Surface, Square Feet (a)	*Venting Capacity Cubic Feet Per Hour*	*Minimum Opening, Iron Pipe Size, Inches (b)*
20	21,000	2
30	31,600	2
40	42,100	3
50	52,700	3
60	63,200	3
70	73,700	4
80	84,200	4
90	94,800	4
100	105,000	4
120	126,000	6
140	147,000	6
160	168,000	6
180	190,000	6
200	211,000	6
250	239,000	6
300	265,000	6
350	288,000	8
400	312,000	8
500	354,000	8
600	392,000	8
700	428,000	8
800	462,000	8
900	493,000	8
1,000	524,000	10
1,200	557,000	10
1,400	587,000	10
1,600	614,000	10
1,800	639,000	10
2,000	662,000	10
2,400	704,000	10
2,800 and over	742,000	10

(a) Interpolate for intermediate values.

(b) These pipe sizes apply only to open vent pipes of the indicated diameter not more than 12 inches long and a pressure in tank of not more than 2.5 pounds per square inch. If tank is to be equipped with venting device or flame arrester, the vent opening must accommodate the venting device or flame arrester sized in accordance with Column 2 of Table 15-24-190(b).

(Prior code § 129.1-16)

15-24-200 Gravity feed.

Gravity Feed Prohibited. No tanks, drums or other containers holding flammable liquids within a building or discharging within a building, shall be provided with any faucet or other bottom-drawing device. Pipes shall not terminate at any point lower than the level of the source of supply. Nothing in this chapter shall be construed as prohibiting the storage or gravity flow or both storage and gravity flow of flammable liquids when such liquids are used in connection with oil-burning equipment installed in accordance with Section 13-180-160*, or in refineries, or in manufacturing and jobbing plants and in stores, plants, and establishments; provided, however, that tanks holding Class I flammable liquids shall be in a room constructed and arranged as provided by Section 15-24-410 for a special room for flammable liquids.

*** Editor's note** – Repealed by Coun. J. 7-9-03, p. 3609, § 1.

Fuel oil gravity feed tanks shall not exceed 550 gallons capacity. No gravity supply to a fuel oil-burning appliance shall exceed three psi. Any oil-fired appliance manufactured with a self-contained supply tank shall not be piped to any other source of supply.

(Prior code § 129.1-17)

15-24-210 Gauging and vending devices.

All flammable liquids, except motor fuels, shall be dispensed through gauging or vending devices which shall be of substantial construction and firmly secured to concrete or masonry foundations, which shall be so located and designed as to prevent motor vehicles damaging such systems, except as permitted under Section 15-24-360. Systems wherein continuous pressure is maintained on the flammable liquid storage tank in connection with gauging or vending devices shall not be permitted unless the hazard of the material is such that no other method of dispensing through gauging or vending devices is possible. The use of aboveground flammable liquid storage tanks, or tank cars or tank trucks, in connection with flammable liquid vending or gauging devices, shall not be permitted except as provided in Section 15-24-221. Tank trucks or tank cars shall not be used to store flammable liquids while the liquid is being used.

(Prior code § 129.1-18; Amend Coun. J. 2-16-89, p. 24942; 5-2-95, p. 73)

15-24-220 Motor fuel dispensing.

All flammable liquid gauging, vending and dispensing devices used for motor vehicle fuel shall be of substantial construction, and firmly secured to a concrete foundation, which shall be so located and designed as to prevent motor vehicles from damaging such devices. Systems wherein continuous pressure is maintained, or water is used to displace liquid from storage tanks, shall not be permitted. The use of aboveground storage tanks, tank cars, tank trucks or portable tanks in connection with gauging, vending and dispensing devices, shall not be permitted except for such equipment installed on tank vehicles complying with Section 15-24-1080 and tanks complying with Section 15-24-221 of this Code.

Every remote fuel system shall be equipped with a fuel leak detector valve or device located as close as possible to or within the pumping unit. An impact valve shall be provided at the base of each dispenser. Such devices and valves shall be listed by a testing laboratory which has as its primary purpose the testing and evaluation of equipment and materials to meet appropriate standards.

Automatic hose nozzle valves with latch-open devices shall not be permitted unless equipped with an automatic shut-off device to stop the flow of liquid when the valve is released from a fill opening or upon impact with pavement. All dispensing devices shall be located so that all parts of the vehicles being served will be on private property. In no case shall the dispensing hose be longer than 16 feet for filling stations and private locations. Where dispensing equipment is used exclusively for trucks or other large vehicles, automatic hose retrievers may be used, and shall not exceed 40 feet of hose.

Dispensing devices for motor vehicle fuel, except devices used exclusively for dispensing Class II or Class III flammable liquids within occupancy Class H3 buildings, shall not be permitted in buildings hereafter erected, altered or converted.

The dispensing of motor fuels which are Class I flammable liquids directly from tank vehicles shall be permitted only from tank vehicles complying with Section 15-24-1080 and tanks complying with Section 15-24-221 of this Code. Retail sales of motor fuel to motor vehicles from tank vehicles shall not be permitted. The filling of fuel tanks from tank vehicles shall not be permitted within buildings.

(Prior code § 129.1-18.1; Amend Coun. J. 2-16-89, p. 24942; Amend Coun. J. 10-31-90, p. 22573; Amend Coun. J. 5-2-95, p. 73; Amend Coun. J. 3-19-97, p. 41391)

15-24-221 Aboveground tanks.

The use of aboveground storage tanks, tank cars, tank trucks, or portable tanks in connection with vending, gauging, or dispensing of flammable liquids, other than for equipment installed on tank vehicles complying with Section 15-24-1080, shall be permitted only under the following limited circumstances:

(A) The construction and installation of the tanks must satisfy each of the following conditions and restrictions:

(1) Tanks shall be enclosed within a two- hour fire-rated assembly.

(2) The tank assembly shall provide 100 percent secondary containment of the flammable liquid. Dikes as required in Section 15-24-170 need not be provided.

(3) Tanks shall be limited to a capacity of 1,000 gallons.

(4) No more than two such aboveground tanks shall be installed or located at any one site.

(5) The tank shall be completely surrounded by a protective guardrail which is located a minimum of two feet away from the tank.

(6) Dispensing of the flammable liquid shall be by means of a pump which is permanently attached to the top of the enclosing assembly described in subsection (A)(1) above and which is equipped with an anti-syphon valve.

(7) Such tanks shall be located a minimum of ten feet away from any building or property line, except that tanks containing Class II or Class III liquids, as defined in Section 15-24-020, may be located within three feet of a fire-resistive wall without openings.

(8) Each tank shall bear the words, “Flammable – Keep Fire Away”, conspicuously on each side of the tank. The coloring of the letters shall be a color which contrasts with the color of the tank and the letters each must be a minimum of four inches high.

(9) A lockable fill cap shall be provided.

(10) Tanks shall be electrically grounded.

(11) Emergency vents conforming with Section 15-24-190 B shall be provided for both the primary tank and the secondary containment space.

(B) Aboveground tanks used pursuant to this section shall not be used for any retail sales.

(Added Coun. J. 5-2-95, p. 73)

15-24-230 Gasoline pumping prohibited.

Pumping of gasoline from a tank truck into an underground tank shall be prohibited.

(Prior code § 129.1-18.2; Amend Coun. J. 2-16-89, p. 24942)

15-24-240 Warning signs.

Warning signs prohibiting smoking and instructing customers to turn off ignition systems during filling operations shall be posted in a conspicuous location at each island. Such signs shall be metal or other material designed to withstand weather. Such signs shall have a white background with the words “No Smoking” and “Turn Off Engine” in red letters, a minimum of four inches high with a minimum of a one-half-inch stroke. Signs with directions for operation of the dispensing devices shall also be provided.

(Prior code § 129.1-18.3; Added Coun. J. 2-16-89, p. 24942)

15-24-250 Definition of safety clearance.

Whenever in the following sections the words “safety clearance” are used, said words shall be construed to require a space open its entire area to the sky, and which shall be continuous on all sides of the building or structure; between such building and any other building, or property dividing lot line, or the lot line adjoining or adjacent to a public park, or any main line of street, electric, elevated railway or any other railway right-of-way.

(Prior code § 129.1-19)

15-24-260 Safety clearances.

The minimum required safety clearance for aboveground flammable liquid storage tanks in reference to any building or lot line shall be regulated as follows:

Wherever unstable liquid is used in this section it shall mean a liquid which in pure state or as commercially produced or transported will vigorously polymerize, decompose, condense or will become self- reactive under conditions of shock, pressure or temperature.

(a) Every aboveground tank for the storage of flammable or combustible liquids, except unstable liquids, operating at pressures not in excess of 2.5 p.s.i.g. shall be located in accordance with Table 15-24-260(a).(See Table 15-24-260(a).)

(b) Every aboveground tank for the storage of flammable liquids, except unstable flammable liquids, operating at pressures exceeding 2.5 p.s.i.g. shall be located in accordance with Table 15-24-260(b). (See Table 15-24-260(b).)

(c) Every aboveground tank for the storage of unstable liquids shall be located in accordance with Table 15-24-260(c). (See Table 15-24-260(c).)

(d) Reference Table 15-24-260(A) for Tables 15-24-260(a), 15-24-260(b) and 15-24-260(c).

Table 15-24-260(A)

Capacity Tank Gallons	*Minimum Distance in Feet From Lot Line*
275 or less	5
276 to 750	10
751 to 12,000	15
12,001 to 30,000	20
30,001 to 50,000	30
50,001 to 60,000	50

Over 60,000 gallons	–

The minimum distance for safety clearance shall be increased one foot for each additional 3,000 gallons increase in the capacity of tanks; provided, however, that the safety clearance need not exceed 250 feet. The aforesaid maximum safety clearance of 250 feet may be reduced to 175 feet where every tank is equipped with an approved floating raft or an approved permanently attached extinguishing system. No underground tank or dike shall be located nearer than 50 feet to the river, lake or other waterway. Truck loading docks and platforms shall be located not less than 25 feet from the storage tanks, plant buildings and property lines.

The safety clearance between tanks shall be regulated according to capacity as follows:

Capacity of the Larger of the Two Tanks (Gallons)	*Minimum Clearance Between Tanks (Feet)*
300 or less	3
500	3
1,000	3
8,000	3
12,000	3
18,000	3
24,000	3
30,000	3
48,000	10
75,000	10
100,000	13
150,000	15
200,000	15
Over 200,000	Distance equal to the diameter or the greatest horizontal dimension of the larger tank.

A tolerance of ten percent in capacity shall be allowed in all tanks. The minimum required safety clearance for flammable liquid storage tanks aboveground, required by this section may be reduced to the minimum safety clearance between tanks, as provided above, whenever such tank is individually diked and protected by fire walls of four-hour fire-resistive construction, extending not less than three feet above and beyond each tank, and provided with a fender or return wall for each such fire wall of the same height and thickness at each end and extending not less than three feet on each side of such fire wall.

Nothing in this section shall be interpreted or construed to apply to any group of oil storage tanks, every part of which group has an open space of not less than 1,000 feet, continuous on all sides of the group of tanks or between such group of tanks and any building or property dividing line, or the opposite side of each adjoining and adjacent public way or public park or any main line of a steam, electric, elevated railway or any other railway right-of-way; provided, that the provisions of this paragraph shall apply only to oil storage tanks storing liquids above the ground, and which liquids have a flashpoint above 150 degrees Fahrenheit. This paragraph shall not apply to any liquids stored under the ground.

Table 15-24-260(a)

Type of Tank	*Protection*	*Minimum Distance in Feet from Lot Line*
Floating Roof	None	Diameter of tank but need not exceed 175 ft.
Vertical with weak roof to shell seam.	Approved foam or inerting system on the tank.	1/2 times diameter of tank and shall not be less than 5 ft.
	None	2 times diameter of tank but need not exceed 350 feet.
Horizontal and vertical, with emergency relief venting to limit pressures to 2.5 p.s.i.g.	Approved inerting system on the tank or approved system on vertical tanks.	1/2 times Table 15-24-260(A) but shall not be less than 5 ft.
	None	2 times Table 15-24-260(A)

Table 15-24-260(b)

Type of Tank	*Minimum Distance in Feet from Lot Line*

Any type	3 times Table 15-24-260(A) but shall not be less than 50 ft.

Table 15-24-260(c)

Type of Tank	*Protection*	*Minimum Distance in Feet from Lot Line*
Horizontal and vertical tanks with emergency relief venting to permit pressure not in excess of 2.5 p.s.i.g.	Tank protected with any one of the following: Approved water spray, approved inerting, approved insulation and refrigeration, approved barricade.	See Table 15-24-260(A), but the distance may not be less than 25 ft.
	None	5 times Table 15-24-260(A), but not less than 100 ft.

(Prior code § 129.1-20)

15-24-270 Tanks in buildings.

Tanks for flammable liquids inside of buildings other than structures used exclusively for the purposes of hazardous use units for the handling and storage of flammable liquids, shall be constructed as follows:

120 Gallons or Less. Tanks for Class II and III liquids having a capacity of 120 gallons or less shall be of steel or tin plate, soldered and tight. Material shall be of not less than No. 20 U.S. standard gauge; provided, however, that where tanks contain more than six gallons of liquid used in connection with and in the same room with oil-burning equipment, the provisions of the third paragraph shall apply. Nothing in the building provisions of this Code shall be construed as prohibiting the use of original barrels or drums as a source of supply, if such barrels or drums are substantially placed to prevent tipping or rolling. Pumps shall be inserted through a close-fitting connection in the side of the head of the container. These tanks shall be located in rooms constructed in accordance with Section 15-24-410 of this Code.

Over 120 Gallons. Tanks for Class II and III liquids having a capacity of more than 120 gallons shall be of the thickness required by Section 15-24-280 or shall be constructed of concrete. These tanks shall be located in rooms constructed in accordance with Section 15-24-410 of this Code.

Location and Foundation. Tanks shall be located below the level of any piping to which they are connected, or else shall be equipped with standard antisiphoning devices, and shall be set on a substantial foundation. Tanks exceeding 2,500 gallons capacity shall be supported independently of the floor construction.

Storage Tanks for Fuel Oil in Connection with Oil- burning Equipment and Diesel Oil in Connection with Emergency Diesel-driven Equipment. Steel tanks containing more than 285 gallons and installed in connection with oil-burning equipment and diesel oil shall be constructed in accordance with the first paragraph of Section 15-24-280. Fuel oil tanks located inside of buildings shall be located in the basement or lowest story thereof, and shall not exceed 550 gallons individual or aggregate capacity if unenclosed. Fuel oil storage tanks having an aggregate capacity of more than 550 gallons shall be enclosed within walls of not less than four-hour fire-resistive construction extending at least one foot above the highest level of the tanks. The ceiling or enclosure above such tanks shall be of not less than four-hour fire-resistive construction, unless such tanks are surrounded with sand or earth within the enclosure and up to not less than one foot above the highest level of the tanks. In lieu of such enclosure, the tanks may be imbedded solidly in reinforced concrete not less than six inches thick at any point. Concrete fuel oil tanks shall have an enclosure as required by this paragraph for steel tanks. Walls of concrete tanks shall be constructed independently of and not in contact with the building walls or enclosing walls. In buildings of Type IIIA, IIIB or IIIC construction the gross capacity of fuel oil and diesel oil storage tanks shall not exceed 5,000 gallons. In buildings of Type IB, IC or II construction, the gross capacity of fuel oil and diesel oil storage tanks shall not exceed 10,000 gallons. In any room of a building of Type IA construction the gross capacity of fuel oil and diesel oil may have a capacity of 50,000 gallons, with an individual tank capacity not exceeding 25,000 gallons, provided tank or tanks shall have a separation of four-hour fire-resistive construction from any part of the building. Notwithstanding any of the foregoing, in any room of a building of Type IB construction containing a technology center as defined in Section 13-56-121, tank capacity as in Type IA construction buildings shall be permitted if the story on which the fuel storage room is located, plus the first two stories above and the first two stories below the fuel storage room, meet the fire resistance standards of a Type IA construction building. The walls may be extended to and bonded to the underside of the construction above in lieu of a separate top. 15 inches clearance shall be left around the tank for the purpose of inspection. Such tank enclosure shall be capable of withstanding the hydrostatic pressure of the contents of the tank or tanks, and shall be provided with a liquid- tight noncombustible sill raised not less than six inches above the floor. An opening which is closed by a self- closing Class A fire door shall be provided above the liquid level. Provision shall be made for adequate ventilation of such enclosures prior to entering for inspection.

Not more than one integral tank shall be installed on each piece of diesel-driven equipment. It shall be securely mounted on the engine assembly, protected against vibration, physical damage, engine heat and the heat of exhaust piping. A return line shall be provided to return surplus oil from the engine tank to supply tank. A day tank shall not exceed 550 gallons capacity and shall be at a lower level than the engine tank. Doorways of rooms containing tanks, either installed as an integral part of the engine assembly, or day tanks, shall have a noncombustible liquid-tight sill raised not less than six inches above the floor.

(Prior code § 129.1-21; Amend Coun. J. 6-28-00, p. 36679, § 8; Amend Coun. J. 11-8-12, p. 38872, § 235)

15-24-280 Underground and enclosed tanks.

Construction Materials. Underground and enclosed tanks for flammable liquids shall be constructed of galvanized steel, or open hearth steel, or of wrought iron of thickness and weight not less than provided in the following table:

Capacity (Gallons)	*Minimum Thickness of Materials*	
	U.S. Standard Gauge	*Pounds Per Sq.Ft.*
1 to 285	16	2.5
286 to 560	14	3.125
561 to 1,100	12	4.375
1,101 to 4,000	7	7.5
4,001 to 12,000	1/4 in.	10
12,001 to 20,000	5/16 in.	12.5

Any tank built in accordance with Underwriters' Laboratories Standard 172 shall be acceptable.

All material used in underground and enclosed storage tanks, for which material is lighter than No. 7 U. S. Standard gauge shall be galvanized. If internal bracing is provided, tanks for the storing of Class III liquids, having a capacity of from 12,001 to 30,000 gallons, shall be built of steel plate not less than one- fourth-inch thick. All joints of tanks shall be riveted and caulked, brazed or welded. Underwriters' Laboratories, Inc. labeled or any other nationally recognized testing laboratories approved glass-fiber reinforced plastic tanks may be used for underground storage of flammable liquids. Tanks shall be tight and sufficiently strong to bear without injury the most severe strains to which tanks are subjected. Shells of tanks shall be properly reinforced where connections are made. All connections shall be made through the top of the tank above the liquid level. Tanks and systems under pressure shall be designed for four times the maximum working pressure. All iron or steel tanks shall be coated on the outside with tar or asphaltum or heavy protective paint. All concrete tanks shall be constructed in accordance with the provisions of Chapter 13-136 of this Code. Compartmented tanks shall not be permitted. Inlet openings for flammable liquid tanks inside buildings shall be piped down to four inches from the bottom of the tank unless they are equipped with a trap. Gauging openings inside of buildings shall not be permitted.

All enclosed and underground tanks when installed shall be tested to a pressure equal to the static head of the height of the vent, but not smaller than five psi. Such test shall be held for not less than 30 minutes without loss of air of more than ten percent air pressure drop. When it is necessary to test such tank to a pressure of more than five psi, the test shall be of hydrostatic nature utilizing water. Pressure tanks shall be tested to one and one-half times their working pressure.

Covering for Metal Tanks. All flammable liquid tanks buried underground shall have the top of the tank not less than two feet below the surface of the ground except in lieu of such covering, tanks may be buried under not less than 12 inches of earth, with a cover of reinforced concrete not less than six inches in thickness provided over such tanks, which shall extend not less than one foot horizontally beyond projected limits of the tanks in all directions. All concrete work shall be in accordance with Chapter 13-136 of this Code. Where tanks are liable to be displaced because of moisture in the ground, all tanks shall be securely anchored or weighted. Where tanks are located under driveways, such tanks shall not be less than three feet below the top surface of the driveway; provided, however, that if such driveways are paved with concrete not less than six inches in thickness, the total coverage above the top of the tank shall be not less than two feet.

Covering for Underwriters' Laboratories, Inc. Labeled Glass-fiber Reinforced Plastic Tanks.

Depth and Cover. Glass-fiber reinforced plastic tanks shall be set upon firm earth which has not been previously disturbed and may be set on a minimum of six inches of number 4 run gravel or sand. Glass-fiber reinforced plastic tanks shall be buried with two and one-half feet of compacted well graded granular soil, number 4 run gravel or sand, with a cover of reinforced concrete not less than six inches in thickness provided over such tanks, which shall extend not less than one foot horizontally beyond the projected limits of the tank in all directions, a minimum clearance of eighteen inches between tanks. When anchoring is required, hold down straps shall be installed. A minimum clearance of two inches between bottom end of pipe and tank bottom shall be maintained. Dipstick shall be made of wood without sharp tips. Means shall be provided not to allow dipstick to reach bottom of tank.

Capacity. The individual capacity of underground tanks is limited in respect to the lowest floor, basement or lot line as given in the following table:

	Class I	*Class II and III Gallons*
If top of tank is above the lowest floor, basement or part of any building with a clearance of 10 feet or less	550	50,000
More than 10 feet	551 to 2,000	50,001 to 75,000
More than 20 feet	2,001 to 5,000	75,001 to 100,000
More than 25 feet	5,001 to 15,000	100,001 to 150,000
More than 30 feet	15,001 to 20,000	150,001 to 200,000

More than 40 feet	20,001 to 50,000	200,001 to 500,000
More than 50 feet	Unlimited	Unlimited

Clearances on the side adjacent to a public street or alley may be waived.

The capacity of any tank containing flammable liquid of Class I shall not exceed 15,000 gallons in any filling station.

Distance from sewers, conduits and vaults shall be the same as outlined in the above table. When said sewer, conduits, or vault are below the top of the tank, the term "sewer" includes a line out of the said site; provided, however, these clearances shall not be required from a sewer line out of said site if such sewer is constructed of cast iron with hot poured lead joints.

Abandonment or Removal of Underground Tanks. Underground tanks taken out of service shall be disposed of by any one of the three following means:

(a) Being placed in "temporarily out of service" condition; provided, however, that no temporarily out of service tank shall be built upon;

(b) Abandoned in place; or

(c) Removed.

Tanks Rendered "Temporarily Out of Service".

"Tanks rendered 'Temporarily Out of Service'" means flammable liquid storage tanks which are temporarily not being used for a period of time less than six months.

(a) Remove all flammable liquid that can be pumped out with the service pump;

(b) The fill line, gauge hatch and pump suction shall be capped and secured against tampering;

(c) The vent line shall be left open.

Abandoning Underground Tanks in Place.

(a) Remove all flammable liquid from tank and from all connecting lines;

(b) The suction, inlet, gauge and vent lines shall be disconnected;

(c) The tank shall be flooded with water, pumped out and then filled with an inert solid material;

(d) Remove all connecting lines below ground level, and cap or plug all tank openings below ground level.

Removal of Underground Tanks.

(a) Remove all flammable liquid from tank and connecting lines;

(b) Disconnect the suction, inlet, gauge and vent lines;

(c) The tank shall be flushed with water and cleaned until rendered gas-free as indicated by combustible gas indicator;

(d) If a tank is to be disposed of as junk, it shall be retested for explosive vapors, and rendered gas- free. Before releasing to a junk dealer, a sufficient number of holes or openings shall be made at the bottom of the tank. The net cross-sectional area for such holes shall not be less than 78 square inches per tank;

(e) The tank shall be removed immediately from said site.

Prohibition of Abandonment of Aboveground Flammable Liquid Tanks.

(a) Abandoned aboveground flammable liquid tanks shall be removed. The tank shall be flushed with water and cleaned until rendered gas-free as indicated by a combustible gas indicator.

(b) The tank shall be dismantled and junked. If in one piece before releasing to a junk dealer, a sufficient number of holes or openings shall be made in the tank. The net cross-sectional area for such holes shall not be less than 78 square inches per tank.

(Prior code § 129.1-22)

15-24-290 Tank testings.

All flammable liquid tanks in use may be tested in accordance with Section 15-24-280 whenever the fire commissioner deems necessary.

(Prior code § 129.1-22.1; Amend Coun. J. 5-18-16, p. 24131, § 144)

15-24-300 Railroad tank car storage prohibited.

Railroad tank cars shall not be used for aboveground storage tanks.

(Prior code § 129.1-22.2)

ARTICLE III. CLOSED CONTAINER STORAGE (15-24-310 et seq.)

15-24-310 General requirements.

Storage in Containers. The storage of flammable liquids within buildings shall be as given in this paragraph; provided, however, that in a special room for flammable liquids, unlimited quantities of Class II or III flammable liquids may be stored therein as provided in Section 15-24-410 of this Code.

(a) *In Buildings of Type IVA or IVB Construction.* Class I or II liquids, in sealed containers of safety cans of not more than one gallon capacity, not exceeding a total of five gallons. Class III liquids, maximum limit of any tank or container, 60 gallons to a maximum aggregate amount of 60 gallons except as otherwise permitted in Sections 15-24-170, 15-24-270 and 15-24-280 of this Code.

(b) *In Other Buildings.* Class I liquids, in sealed containers or safety cans not more than one gallon capacity, not exceeding a total of ten gallons. Class II liquids in sealed containers or safety cans of not more than five gallons capacity or in barrels, drums or tanks not more than 60 gallons capacity, to a maximum aggregate amount of 60 gallons. Class III liquids in sealed containers of not more than five gallons capacity, in barrels, drums and tanks not exceeding 120 gallons capacity to a maximum aggregate amount of 120 gallons, except as otherwise permitted in Sections 15-24-170, 15-24-270 and 15-24-280 of this Code.

(c) Whenever the amount of flammable liquid stored in a building exceeds the limits in subitems (a) or (b) given above, the excess flammable liquid shall be stored in a special room for flammable liquids.

(d) *Paint and Lettering.* Portable containers of a capacity of ten gallons or less, used for storing Class I flammable liquids, shall be painted red, or shall be painted with a conspicuous band or stripe of red. Such containers shall be conspicuously lettered in black with the following words: “Dangerous – Keep Lights and Fires Away”. Portable containers, used for storing Class III flammable liquids shall be painted blue, or shall be painted with a conspicuous band or stripe of blue. Such containers shall be conspicuously lettered in white with the following words: “Dangerous – Keep Light and Fire Away”.

Storage Cabinets. Where the total quantity of flammable liquids stored is more than ten gallons and less than 50 gallons, and no individual container exceeds five gallons capacity, storage cabinets constructed as follows shall be required: bottom, top and sides of cabinet shall be made of sheet iron, not less than No. 18 gauge in thickness. Said cabinet shall be double walled, with not less than one and one-half inches air space. Joints shall be riveted or welded. Doors shall be of a construction equivalent to walls and shall be provided with a three-joint lock. Door sill shall be raised not less than two inches above the bottom of the cabinet. The cabinet shall be conspicuously labeled in red letters: “Flammable – Keep Fire Away”.

(Prior code § 129.1-23)

15-24-320 Inspections.

All containers, tanks and other equipment used for the storage or use of flammable liquids and all buildings and premises wherein the same are stored or used shall be constructed and maintained in accordance with the provisions of this chapter.

Every container or tank for flammable liquids of a capacity of 60 gallons or more, either aboveground or within a building, and the premises and equipment used for the storage or handling of flammable liquids by any person subject to license under this chapter, shall be inspected by the fire commissioner at least once each year.

(Prior code § 129.1-24; Amend Coun. J. 5-18-16, p. 24131, § 145)

15-24-330 Labels on products for sale.

All flammable liquids, flammable liquid compounds or flammable liquid mixtures, offered for sale at retail in containers shall be conspicuously marked or labeled “flammable” in easily legible type, which is in contrast by typography, layout or color with any other printed matter on the label. Labels shall not be required on beverages, articles of food or drugs, when the container is labeled in accordance with the regulations of the Interstate Commerce Commission or Department of Transportation or when the container is labeled in accordance with the Federal Hazardous Substances Labeling Act and Regulations.

(Prior code § 129.1-25)

15-24-340 Container construction.

A container shall not exceed 60 gallons individual capacity and shall be made of metal or approved plastic, except that within buildings:

(a) Plastic or glass containers having an individual capacity of not more than one pint may be used for Class I, II or III flammable liquids.

(b) Nonreusable plastic containers larger than one pint, but not more than one gallon, may be used for Class II and Class III liquids in common consumer products, such as, floor care compounds, charcoal lighter and paint thinner.

(c) Nonreusable plastic containers bearing Federal D.O.T. or other approval agency markings, having an individual capacity of more than a pint, but not more than two and one-half gallons, stored in buildings and areas with automatic sprinkler systems, as required in Section 15-16, Article I of this Code, may be used for flammable liquids other than Class I.

(d) Plastic or glass containers having an individual capacity of not more than one gallon, may be used for medicines, beverages, foodstuffs and toiletries that are flammable liquids.

(e) Plastic or glass containers having an individual capacity of not more than one gallon, may be used in laboratories for flammable

liquids whose chemical purity would be contaminated by metal containers.

(Prior code § 129.1-26; Added Coun. J. 6-20-84, p. 7832)

15-24-350 Automatic sprinklers.

For automatic sprinkler requirements, see Chapter 15-16 of this Code.

(Prior code § 129.1-27)

15-24-360 Transfer to portable containers.

Class I flammable liquids, other than motor fuels, shall be dispensed from tank trucks into portable containers under the following conditions:

(a) The portable container and the tank truck shall be electrically interconnected and positively grounded during filling operations.

(b) The container used shall be an approved safety can or a metal drum.

(c) Smoking shall not be allowed during filling operations. No other ignition sources shall be within 20 feet unless necessary for the transfer of the flammable liquid.

(d) Actual filling operations shall be conducted outside the building. Safety clearances of ten feet shall be maintained between the filling operations and any structure. Provided, however, filling operations may be conducted inside a building or room designed for flammable liquid use, if a fixed piping system is used from the truck located outside the building and entering directly into the building or room designed for flammable liquid use.

(Prior code § 129.1-28)

15-24-370 Standard fireproof vaults.

The walls, floor and ceilings of a standard fireproof vault, whenever such a room is required by this Code, shall be built of reinforced concrete or masonry of not less than two-hour fire-resistive construction. The distance from the floor to the ceiling of a standard fireproof vault shall not exceed 11 feet. Where a standard fireproof vault is located within any building, the cubical contents of such standard fireproof vault shall not exceed 750 cubic feet. Where a standard fireproof vault is located outside of a building so that a safety clearance of not less than five feet is provided on not less than three sides of such fireproof vault, the cubical contents of such vault shall not exceed 1,500 cubic feet. Nothing in this chapter shall be construed as prohibiting more than one standard fireproof vault in any building or structure or on any lot or plot of ground. All openings in the floors, walls, or ceilings of standard fireproof vault, except required vent flue openings and window openings for ventilation, shall be equipped and protected with a Class A fire door of the automatic type and shall have as its actuating mechanism to close such door, a thermostatic releasing device. No wood floor, wood racks, wood shelves, or any other combustible material other than the substance for which any standard fireproof vault is intended shall be allowed or permitted in such vault. Shelves or racks used to support the material stored in vault shall be of metal and of open construction, so arranged as to permit water from the sprinkler heads to pass between container or packages.

Flammable Liquids. Whenever a standard fireproof vault is used for the storage of flammable liquids, there shall be a sill at every doorway thereto, constructed of noncombustible materials and six inches high above the level of the floor of the vault. All floor drains in a vault used for storing or keeping flammable or corrosive liquids shall have no connections with the drainage system of the building, but shall be arranged to drain to a location outside of the building remote from all connections or drains to the sewer system.

(Prior code § 129.1-29)

15-24-380 Automatic sprinklers in vaults.

For automatic sprinkler requirements, see Chapter 15-16 of this Code.

(Prior code § 129.1-30)

15-24-390 Lighting in vaults.

Any lighting in a standard fireproof vault shall be by electricity only. The light shall be controlled by an indicating switch located on the outside of the vault. All such lights shall be equipped with wire guards, keyless sockets, and vaporproof globes.

(Prior code § 129.1-31)

15-24-400 Ventilation in vaults.

Every standard fireproof vault shall have a vent flue or window opening directly to the outer air. Such vent flue termination or window shall be located not less than ten feet measured vertically or five feet measured horizontally from any fire door or fire window, or not less than 20 feet measured vertically, or ten feet measured horizontally, from any unprotected opening. Such window or vent flue shall have a net open area of not less than five percent of the total wall area in the standard fireproof vault. Nothing in this chapter shall be construed as prohibiting on each floor, vent shaft connections from standard fireproof vaults into one vent shaft; provided, however, that not more than four such vaults on any one floor shall be connected to one such vent shaft. The area of the combined vent shaft shall be of such area as is required to vent the largest of the standard vaults for which said vent shaft provides ventilation. All vent flues or portions of vent flues shall have no inclination from the horizontal of less than 45 degrees. Nothing herein shall be construed as preventing more than one window or vent flue or combination of windows or vent flues to provide the necessary ventilating area. Any such vent flue shall be used for no other purpose than to provide ventilation from standard fireproof vaults. Such vent flue shall be constructed of brick, tile or concrete walls not less than four inches in thickness, and no combustible material shall be used in the construction or support of flues.

Any vent flue opening in a standard fireproof vault shall be in the ceiling or as close as practicable to the ceiling. The unobstructed opening into the atmosphere shall be not less in area than the area of the vent flues. Every vent flue furnishing the required ventilation shall be equipped with not less than a 60-minute fire-resistive door which shall be held normally closed, and such fire door shall have as its actuating mechanism a thermostatic releasing device to open the door. Such a door in the vent flue shall be so arranged that when the door is opened, the entire required area of the vent flue shall be available for ventilation purposes. All required windows shall be so provided with thermostatic releasing devices that a fire or an explosion in the vault shall cause such windows to open for the entire required ventilation area.

(Prior code § 129.1-32)

15-24-410 Flammable liquid storage rooms.

In any special room for flammable liquids, the door openings to other rooms or buildings shall be provided with noncombustible sills, raised not less than six inches above the floor or such special room. Where the total quantity of Class I liquids stored or handled in any room, does not exceed 200 gallons, such room shall have floors, walls and ceilings of not less than one-hour fire-resistive construction. Floors shall be arranged to drain toward the outside of the building. Where the total quantity of Class I flammable liquids stored or handled in any rooms exceeds 200 gallons, but does not exceed 400 gallons, all floors, walls and ceilings of such room shall be of not less than two-hour fire-resistive construction. Where the total quantity of Class I flammable liquids stored or used exceeds 400 gallons, but does not exceed 600 gallons, the floors, walls and ceilings of such room shall be of not less than three- hour fire-resistive construction. Where the total quantity of Class I flammable liquids stored or used exceeds 600 gallons, the floors, walls and ceilings of such room shall be of not less than four-hour fire-resistive construction.

Outside storage houses for the storage and handling of flammable liquids shall be constructed in accordance with this section. All door openings through the enclosures of such rooms into other rooms or buildings, shall have fire doors as required by Chapter 15-12 of this Code for such fire-resistive walls. The provisions of this paragraph do not apply to fuel oil storage tanks otherwise permitted by Section 15-24-270. Ventilation as required by Section 15-24-400 shall be provided.

(Prior code § 129.1-33)

15-24-420 Storage of oils, paints and varnishes.

Unless otherwise specified in the building provisions of this Code, oils, paints, varnishes and similar fluids having a flashpoint above 200 degrees Fahrenheit, according to the standard tests for flashpoint, shall, if stored in any building used for other purposes, in quantities exceeding ten barrels aggregate, be placed in approved metal tanks, and shall be drawn only by the use of approved pumps or other approved devices. Quantities less than ten barrels aggregate may be stored in barrels, or ordinary tanks, and if drawn on the premises, suitable drip pans shall be provided to catch the drips. Boxes of sawdust shall not be used for the purpose. The premises surrounding such tanks shall be kept clean at all times. Any absorbents used to clean flammable liquid spills shall be approved by a nationally recognized testing laboratory.

(Prior code § 129.1-34)

15-24-430 Outside container storage.

Closed containers stored outside in the open shall be of a type meeting the regulations of the Interstate Commerce Commission or Department of Transportation or as herein required. No more than 40 drums (55 gallon capacity per drum) of Class I flammable liquids shall be stored per pile and the pile shall be located at least 40 feet from the nearest building; except that the pile can be located ten feet from the nearest building located on the same premises and under the same management. No more than 80 drums (55 gallon capacity per drum) of Class II flammable liquids shall be stored per pile and the pile shall be located at least 30 feet from the nearest building; except that, the pile can be located ten feet from the nearest building located on the same premises and under the same management. Provided, however, where closed container drum storage on the premises is for resale only with no use other than repackaging the maximum amount of Class I flammable liquids stored per pile may be not more than 120 drums and not more than 160 drums for Class II flammable liquids. A minimum distance of five feet shall be maintained between all piles of Class I and/or Class II flammable liquids. There shall be a 12-foot wide access road within 200 feet of each container. If equipped with a deluge- type sprinkler system, the size of the piles can be doubled and all safety clearances reduced by one half. All storage shall be located so that runoff due to leakage is not toward any structure.

(Prior code § 129.1-35)

ARTICLE IV. PIPING, VALVES AND FITTINGS (15-24-440 et seq.)

15-24-440 Piping.

Where the working pressure is less than 100 pounds, all pipe used in systems for transferring and venting of flammable liquids shall be of the standard full weight, ANSI Schedule ten wrought iron, steel, stainless steel, brass type pipe, Type K copper tube or copper pipe. All pipe shall be connected with standard malleable fittings or welded. Copper tubing shall be connected with flare joints or sweat fittings employing solder having a melting point of 1,000 degrees Fahrenheit or more. Where the working pressure is in the excess of 100 pounds per square inch, extra heavy wrought steel pipe (ASTM Schedule 80) and fittings shall be used. All aboveground piping shall be rigidly supported. Swing joints shall be made with butt or close nipples. Cast iron fittings shall not be permitted. Underwriters' Laboratories, Inc. listed expansion joints or flexible underground pipe connectors not exceeding 24 inches in length shall be permitted. No flexible underground pipe connector shall be connected to any impact check valve or within five feet of any remote pumping dispenser.

(Prior code § 129.1-36; Amend Coun. J. 2-7-96, p. 15463)

15-24-450 Test for piping.

Test for Pipe. All standard full weight wrought iron, steel, stainless steel, brass type pipe, Type K copper tube or copper pipe and fittings shall be tested hydrostatically utilizing water or air tested when installed to 100 psi. Extra heavy wrought steel pipe (ASTM Schedule 80) and fittings shall be tested hydrostatically utilizing water or air tested when installed to one and one-half times its maximum working pressure. The air test shall be held for ten minutes without any loss of pressure. Suction lines may be tested under a vacuum of not less than 20 inches of mercury. Underground and enclosed tank vent pipes may be tested with said tank equal to tank pressure, and not less than five psi.

(Prior code § 129.1-37)

15-24-460 Depth and cover for piping.

Depth and Covering for Pipe. All underground pipe shall be surrounded with six inches of fine clean sand and pipe shall be at least one foot below the surface of the ground.

(Prior code § 129.1-38)

15-24-470 Protection against corrosion.

All piping for flammable liquids, both aboveground and underground where subject to external corrosion, shall be painted or otherwise protected.

(Prior code § 129.1-39)

15-24-480 Valves.

Valves in Drawing-Off Pipes. All drawing-off pipes terminating inside of any building, shall have an automatically closing type shutoff valve or dead-man switch to control pump and an emergency valve at the point of discharge.

Valves for Aboveground Tanks Below Liquid Level. All aboveground tanks shall have a valve in the discharge pipe leading from such tank which shall be located within two feet of the tank, with no branches or outlets between the tank and valve. All inlet pipes shall have a tank valve and shall have a check valve immediately adjacent to the tank valve. Where a pair of valves are used in a pipe line aboveground, a relief valve or a relief bypass valve shall be provided in each line and discharge into the top of the tank or a properly installed underground tank. Relief valves shall be of sufficient size to prevent excessive pressure in the pipe line and in no case shall the relief valve be set at a higher pressure than the maximum working pressure of the pipe. Pipes leading into or out of a diked area shall have an additional valve within ten feet of the dike, except no valves will be required in aboveground pipe lines when such pipes are used for conserving vapor losses and piped to an expanding roof tank.

All valves shall have identification tags, stating the use of the valve and the material that is conveyed. Tags shall be of the stamped metal type and not less than one-fourth-inch lettering used. Tags shall be permanently fixed to the valve. All piping shall be labeled stating material conveyed or flammable liquid and its class. The direction of the normal flow shall be clearly shown.

Pipe Drain to Tanks. Where underground tanks are used, vent, fill, and suction lines shall pitch toward the tank without traps or pockets. Suction piping entering a building from an underground tank, shall be equipped with an approved antisyphon device when said pipe is installed below, or may fall below the highest level of the tank.

Pipes in Rooms Containing Open Flames. Pipes conveying Class I or II flammable liquid, shall not extend into or pass through any room which contains open light or fire, unless said pipes are of standard full weight wrought iron, steel or extra heavy wrought steel pipe (ASTM Schedule 80) are without threaded joints or connection.

(Prior code § 129.1-40)

15-24-490 Pressure-relief valves.

Pumps delivering to or taking supply from an aboveground tank shall be provided with valves on both suction and discharge side of pumps. When a positive displacement pump is used, a relief valve of sufficient size shall be provided at the discharge side. The discharge of the relief valve shall be piped the same size as the relief valve to the suction size of the pump or return to the supply tank. Integral relief valves may be produced. Flammable liquid discharged by means of a centrifugal pump into an aboveground storage tank, shall be provided with a check valve immediately adjacent to the tank valve.

Any flammable liquid heater or pipe incorporating a heater shall be provided with a relief valve of sufficient size and so arranged to discharge to the supply tank, when any valve, pump, or other device will prevent the release of excessive pressure.

(Prior code § 129.1-41)

15-24-500 Auxiliary devices.

Filling Pipe. The end of the fill pipe for all flammable liquids storage tanks shall be carried to a location outside of all buildings and shall be more than five feet from any door or window or any other opening. The fill pipe shall be closed by a screw cap or fill cap and Class I flammable liquids shall be provided with locks and kept locked except during the filling operation. In buildings of Type IA construction where the tank for diesel oil is above the first floor the fill shall be in the same room as the tank.

Standard Filling Hose. All hose used for the transferring of flammable liquids shall be of the metal lined type, or of the type embodying wire wound within the fabric of the hose, and thoroughly bonded to the coupling connection at each end of the hose. Deliveries of flammable liquids of Class I and Class II shall be made directly to the storage tank through the fill pipe by means of a hose

or pipe connected to the fill pipe in the barrel, container, tank, wagon or tank car from which such liquid is being drawn.

Pumps Required. Flammable liquids shall be drawn from tanks by Underwriters' Laboratories, Inc. listed pumps, which shall be equipped with controlling apparatus, and the piping system shall be so arranged as to control the quantity of discharge and to prevent leakage or discharge inside of the building by any derangement of the system. When located inside a building, the pump for Class I liquids, except fuel oil used for heating purposes, shall be located at grade level in a well ventilated place. Class II and III flammable liquid pumps may be below the ground floor but not installed in any pit or manhole and the dispensing of such liquid shall be on or above the ground floor in a well ventilated place.

Cross-Connections. No cross-connection of Class I flammable liquids shall be permitted with Classes II and III and there shall be separate pipelines and pumps maintained for Class I as distinguished from Classes II and III. However, this requirement shall not apply to occupancies containing flammable liquid processing operations wherein all pumps and electrical equipment are of the type approved for use in hazardous locations, as required by the electrical regulations of this Code.

(Prior code § 129.1-42)

ARTICLE V. PROCESSING

15-24-510 Room ventilation.

All rooms in which Class I flammable liquids are used in open vats, pans or other vessels, or in which any flammable liquids are heated or otherwise treated in such a manner as to produce flammable vapor, shall be ventilated as hereinafter provided. There shall be a vent opening in the wall at the floorline near each open receptacle and each heating device containing such liquid. Such vent openings shall have a net cross- sectional area of not less than 32 square inches and shall be protected with one-half-inch mesh No. 16 wire. When such vent openings are not located in the outside wall of the building or room, there shall be a noncombustible vent flue built into the wall or floor or securely fastened thereto and so arranged as not to be subject to mechanical injury. Such vent flue shall conduct to and pass through an exhaust fan, which shall run continuously while the room is in use, and which shall be sufficient capacity to change the air in the room completely in not more than five minutes. All discharge outlets of such vent flues shall be provided with noncorrodible wire screen and shall be so located that they are not nearer than ten feet vertically or five feet horizontally from any door or window opening.

(Prior code § 129.1-43)

15-24-520 Kettles, vats, vessels.

Kettles, vats, saturators and other vessels used in manufacturing processes and which have a capacity of more than five gallons of flammable liquids shall not be located within five feet of combustible material, nor within five feet of any exit. All combustible floors within ten feet of such containers shall be protected with a noncombustible covering. All kettles and other open containers shall be provided with substantial covers arranged to close automatically by heat-actuated devices, or shall be provided with equipment to flood such tank with standard foam-solution fire extinguisher, or a standard dry-powder fire extinguisher, or an approved carbon dioxide extinguisher as defined in Article II of Chapter 15-16 of this Code.

(Prior code § 129.1-44)

15-24-530 Distilling and condensing plants.

(a) Except as otherwise provided in Section 15-24-540 or in subsection (b) of this section, all distilling and condensing plants shall have a clearance of not less than 300 feet in reference to any building or lot line.

(b) Buildings, or parts thereof, used to distill ethyl alcohol, either as a primary or auxiliary use, shall be classified as a Class G-2, moderate hazard industrial unit, and shall have either (1) a clearance of not less than 300 feet in reference to any building or lot line, or (2) at least a four-hour fire-resistive separation to all other uses. In addition, all flammable liquid storage or any dust producing operations shall comply with all applicable city requirements.

(Prior code § 129.1-45)(Amend Coun. J. 10-28-15, p. 11951, Art. X, § 14)

15-24-540 Reclaiming systems.

Nothing in the building provisions of this Code shall be construed prohibiting the use of flammable liquid reclaimers or recovery systems, the capacity of which is less than ten gallons per hour and which equipment shall not heat the liquid above 500 degrees Fahrenheit, and which shall have no open flame. Such devices shall be arranged so that all gasoline or kerosene and similar vapor which are removed from the oil, shall be condensed and collected in a closed vaportight container.

(Prior code § 129.1-46)

ARTICLE VI. PAINT MIXING AND SPRAYING (15-24-550 et seq.)

15-24-550 Definitions.

“Paint mixing room” means a room designed, intended or used for the purpose of mixing paint, varnish, lacquer, enamel or other such volatile or flammable liquid or liquid containing any volatile flammable substance in solution or suspension, during any 24-hour period.

“Paint spraying room” means a room designed, intended or used for the purpose of spraying more than ten gallons of paints, varnish, lacquer, enamel or other such volatile or flammable liquid or liquid containing any volatile flammable substance in solution or suspension during any 24-hour period; without use of an approved spray booth.

“Paint spraying” means the application of flammable or combustible paint, varnish, lacquer, enamel, stain or other such volatile or

flammable liquid, or liquid containing any volatile flammable substance in solution or suspension applied as a spray by whatever means, in continuous or intermittent processes, where more than one gallon of such liquid is used in any 24-hour period.

"Spray area" means any area in which dangerous quantities of flammable vapors or combustible residues, dusts or deposits are present due to the operation of spraying processes. The spray area shall include:

(a) The interior of spray booths;

(b) The interior of ducts exhausting from spraying processes;

(c) Any area in the direct path of spray or any area containing dangerous quantities of air- suspended combustible residue, dust, deposits, spray or vapor as a result of spraying operations.

"Spray booth" means a specially designed enclosure constructed of noncombustible materials and otherwise complying with the requirements of this chapter and other applicable sections of this Code, in which paint-spraying operations are carried on.

(Prior code § 129.1-47)

15-24-560 Spraying restrictions.

Spraying. Paint-spraying operations shall not be permitted in any institutional building. Paint-spraying operations shall not be permitted in any assembly, school or multiple-dwelling building except in a room designed for the purpose, protected with an approved system of automatic sprinklers and separated vertically and horizontally from other parts of the building by construction having not less than two-hour fire-resistive rating.

(Prior code § 129.1-48)

15-24-570 Paint mixing, spraying and japanning room.

Every paint-mixing room, paint-spraying room and every room containing a japanning dip tank, vat or japanning oven located in any building other than a building of Type IA, IB or IC construction which is also equipped throughout with a standard system of automatic sprinklers, shall be constructed in accordance with the requirements of this section. Any such room, with a floor area of not more than 600 square feet, shall have a floor of any type of construction permitted for the building in which located and shall have both walls and ceiling of one-hour fire-resistive construction. Any such room, with a floor area of more than 600 square feet and not more than 1,200 square feet, may have a floor of any type of construction permitted for the building in which located, and shall have both walls and ceiling of two-hour fire-resistive construction. Any such room with a floor area of more than 1,200 feet, shall be separated from every other part of the building by not less than four-hour fire-resistive construction. No such rooms shall have any opening except a doorway or doorways between such room and any part of the building. Every doorway through any such wall or separation shall be provided with a door of the character required by Chapter 15-12 for fire doors. Nothing in this section shall be constructed as prohibiting or preventing the installation of noncombustible piping or conveyors or similar dust-tight enclosed mechanical devices between floors or stories in such rooms or buildings.

(Prior code § 129.1-49)

15-24-580 Exemptions from regulations.

All paint-spraying operations, except maintenance, decorating or construction painting of buildings proper, shall comply with all applicable provisions of this Code and with the special provisions of Sections 15-24-590 to 15-24-670 of this Code.

(Prior code § 129.1-50)

15-24-590 Spray booths and rooms, where required.

A spray booth shall be required when paint- spraying operations are carried on in any building when using more than one gallon of previously defined liquid in any 24-hour period except in those cases where the physical size of the materials being sprayed, such as in structural steel shop coating and similar operations, makes it impractical to conduct such operations within a spray booth. A paint-spraying room shall be required when the liquids used, as defined in Section 15-24-550, exceed ten gallons in any 24-hour period unless conducted in an approved booth. Nothing in this section shall be construed as prohibiting more than one such spray booth in any paint-mixing room.

(Prior code § 129.1-51)

15-24-600 Spray booth construction.

The construction of a spray booth shall be as follows:

(a) To be constructed of at least 18-gauge steel or equivalent noncombustible material, rigidly supported and specifically designed for its intended use.

(b) The interior surfaces of spray booths shall be smooth and continuous without edges, and otherwise designed to prevent pocketing of residues and facilitate the safe cleaning and washing without injury.

(c) The floor of the spray booth and the operators' working area shall be of noncombustible, nonsparking material of such character as to facilitate the safe cleaning and removal of residues.

(d) Baffle plates shall be of noncombustible materials, readily removable or accessible on both sides for cleaning, and shall be designed to promote an even flow of air through the booth and prevent the deposit of overspray before it enters the exhaust ducts. Such

baffle plates shall not be located in the exhaust ducts.

(e) Each spray booth having a frontal area larger than nine square feet shall have a metal deflector or curtain not less than two and one-half inches deep installed at the upper outer edge of the booth over the opening.

(f) Each spray booth shall be separated from all other operations by not less than three feet.

(g) Spray booths shall be so installed that all portions are readily accessible for cleaning. A clear space of not less than three feet on all sides shall be kept free from storage or combustible construction.

(h) When spraying areas are illuminated through glass panels or other noncombustible transparent materials, only approved fixed lighting units shall be used as a source of illumination. Panels shall effectively isolate the spraying area from the area in which the lighting unit is located, and shall be of noncombustible material of such a nature or so protected that breakage will be unlikely. Panels shall be so arranged that normal accumulations of residue on the exposed surface of the panel will not be raised to a dangerous temperature by radiation or conduction from the source of illumination.

(Prior code § 129.1-52)

15-24-610 Dry type spray booths.

Overspray dry filters of filter rolls, when installed in dry-type spray booths, shall comply with the following:

(a) The spraying operations shall be so designed, installed and maintained that the average air velocity over the open face of the booth (or booth cross-section during spraying operations) shall be not less than 100 linear feet per minute. Visible gauges or audible alarm or pressure-activated devices shall be installed to indicate or insure that the required air velocity is maintained.

(b) All discarded filter pads and filter rolls shall be immediately removed to a safe, well-detached location or placed in a water-filled metal container and disposed of at the close of the day's operation unless maintained completely in water.

(c) The location of filters in a spray booth shall be so as to not reduce the effective booth enclosure of the articles being sprayed.

(d) Space within spray bath on the downstream and upstream sides of filters shall be protected with approved automatic sprinklers.

(e) Filters or filter rolls shall be used when applying a spray material known to be highly susceptible to spontaneous heating and ignition.

(f) Clean filters or filter rolls shall be noncombustible or of approved type.

(g) Filters and filter rolls shall not alternately be used for different types of coating materials, where the combination of materials may be conducive to spontaneous ignition.

(Prior code § 129.1-53)

15-24-620 Restrictions around spray booths.

(a) There shall be no open flame or spark- producing equipment in any spray area as defined in Section 15-24-550 nor within 20 feet thereof unless separated by a partition complying with the requirements of Section 15-24-570 except that such equipment may be operated within a spray area other than within a spray booth during such nonspraying periods when the spray area is free of a dangerous accumulation of flammable vapors and except as permitted in Section 15-24-570 drying apparatus, and Sections 15-24-680 to 15-24-700, electrostatic apparatus.

(b) Heating appliances, steampipes or hot surfaces shall not be located in any spray area where deposits of combustible residues may readily accumulate.

(c) Unless specifically approved for locations containing both deposits of readily ignitable residue and explosive vapor, there shall be no electrical equipment in any spray area whereon deposits of combustible residue may readily accumulate, except wiring in rigid conduit or in boxes or fittings containing no taps, splices or terminal connections and except as hereinafter provided in Section 15-24-860 relating to drying apparatus and Sections 15-24-680 to 15-24-700 relating to electrostatic spraying apparatus.

(d) Electrical wiring and equipment not subject to deposits of combustible residues but located in a spray area shall be of the explosion-proof type approved for use in such hazardous locations. Such area shall be considered a Class I Division 1 hazardous location as defined in Section 14E-5-500.

(e) Electrical wiring, motors and other equipment outside of but within 20 feet of any spray area and not separated, as directed in Section 15-24-570, shall not produce sparks under normal operating conditions. Such area shall be considered as Class I Division 2 hazardous locations as defined in Section 14E-5-500.

(f) Electric lamps outside but within 20 feet of any spray area and not separated therefrom as directed in Section 15-24-570 shall be totally enclosed to prevent the falling of hot particles and shall be protected from physical damage by suitable guards or by location.

(g) Portable electric lamps shall not be used in any spray area during spraying operations. Portable electric lamps used during cleaning or repairing operations shall be of the type specifically approved for Class I hazardous locations as defined in Section 14E-5-500.

(h) All metal parts of spray booths, exhaust ducts and piping systems conveying flammable liquids shall be electrically grounded in an effective and permanent manner, complying with the requirements of the electrical provisions of this Code.

(Prior code § 129.1-54; Amend Coun. J. 9-6-17, p. 55278, Art. II, § 53)

15-24-630 Ventilation of spray booths.

The ventilation of spray booths and spray areas shall comply with the provisions of Chapter 13-176 of this Code and with the following:

(a) All spraying areas shall be provided with positive, mechanical ventilation adequate to prevent the dangerous accumulation of vapors and to safely remove such vapors to a safe location.

(b) Such mechanical ventilation shall be kept in operation at all times while the spraying operations are being conducted and for a sufficient time thereafter to allow vapors from drying coated articles and finishing material residues to be exhausted.

(c) Each spray booth shall have an independent exhaust duct system discharging to the building exterior and shall comply with the ventilation requirements of this Code. Multiple-cabinet spray booths in which identical spray-finishing materials is used with a combined frontal area of not more than 18 square feet, may have a common exhaust. If more than one fan serves one booth, all fans shall be so interconnected that one fan cannot operate without operating all.

(d) Electric motors driving exhaust fans shall not be placed inside of booths or ducts. Fan rotating element shall be nonferrous or nonsparking or the casing shall consist of or be lined with such material.

(e) Belts shall not enter the booth or ducts unless such belts and pulleys within the booth or ducts are tightly enclosed.

(f) Exhaust ducts shall be constructed of steel and shall be substantially supported. Readily accessible cleanout openings shall be provided.

(g) Exhaust ducts shall have a clearance from unprotected combustible construction or material of not less than 18 inches. If such combustible construction is provided with the following protection applied to all surfaces within 18 inches, clearances may be reduced to the clearances indicated:

1. 28-gauge sheet metal or one-fourth-inch asbestos mill-board.....12 inches
2. 28-gauge sheet metal or one-eighth-inch asbestos mill-board spaced out one inch on noncombustible spacers.....9 inches
3. 22-gauge sheet metal or one-inch rockwool batts reinforced with wire mesh or the equivalent.....3 inches
4. Air exhaust from spraying operation shall not be recirculated.

(Prior code § 129.1-55)

15-24-640 Flammable liquid storage.

The storage and handling of flammable liquids used in connection with paint spraying shall conform to the requirements of Section 15-24-410 and other applicable chapters of this Code, and with the special provisions of the following:

(a) When the quantity of flammable liquids used in spraying, in five-gallon and smaller containers, other than in original sealed containers or approved safety cans, exceeds a total of ten gallons, it shall be stored in a metal cabinet and when the total quantity exceeds 50 gallons of such flammable liquid, a room complying with Section 15-24-410 shall be required.

(b) Only original closed containers, approved portable tanks, approved safety cans or a properly arranged system of piping shall be used for bringing flammable liquids into spray-painting areas.

(c) Containers supplying spray nozzles shall be of the closed type. Containers not resting on floors shall be on noncombustible supports or suspended by wire cables.

(d) All containers or piping to which is attached a hose or flexible connection shall be provided with a quick-closing valve and equipped with a weight and a fusible link, arranged to automatically close the valve in the event of a fire. Such valves shall be closed when not in use.

(e) Heaters shall not be located in the spray booth or area or other locations subject to the accumulation of combustible deposits or residue.

(f) If flammable liquids are supplied to spray nozzles by positive displacement pumps, the pump discharge line shall be provided with an approved relief valve discharging to the pump suction or to a safe detached location, or a device shall be provided to stop the prime moved when the discharge pressure exceeds 125 percent of the normal operating pressure.

(g) Whenever flammable liquids are transferred from one container to another, both containers shall be bonded or effectively grounded. Piping systems for flammable liquids shall be permanently grounded.

(Prior code § 129.1-56)

15-24-650 Automatic sprinklers.

For automatic sprinkler requirements, see Chapter 15-16.

(Prior code § 129.1-57)

15-24-660 Fire prevention requirements.

The operation and maintenance of paint spray operations shall also comply with the following:

(a) All spray areas shall be kept as free from the accumulations of deposits of combustible residues as practical with cleaning conducted daily.

(b) Scrapers, spuds, or other such tools used for cleaning purposes shall be of nonsparking material.

(c) Residue scrapings and debris contaminated with residue shall be immediately removed from the premises and properly disposed of.

(d) The use of flammable solvents for cleaning operations shall be restricted to those having a flashpoint of not less than 100 degrees Fahrenheit closed cup tester except that solvents with flashpoints not less than those normally used in spraying operations may be used for cleaning spray nozzles and auxiliary equipment, provided such cleaning is conducted inside spray booths and ventilating equipment is operating during cleaning periods.

(e) Spray booths shall not be alternately used for different types of coating materials, where the combination of the materials may be conducive to spontaneous ignition, unless all deposits of the first used material are removed from the booth and exhaust ducts prior to spraying with the second coating material.

(Prior code § 129.1-58)

15-24-670 Motor vehicle undercoating.

Motor vehicle undercoating operations shall comply with the following provisions:

(a) When certified by the bureau of ventilation that the premises comply with all applicable provisions of Chapter 13-176 and when undercoating materials and solvents having a flashpoint not lower than 100 degrees Fahrenheit closed cup testers are used, motor vehicle undercoating spray operations may be exempt from this Code relating to spraying operations on the express approval of the fire commissioner.

(b) Undercoating spray operations not conforming with paragraph (a) of this section shall be subject to all applicable provisions of this Code.

(Prior code § 129.1-59; Amend Coun. J. 5-18-16, p. 24131, § 146)

15-24-680 Electrostatic paint-spraying apparatus.

Electrostatic paint spray and deterring apparatus shall conform to the requirements of Chapter 15-24 for the provisions of paint spraying and to the specific requirements of the following:

(a) Electrostatic apparatus and devices used in connection with paint-spraying and paint-deterring operations shall be only of the approved type.

(b) Transformers, power packs, control apparatus and all other electrical portions of the equipment, with the exception of high voltage grids and electrostatic atomizing heads and their connections, shall be located outside of the spraying areas or vapor areas as defined in Section 15-24-550 or shall comply with the requirements of Section 14E-5-500 for Class II hazardous locations.

(c) Electrodes and electrostatic atomizing heads shall be of substantial construction, shall be rigidly supported in permanent locations and shall be effectively insulated from ground. Insulators shall be nonporous and noncombustible.

(Prior code § 129.1-60; Amend Coun. J. 9-6-17, p. 55278, Art. II, § 54)

15-24-690 Electrical equipment.

All electrostatic paint spray apparatus shall conform to the requirements of Title 14E and with the following specific requirements:

(a) A space of at least twice the sparking distance shall be maintained between goods being painted or deterred and electrodes, electrostatic atomizing heads or conductors. A suitable sign indicating such distance shall be conspicuously posted.

(b) Electrostatic apparatus shall be equipped with automatic controls which will operate without time delay, to disconnect the power supply to the high voltage transformer and to signal the operator under any of the following conditions:

1. Stoppage of the ventilating fans or failure of the ventilating equipment from any cause;
2. Stoppage of the conveyor carrying goods past the high-voltage grid;
3. Occurrence of a ground or of an imminent ground at any point on the high-voltage system;
4. Reduction of the clearance below that specified in Section 15-24-690.

(Prior code § 129.1-61; Amend Coun. J. 9-6-17, p. 55278, Art. II, § 55)

15-24-700 Fire prevention requirements.

The following shall also apply to electrostatic spray painting apparatus and operations:

(a) Adequate booths, fencing, railings or guards shall be so placed about the equipment that they, either by their location or character or both, assure that a safe isolation of the process is maintained from plant storage and personnel. Such railings, fencing and guards shall be conducting material adequately grounded and shall be at least five feet from the processing equipment.

(b) Signs designating the process as dangerous in regard to fire and accident shall be posted. Such signs shall have a white field with

red letters at least four inches high with at least one-half-inch stroke. Such signs shall read as follows: “Electrical and Fire Hazard – Keep Away – Only Authorized Personnel Permitted”.

(c) All insulators shall be kept clean and dry.

(d) Drip plates and screens subject to paint deposits shall be removable and shall be taken to a safe place for cleaning.

(Prior code § 129.1-62)

15-24-710 Portable electrostatic paint-spraying operations.

Electrostatic handheld mobile paint-spraying and paint-deterring apparatus shall conform to the requirements of Chapter 15-24 for the provisions of paint spraying and to the specific requirements of the following:

(a) Electrostatic apparatus and devices used in connection with paint-spraying and paint-deterring operations shall be only of the approved type.

(b) Transformers, power packs, control apparatus and all other electrical portions of the equipment, with the exception of electrostatic atomizing spray gun and its connections, shall be located outside of the spraying areas or vapor areas, as defined in Section 15-24-550 or shall comply with the requirements of Section 14E-5-500 for Class II hazardous locations.

(c) The handle of the spraying gun shall be grounded, by a metallic connection, in such a manner that the operator is grounded during the time the spray gun is operated.

(d) All objects and devices within the spray area shall also be grounded and signs posted stating the object or device is grounded during the time the spray gun is operated.

(e) Adequate ventilation shall be provided to eliminate an explosive atmosphere due to the presence of explosive vapor.

(f) Signs, as required by Section 15-24-700(b) shall be posted in the area to prevent personnel from being harmed.

(Prior code § 129.1-62.1; Amend Coun. J. 9-6-17, p. 55278, Art. II, § 56)

ARTICLE VII. DIPPING AND ROLL COATING (15-24-720 et seq.)

15-24-720 Definitions.

“Dip tank” means a tank, vat or container containing Class I, II, or III flammable liquid or a liquid containing any volatile flammable substance in solution or by suspension in which articles or materials are immersed for the purpose of coating, finishing, cleaning, treating or similar processes.

“Dip tank vapor area” means the area within a 20-foot radius of any dip tank, its drain board or associated drying, conveying or other equipment, during operation or shutdown periods, unless separated by walls conforming to Section 15-24-570 of this Code.

(Prior code § 129.1-63)

15-24-730 Restrictions.

Dip tanks shall not be permitted in any institutional building. Dip tanks shall not be permitted in any school, assembly or multiple-dwelling building, except in a room designed for the purpose, protected with an approved system of automatic sprinklers and separated vertically and horizontally from other parts of the building by construction having not less than two-hour fire-resistive rating.

(Prior code § 129.1-64)

15-24-740 Ventilation.

Ventilation of dip tanks vapor areas shall comply with the applicable sections of Chapter 13-176. Such ventilation shall be adequate to prevent the vapor accumulations. Such ventilation shall also be so arranged that failure of any ventilating fan shall automatically stop any dip tanks conveying system.

(Prior code § 129.1-65)

15-24-750 General requirements.

Dip tanks, as defined in Section 15-24-720, shall comply with all applicable provisions of this Code and with the special provisions of Sections 15-24-760 to 15-24-830.

(Prior code § 129.1-66)

15-24-760 Dip tank construction.

(a) Dip tanks shall be constructed of substantial noncombustible material and their supports shall be of heavy metal, reinforced concrete or masonry.

(b) Adequate drainboards shall be provided to prevent the liquid from dripping on the floor or other undesirable locations. Such drainboards shall be constructed of substantial noncombustible material and shall have a pitch of not less than one-half-inch vertical rise for each ten feet of the horizontal so that the liquid will drain back to the dip tank or other suitable location. Such drainboards shall be arranged to automatically prevent the conducting of water into the dip tank in the event of a fire.

(c) Dip tanks of over 150 gallons in capacity or ten square feet in liquid surface area hereafter installed shall have a trapped overflow pipe leading to an underground salvage tank complying with the requirements of Section 15-24-280. The bottom of the overflow connection shall be not less than six inches below the top of the tank.

(d) Dip tanks in excess of 500 gallons in liquid capacity hereafter installed shall be equipped with an approved quick-opening valve located at the bottom of the dip tank. Such valve shall operate manually and shall also be arranged to automatically open the valve in the event of a fire and quickly drain the contents of the tank to an underground salvage tank, complying with the requirements of Section 15-24-280. Manual operation shall be from a safe, accessible location. Where gravity flow is not practicable, automatic pumps shall be provided. Such drains shall be trapped.

(e) Dip tanks utilizing a conveyor system shall be so arranged that in the event of a fire, the conveyor system shall automatically cease motion and the required bottom drains shall open.

(Prior code § 129.1-67)

15-24-770 Electrical equipment.

Electrical wiring, motors and fixtures in any dip tank vapor area shall comply with Title 14E for hazardous locations and with the specific provisions of this section.

(a) There shall be no open flames, spark- producing devices or heated surfaces having a temperature sufficient to ignite the vapors in any dip tank vapor area.

(b) Electric wiring and equipment in any dip tank vapor area shall be explosion-proof type approved for use in such hazardous locations. Such area shall be considered as Class I, Division 1 hazardous locations as defined in Section 14E-5-500.

(c) Unless specifically approved for locations containing both deposits of ignitable residues and explosive vapors, there shall be no such electrical equipment in the vicinity of dip tanks or associated drainboards or drying operations which are subject to splashing or dipping of dip tank liquids, except wiring in rigid conduit or in threaded boxes or fittings containing no taps, splices or terminal connections and except hereinafter specifically permitted in Sections 15-24-680 to 15-24-700 relating to electrostatic apparatus.

(d) In any floor space outside of the dip tank vapor area, but within 20 feet therefrom and not separated by fire separation complying with Section 15-24-730, there shall be no open flames or spark- producing devices. Such areas shall be considered as Class I, Division 2 hazardous locations as defined in Section 14E-5-500.

(Prior code § 129.1-68; Amend Coun. J. 9-6-17, p. 55278, Art. II, § 57)

15-24-780 Fire prevention requirements.

A dip tank shall be required when for any reason articles or materials are immersed in Class I, II or III flammable liquids or in a liquid containing any volatile flammable substance in solution or in suspension. All dip tank, flow coat and roll coating operations and maintenance shall comply with the following:

(a) Areas in the vicinity of the dip tanks shall be kept clear of combustible stock and shall be kept entirely free of combustible debris.

(b) Frequent inspections and tests of all dip tank facilities shall be made by a qualified employee, including covers, overflow pipe inlets and discharge pipe, bottom drains, all valves including quick opening valves, electrical wiring and equipment and grounding connections ventilating facilities and all extinguishing equipment. Any defects shall be promptly corrected.

(Prior code § 129.1-69)

15-24-790 Fire-extinguishing equipment.

Fire extinguishing equipment shall be provided as follows:

(a) Standard fire extinguishers shall be required.

(b) Dip tanks having less than 150 gallons capacity or less than ten square feet liquid surface area shall be fitted with a cover complying with the provisions of Section 15-24-800 or with one of the automatic extinguishing facilities specified below.

(c) Dip tanks of over 150 gallons capacity or having a liquid surface area in excess of ten square feet shall be protected with at least one of the following automatic extinguishing facilities:

1. An approved automatic water spray extinguishing system;
2. An approved automatic foam extinguishing system;
3. An approved automatic carbon dioxide extinguishing system;
4. An approved automatic dry chemical extinguishing system.

(Prior code § 129.1-70)

15-24-800 Dip tank covers.

Dip tank covers shall comply with the following:

(a) Covers shall be arranged to close automatically in the event of a fire. Such tank covers shall also be arranged for manual operation.

(b) Covers shall be constructed of substantial noncombustible materials or if of the tin-clad type, the enclosing metal shall be with locked joints.

(c) Chains or wire rope shall be used for cover support or operating mechanism.

(d) Covers shall be kept closed when dip tanks are not in use.

(Prior code § 129.1-71)

15-24-810 Hardening and tempering tanks.

Hardening and tempering tanks shall comply with the requirements of Sections 15-24-760 to 15-24-800 and with the specific requirements of the following provisions:

(a) Such tanks shall not be located on or within 20 feet of combustible floors. Such tanks shall not be closer than 20 feet for a furnace or other open-flame heating device, torch or other heat-producing device.

(b) Such tanks shall be provided with noncombustible hood and vent, and vented directly to the outside of the building and shall otherwise comply with the requirements of Chapter 13-176. Such vents and hood shall not be closer than 18 inches to any combustible materials.

(c) Each such tank shall be equipped with a high temperature limit switch so arranged to sound a suitable audible alarm when the temperature of the quenching medium reaches 50 degrees below the flashpoint.

(d) Such tanks having a capacity of over 500 gallons or having a liquid surface area of 25 square feet or more shall be protected as specified in Section 15-24-790(b) or (c) of this Code.

(e) Air under pressure shall not be used to fill or to agitate the quenching medium in the tanks.

(Prior code § 129.1-72)

15-24-820 Flow coat operations.

Flow coat operations shall comply with the requirements for dip tanks. The area of the sump and any area within 20 feet of the flow coat operations shall be considered the vapor area. Flow coat operations shall also conform to the following specific requirements:

(a) Paint or other flammable liquid shall be supplied by direct low pressure pumping arranged to automatically shut down by means of approved heat- actuated devices in the event of a fire.

(Prior code § 129.1-73)

15-24-830 Roll coating operations.

Roll coating operations shall comply with the following provisions and the other applicable requirements of the code:

(a) The processes of roll coating, spreading and impregnating in which fabrics, paper or other material is passed directly through a dip tank or trough containing flammable liquids or over the surface of a roller that revolves partially submerged in a flammable liquid shall conform to the requirements of Sections 15-24-760 to 15-24-800 of this Code.

(b) Adequate arrangements shall be made to prevent sparks from static electricity by electrically bonding and grounding all metallic rotating and other parts of the machinery and equipment and by the installation of static collectors. All such electrical bonding and grounding shall be done in strict accordance with the provisions of Title 14E.

(Prior code § 129.1-74; Amend Coun. J. 9-6-17, p. 55278, Art. II, § 58)

ARTICLE VIII. DRYING APPARATUS (15-24-840 et seq.)

15-24-840 Drying rooms.

Every room for the drying of articles or materials, which will give off explosives or flammable vapors during the drying process, shall have an enclosure of two-hour fire-resistive construction, if it has a floor area of 1,000 square feet or less and of three-hour fire- resistive construction of solid masonry or concrete if it has a floor area exceeding 1,000 square feet but not more than 2,000 square feet; and of four-hour fire-resistive construction if it has a floor area exceeding 2,000 square feet; provided, however, that an opening, or openings from any adjoining room for a conveyor may be provided in an enclosure for any such drying room if each such adjoining room is made to conform with the requirements of this section for such a drying room; and provided further, that if a system of collecting and disposing of the vapors produced in the drying room is provided, then the enclosure for the drying room shall be not less than one-hour fire-resistive construction in any case, and the provisions of this section for an adjoining room in which there is a conveyor extending into the drying room shall not apply.

(Prior code § 129.1-75)

15-24-850 Drying ovens.

Section 15-24-840 shall not apply when drying is conducted in a drying device specifically designed for drying articles, which have been coated with a material that gives off explosive vapor during drying. Adequate ventilation shall be provided, which will insure ventilation sufficient to prevent buildup of an explosive mixture. The ventilation system shall be interlocked such that in case of failure of the ventilating system, the drying device will not function. The heating operation shall comply with Chapter 13-180. The drying operation shall comply with Section 15-24-860. Whenever located adjacent to the spraying operation, preventilation shall occur before

the heating system can be started.

(Prior code § 129.1-76)

15-24-860 Fire prevention requirements.

Drying apparatus shall comply with the applicable chapters of this Code and with the special requirements of this section:

(a) Spray booths, spray areas, spray rooms used for spraying operations shall not alternately be used for the purpose of drying by any arrangement which will cause an increase in the surface temperature of the spray booth, spray area, spray room used for spraying operations, except as hereinafter permitted.

(b) Except as specifically provided in Section 15-24-860(c) drying or baking units utilizing a heating system having open flames or which may produce sparks shall not be permitted in any spray booth, spray area, spray room but may be installed adjacent thereto if equipped with an interlocked ventilating system arranged to:

1. Thoroughly ventilate the drying space before the heating system can be started;

2. Maintain a safe atmosphere at any source of ignition;

3. Automatically shut down the heating system in the event of failure of the ventilating system.

(c) Motor vehicles refinishing booths or enclosures, otherwise installed and maintained in conformity with this section, may alternately be used for drying with portable infrared drying apparatus when complying with the following:

1. The procedure shall be restricted to occasional operations using less than ten gallons in any 24-hour period of liquids as defined for paint spraying in Section 15-24-550 of this Code.

2. The interior of spray enclosures shall be kept free of overspray deposits.

3. During the spray operations, the drying apparatus and electrical connections and wiring thereto shall not be located within the spray enclosure nor in any other location where spray residue may be deposited thereon.

4. Spraying apparatus, drying apparatus and ventilating system of the spray enclosure shall be equipped with suitable interlocks so arranged that:

(a) Spraying apparatus cannot be operated while drying apparatus is inside the spray enclosure;

(b) Spray enclosure will be purged of spray vapors for a period of not less than three minutes before drying apparatus can be energized;

(c) The ventilating system will maintain a safe atmosphere within the enclosure during the drying process and the drying apparatus will automatically shut off in the event of failure of the ventilating system.

5. All electrical wiring and equipment of the drying apparatus shall conform to Title 14E. Only equipment of a type approved for Class I, Division 2 hazardous locations, as defined in Section 14E-5-500, shall be located within 18 inches of the floor level. All metallic parts of the drying apparatus shall be properly electrically bonded and grounded.

(Prior code § 129.1-77; Amend Coun. J. 9-6-17, p. 55278, Art. II, § 59)

15-24-870 Ventilation.

Every room for the drying of articles or materials which will give off explosive or flammable vapors during the drying process shall have means of natural ventilation the same as required under Section 15-28-260 for a material heating room, except that where there is a mechanical means of collecting and disposing of all such vapors produced in the drying room, the provisions of this section shall not apply.

(Prior code § 129.1-78)

15-24-880 Heating.

All steam or hot water pipes in every standard drying room, and in every drying room for any article or material which will give off explosive or flammable vapors during the drying process, shall be carried on noncombustible supports and shall be provided with noncombustible guards so arranged as to maintain a clear space of not less than six inches between such pipes and any article or material which is being dried. Any wire or sheet metal used in such guards shall be not less than one-eighth-inch thick, and where the articles or materials being dried are heavy or are handled in carts, trucks or other conveyors, the required guards shall be of sufficient strength to withstand such impacts and pressure as may be imposed upon them. No steam or hot water pipes shall be located less than six inches from the floor at any point. Provisions shall be made for the cleaning of all lint, dust, waste and refuse from around steam and hot water pipes.

Any opening for the admission of hot air to a drying room shall be protected by a metal screen or grille with openings not more than one-half inch in width. The metal of any such screen or grille shall be not less than one-eighth-inch thick. No such opening for the admission of hot air shall be nearer than six inches to the floor at any point.

Any stove in a drying room shall be provided with a standard furnace foundation. Any stove or electric heating device in a drying room shall be provided with a metal guard so arranged as to maintain a clear space of at least six inches between said stove or electric heating device and any material or article which is being dried, which shall conform in all respects to the requirements of this section for guards around steam or hot water pipes.

(Prior code § 129.1-79)

15-24-890 Drying oven design.

Foundations. Every oven, for the baking or japan or enamel work, located on a combustible floor, shall be provided with a standard furnace foundation, meeting the requirements of Chapter 18-28 of this Code.

Separation of Baking Compartment and Fire Chamber. If direct heat is used, the baking compartment of the oven shall be cut off from the fire chamber and smoke flue by a tight noncombustible partition, and provisions shall be made to keep the flame at such distance from such partition as will preclude the possibility of igniting the fumes in the baking compartment.

Metal Oven Construction. The walls and ceiling of every metal oven shall consist of an inner and outer shell of metal not less than three-eightieths-inch thick, with riveted or welded seams and joints, secured to a rigid framework of suitable iron or steel shapes. The inner and outer metal shells shall be separated not less than one and one-half inches, the space between being filled solid with fused noncombustible insulating material not less than one and one-fourth inches thick.

Brick Oven Construction. Every brick oven shall have walls and ceiling at least four inches in thickness and shall be provided with a metal door not less than five sixty-fourths inch in thickness.

Open Ventilation and Relief Covers. Every japanning or enameling oven shall have a vent pipe of iron or steel, not less than one-thirty-second inch thick with riveted or welded seams and joints, or formed of a compressed mixture of asbestos fiber and portland cement or as provided by Chapter 13-152 of this Code for smoke flues and chimneys.

Clearances. No part of any oven enclosure or oven flues shall be located nearer to any combustible construction than is permitted under Chapter 13-152 of this Code for low-pressure boiler breachings.

(Prior code § 129.1-80; Amend Coun. J. 11-9-16, p. 36266, § 32)

ARTICLE IX. DRY CLEANING (15-24-900 et seq.)

15-24-900 Definitions.

As used in this chapter:

"Dry cleaning building" means a building designed, intended or used for no purpose other than the purpose of dry cleaning or spotting as defined in Section 4-6-200.

"Dry cleaning room" means a room for the purpose of carrying on dry cleaning process in any building.

(Prior code § 129.1-81; Amend Coun. J. 3-11-87, p. 40187; Amend Coun. J. 6-14-95, p. 2841; Amend Coun. J. 5-9-12, p. 27485, § 186)

15-24-910 Floor area limit.

No dry cleaning room in which a flammable solvent having a flashpoint below 100 degrees Fahrenheit (closed cup tester) is used shall have a floor area greater than 300 square feet.

(Prior code § 129.1-82)

15-24-920 Safety clearances.

No dry cleaning building shall be located nearer than 100 feet to any building in which there is an institutional, assembly or open air assembly unit.

At least one side of every dry cleaning building in which a flammable solvent having a flashpoint below 140 degrees Fahrenheit (closed cup tester) is used shall have a safety clearance of not less than 15 feet, and every side, which is nearer than 15 feet to another building or structure, or to a lot line, shall be a solid wall without any opening.

(Prior code § 129.1-83)

15-24-930 Dry cleaning buildings.

Every dry cleaning building in which a flammable solvent having a flashpoint below 140 degrees Fahrenheit (closed cup tester) is used shall be of Type IA, IB or IC construction, with all walls, both exterior and interior, of construction the same as required for a fire wall. There shall be no basement or mezzanine in any such building. The surface of the first floor shall be higher than any walk, pavement or ground adjoining the building, and the first floor construction shall be such that there will be no air space or void in or beneath it. There shall be no doorway, window or other opening between any two dry cleaning rooms. Every doorway of any such building shall be provided with a noncombustible door and every window thereof shall be a fire window.

Dry cleaning systems utilizing a solvent having a flashpoint of 140 degrees Fahrenheit and above (closed cup tester) may be employed in any business, mercantile, storage or industrial unit; provided, that the equipment installed therein shall conform to the standards for dry cleaning plants as recommended by the National Fire Protection Association's Pamphlet 32, 1964 Edition, as amended April, 1968, for the class designated therein as Class II; provided further that in buildings of mixed occupancy such dry cleaning systems shall be separated from other occupancies by construction of two-hour fire-resistive value; provided further, that doorways communicating with other occupancies or with a public corridor are provided with Class C fire-resistive doors; provided further, that rooms in which such systems are employed shall have windows in area equal to not less than ten percent of the floor area; provided further, that such windows shall be hung off center and made to operate by rate of rise device so that the sash will drop outward in the event of fire or explosion; provided further, that such windows shall open to street, alley or court or other space open to the sky; and provided further, that no such

dry cleaning system shall be located in any part of a building used as a retail store in which more than two salespersons are employed.

Dry cleaning systems in which solvents of the chlorinated hydrocarbon type are used may be employed in any business, mercantile, industrial or storage unit; provided, that such system is so constructed as to prevent the escape of any vapors into the atmosphere of the room, or shall be enclosed within airtight partitions, immediately surrounding the system, so as to prevent the escape of such vapors beyond the enclosed space; provided further, that in any case where such systems are used, adequate ventilation capable of changing the air in the room every three minutes shall be supplied; provided, that such systems shall exhaust to the outside atmosphere, and the exhaust outlet shall not be closer than 20 feet to the opening of any building; and provided further, that no such dry cleaning system shall be located in any dwelling or place of public assembly except in a dry cleaning room in a multiple-occupancy building complying with all of the following:

(a) The building shall have an approved standard automatic sprinkler system installed in all spaces.

(b) The room shall be isolated from any dwelling unit or place of public assembly by horizontal and vertical separation of a minimum of three hours.

(c) There shall be no direct-fired heating unit within the room.

(d) The handling of drums of cleaning solvent within the building shall be only by licensed operating engineers. This shall include charging and draining of cleaning system.

(e) Ventilation above specified shall be provided by supply and exhaust systems serving only the cleaning room.

(Prior code § 129.1-84; Amend Coun. J. 3-11-87, p. 40187)

15-24-940 Heating.

Every boiler in a dry cleaning building in which a flammable solvent having a flashpoint below 140 degrees Fahrenheit (closed cup tester) is used shall be located in a separate building, or shall be separated by a fire wall from every dry cleaning room. The boiler shall be so situated that the line of travel for gases between it and the nearest opening into any dry cleaning room shall be not less than 20 feet. In every dry cleaning building, all heating shall be by steam or hot water pipes, equipped with guards as provided under Section 15-24-880 for a standard drying room.

(Prior code § 129.1-85)

15-24-950 Steam fire lines.

Steam Fire Lines. Every dry cleaning building in which a flammable solvent having a flashpoint below 140 degrees Fahrenheit (closed cup tester) is used shall be provided with a high pressure steam boiler having a capacity of one horsepower for each 100 cubic feet contained in the largest dry cleaning room in the building. Such boiler shall be arranged and equipped to permit a steam pressure of not less than 30 pounds per square inch being maintained at all times during which dry cleaning operations are carried on in the building. Each dry cleaning room in the building shall be connected to such boiler by a steam pipe of not less than one and one-half inch diameter, either by a direct line to each room, or by a main or mains with branches. Where any such main or branch line passes through a wall, it shall be equipped with a tight-fitting journal solidly built into the wall construction. Discharge pipes shall be provided near the ceiling in each drying room, at intervals of not more than ten feet over the entire ceiling area, and in addition there shall be provided one discharge pipe near the ceiling over each washer and each extractor located or provided for in the room. Each such discharge pipe shall be at least two inches long and shall be directed downward. The discharge of steam into each drying room shall be controlled by a valve located outside the building.

Water Tanks. There shall be an open tank not less than four feet long, two feet wide, and three feet deep near the entrance to every dry cleaning room which shall be so arranged and equipped that it may be kept filled with water to within four inches of its top at all times.

(Prior code § 129.1-86)

15-24-960 Valves.

Every valve required for the control of the discharge of steam through a steam fire line into any dry cleaning room shall be marked with a metal sign which shall bear the words “STEAM FIRE LINE”. Such wording shall be in plainly legible bright red letters on a white background with letters not less than six inches high and with the principal strokes thereof not less than three-fourths inch in width.

(Prior code § 129.1-87)

15-24-970 General requirements.

Drying rooms shall comply with the applicable provisions of Sections 15-24-850 to 15-24-890 inclusive, in addition to Section 15-24-980 of this Code.

(Prior code § 129.1-88)

15-24-980 Ventilation.

Every dry cleaning room shall have means of natural ventilation as required under Section 15-28-260 for material heating rooms. In addition to the natural ventilation required by this section, there shall be a mechanical ventilating system which shall exhaust air from the room as provided by Chapter 13-176 of this Code.

(Prior code § 129.1-89)

ARTICLE X. CARRIERS FOR TRANSPORTATION OF FLAMMABLE LIQUIDS (15-24-990 et seq.)

15-24-990 Definitions.

(a) *Tank Truck.* Any motor vehicle used for the transportation of flammable liquids and which for such purpose is provided with a tank or tanks mounted on the frame or chassis of such vehicle.

(b) *Tank Trailer.* Any vehicle without its own motive power but drawn by a motor vehicle, used for the transportation of flammable liquids and which for such purpose is provided with a tank or tanks mounted thereon.

(c) *Tank Semitrailer.* A vehicle of the tank trailer type so designed and used in conjunction with a motor vehicle that when in use a part of its own weight and load is supported by the motor vehicle.

(d) *Fuel Tank.* The tank designed to contain only the fuel to be used by the engine of the truck upon which it is mounted.

(Prior code § 129.1-90)

15-24-1000 General condition of carriers.

Tank trucks, tank trailers and tank semitrailers shall not be operated unless they are in good repair, clean and free of leaks.

(Prior code § 129.1-91)

15-24-1010 Wheels and tires.

Tank trucks, tank trailers and semitrailers shall be equipped with rubber tires. Tank trucks and tank trailers shall be operated on not less than four wheels. Tank trailers shall have a fifth wheel or equivalent device to prevent dangerous swerving from the path of the towing vehicle. Tank semitrailers shall be operated on not less than two wheels.

(Prior code § 129.1-92)

15-24-1020 Brakes.

Every trailer or semitrailer shall be equipped with a reliable system of brakes and adequate provision shall be made for its efficient operation from the driver's seat of the vehicle drawing such trailer or semitrailer.

(Prior code § 129.1-93)

15-24-1030 Grounding.

Tank, chassis, axles and springs shall be electrically interconnected for static electricity control. In addition, adequate provisions shall be made for bonding the container being filled to the tank, chassis, axles and springs.

(Prior code § 129.1-94)

15-24-1040 Lighting.

Tank trucks, tank trailers and semitrailers shall be equipped with artificial lighting, conforming to the requirements of the state regulations. Lighting circuits shall have suitable over-current protection such as fuses or automatic circuit breakers. The wiring shall be of ample carrying capacity and mechanical strength and shall be substantially secured, insulated and protected against damage. No lighting other than electric lighting shall be permitted on any tank truck, tank trailer or tank semitrailer. Every tank trailer and tank semitrailer shall be provided with side lights and a taillight or lights.

(Prior code § 129.1-95)

15-24-1050 Fire extinguishers.

Each tank truck, tank trailer and semitrailer shall be equipped and maintained with at least one hand fire extinguisher of a type suitable for extinguishing flammable liquid fires. Fire extinguishers shall be kept in good operating condition at all times and shall be located in an accessible place on such tank vehicles.

(Prior code § 129.1-96)

15-24-1060 Exhaust systems.

The exhaust system, including muffler and exhaust line, shall have not less than 12 inches clearance from the fuel system and any combustible material, and shall not be exposed to accumulations of grease or oil, nor to leakage of fuel from faults in the fuel system or from careless filling of fuel tanks. No muffler cutouts shall be permitted.

(Prior code § 129.1-97)

15-24-1070 Warning signs.

Every tank motor vehicle used for the transportation of flammable liquids shall have the word “FLAMMABLE” displayed in English on both sides and rear of the tank in letters not less than five inches high by at least a one-inch stroke, and on the front bumper in letters not less than four inches high by at least a one-inch stroke, each on a background of sharply contrasting color, except that the lettering on vehicles used exclusively for local distribution need not exceed five inches in height by at least a three-fourths inch stroke.

(Prior code § 129.1-98)

15-24-1080 DOT approved trucks.

Any tank truck, tank trailer or semitrailer constructed in accordance with the Department of Transportation regulations shall be deemed to be in compliance with the regulations given in Section 15-24-1090 of this Code.

(Prior code § 129.1-98.1)

15-24-1090 Tanks.

Tanks other than the fuel tanks of tank trucks shall comply with the following provisions:

(a) *Material, Capacity and Gauge.* Except as hereinafter provided, tanks shall be constructed throughout of open hearth or blue annealed steel, of a thickness and gauge in accordance with the provisions of the following table:

Aggregate Capacity (Gallons)	*Shell U.S. Standard Gauge*	*Head U.S. Standard Gauge*
Up to 600	14	14 if bilged or corrugated, otherwise 12
601 to 1,200	12	12 if bilged or corrugated, otherwise 10
Over 1,200	10	8

Tanks exceeding 1,200 gallons in capacity may be constructed with 12-gauge shells and 10-gauge heads; provided, however, that they are subdivided into compartments of 600 gallons or less capacity, and are mounted on chassis equipped with low-pressure balloon pneumatic tires. Other metals of equivalent strength to the gauge of open hearth or blue annealed steel required by the above table may be used in lieu of open hearth or blue annealed steel.

(b) *Joints.* Shell and head joints shall be welded, riveted and welded, brazed or riveted and brazed, riveted and caulked or made tight by some equally effective process.

(c) *Test.* Each tank or compartment shall be tested and proven tight at a pressure of five pounds or more to the square inch.

(d) *Tank Outlets.* Outlets shall be substantially made and attached so as to prevent breakage at the outlets and shall be attached so as to permit complete drainage.

(e) *Bulkheads.* Tanks with compartments carrying liquids of different classes shall be provided with an air space between compartments. Such air space shall be maintained with drainage facilities.

(f) *Compartments Required.* Tanks for flammable liquids of Class I as specified in Section 15-24-020 in excess of 2,500 gallons each. This requirement shall not apply to tanks for transportation in bulk between cities; provided, however, that such tanks shall not be used for distribution within the city limits.

(g) *Attachment of Tanks.* Tanks shall be adequately supported and shall be securely bolted or clamped to the frame of the vehicle.

(h) *Vents.* Each compartment shall be equipped with a vacuum and pressure operating vent with a minimum effective opening of forty-four hundredths square inches. Each compartment carrying Class I flammable liquids, as specified in Section 15-24-020, shall be provided with a vent equivalent in free opening to that provided by a circular hole one and twenty-nine thirty-seconds inches in diameter. If such vent incorporates a fusible element, the fusing temperature of such element shall not exceed 200 degrees Fahrenheit.

(i) *Draw-off Valves.* All draw-off valves or faucets shall have threaded or equally effective connection for fill pipe hose. Such valves or faucets shall be adequately guarded against damage by collision.

(j) *Emergency Discharge Control.* Each compartment of a gravity discharge tank used for the transportation of Class I flammable liquids shall be equipped with a reliable shutoff valve located inside the shell of the tank in the compartment outlet; and, except during delivery operations, such valves shall be kept closed. The operating mechanism for such valves shall be provided with a secondary control, remote from the tank-filling parts and discharge faucets, for use in event of accidents or fire during delivery operations and such control mechanism shall be provided with a fusible section which will cause the valves to close automatically in case of fire. In every case there shall be provided, between the shutoff valve seat and discharge faucet, a shear section which will break under strain, unless the discharge piping is so arranged as to afford the same protection and leave the shutoff valve seat intact.

(Prior code § 129.1-99)

15-24-1100 Fuel tanks.

The main fuel tank shall not be placed over or adjacent to the engine. Tanks shall be arranged to vent during filling operations and to permit draining without syphonage or removal from their mounting.

(Prior code § 129.1-100)

15-24-1110 Loading and unloading racks.

Tank vehicle loading and unloading racks dispensing Class I liquids hereafter erected shall be separated from structures by a clear distance of not less than 25 feet, measured from the nearest portion of any fill stem. In preordinance and existing installations, tank vehicle loading and unloading racks dispensing Class I flammable liquids shall be separated from lot lines on which buildings may be built by a clear distance of not less than 25 feet, measured from the nearest portion of any fill stem.

(Prior code § 129.1-101)

15-24-1120 Static electricity protection.

Static electricity protection shall be provided for flammable liquid transfer. Protection shall consist of metallic bonding cables between vehicle and filling stem. Drag chain shall not meet this requirement.

(Prior code § 129.1-102)

15-24-1130 Drivers or attendants.

The driver, operator or attendant of any tank vehicle shall not leave the vehicle while it is being filled or discharged. Smoking by truck drivers, helpers or attendants shall not be permitted while driving such vehicles, while filling or discharging any tank or compartment or while making any repairs to such vehicles. Motors of tank trucks shall be shut down during making and breaking of hose connections. If loading or unloading is done without the use of a power pump on the truck, the truck motor shall be shut down throughout such operations. No tank or compartment shall be loaded to a volume in excess of 99 and one- fourth percent of its capacity.

(Prior code § 129.1-103)

15-24-1140 Inspections.

It shall be the duty of the owner of every vehicle used for the transportation of flammable liquids to cause such vehicle, including any tank mounted on such vehicle's frame or chassis, to be inspected. The vehicle shall be inspected semiannually before January 1st and July 1st of each year, and the vehicle's tank or tanks shall be inspected annually, for the purpose of ascertaining whether such vehicle and its tank or tanks are in the safe condition and repair as required under this chapter. The owner of such vehicle shall file with the fire commissioner on January 1st and July 1st of each year in the case of trucks, and on July 1st of each year in the case of tanks, a report in writing by an agency approved by the fire commissioner certifying that such vehicle and tanks have been inspected and found to be in compliance with all of the structural and safety requirements provided for in this chapter. It shall be unlawful for any person to operate any such vehicle for which a report has not been filed for any current annual or semiannual period. Whenever any vehicle used to transport flammable liquids is involved in an accident, the owner thereof shall cause such vehicle to be reinspected following such accident.

(Prior code § 129.1-104; Amend Coun. J. 5-18-16, p. 24131, § 147)

15-24-1150 Travel over subway routes prohibited.

It shall be unlawful for any person to transport flammable liquids on any public way within the city under which is constructed any subway used exclusively for local passenger transportation purposes. Such public ways shall include but not be limited to the following:

S. and N. State Street from E. 13th Street to E. and W. Division Street.

W. Division Street from N. State Street to N. Clybourn Avenue.

N. Clybourn Avenue from W. Division Street to W. Willow Street.

S. and N. Dearborn Street from W. Harrison Street to W. Lake Street.

W. Lake Street from N. Dearborn Street to N. Milwaukee Avenue.

N. Milwaukee Avenue from W. Canal Street to W. Division Street.

Ida B. Wells Drive from S. Dearborn Street to S. Des Plaines Street.

N. Tilden Street from W. Canal Street to W. Des Plaines Street.

N. Milwaukee Avenue from N. Albany Street to N. Kimball Avenue.

N. Kimball Avenue from W. Diversey Avenue to W. School Street.

Provided, however, that nothing herein contained shall prevent the operator of any authorized motor vehicle used for the transportation of flammable liquids from crossing any such public way at an intersection or from making deliveries in any block, in which case such person shall approach and leave the place of delivery by means of the nearest intersecting street.

(Prior code § 129.1-105; Amend Coun. J. 11-20-19, p. 9510, Art. I, § 11)

15-24-1160 Restrictions on transportation of Class I liquids.

For purposes of the transportation of Class I flammable liquids by tank vehicles from primary sources of supply, such as refineries, waterway terminals or pipeline terminals, to any wholesale bulk plant or user bulk storage destination within the City of Chicago, route or routes for such transportation are hereby established as follows:

Archer Avenue between State Street and west city limits;

Ashland Avenue between 95th Street and Peterson Avenue;

Brainard Avenue between south city limits and 130th Street;

Burley Avenue between 87th Street and 83rd Street;

Cermak Road between State Street and west city limits;

Chicago Skyway between east city limits and Dan Ryan Expressway;

Cicero Avenue between 87th Street and north city limits;

Columbus Avenue between Western Avenue and south city limits;

Cottage Grove Avenue between 75th Street and 35th Street;

Ewing Avenue between Indianapolis Blvd. and 92nd Street;

Grand Avenue between Ogden Avenue and west city limits;

Halsted Street between 127th Street and 95th Street;

Harlem Avenue between Howard Street and 65th Street;

Indiana Avenue between 130th Street and 127th Street;

Indianapolis Blvd. between 106th Street and Ewing Avenue;

Irving Park Road between Ashland Avenue and west city limits;

Mackinaw Avenue between 92nd Street and 87th Street;

North Avenue between Ogden Avenue and west city limits;

Ogden Avenue between North Avenue and west city limits;

Pershing Road between Cottage Grove and Archer Avenue;

Peterson Avenue between Ashland Avenue and Cicero Avenue;

Roosevelt Road between Ashland Avenue and west city limits;

South Chicago Avenue between 95th Street and Cottage Grove Avenue;

Stony Island Avenue between 103rd Street and 95th Street and between South Chicago Avenue and 75th Street;

Torrence Avenue between 106th Street and 103rd Street;

Western Avenue between 95th Street and north city limits;

59th Street between Ashland Avenue and Western Avenue;

75th Street between Stony Island Avenue and Cottage Grove Avenue;

79th Street between Ashland Avenue and west city limits;

87th Street between east city limits and west city limits;

95th Street between east city limits and west city limits;

103rd Street between Torrence Avenue and Halsted Street;

106th Street between east city limits and Torrence Avenue;

127th Street between Indiana Avenue and Halsted Street;

130th Street between Brainard Avenue and Indiana Avenue;

Certain words and phrases used in this ordinance are defined as follows:

(a) “Wholesale bulk plant” means an establishment to which Class I flammable liquids are transported by rail tank cars or motor tank vehicles primarily for storage and for distribution by tank vehicle.

(b) “User bulk storage” means the storage of Class I flammable liquids in any storage tank having a capacity in excess of 6,000 gallons, primarily for consumption, packaging or processing or for servicing of aircraft.

(Prior code § 129.1-106)

15-24-1170 Use of expressways.

The following additional routes may be used, in addition to those outlined in Section 15-24-1160:

Calumet Expressway between the Dan Ryan Expressway and south city limits;

Dan Ryan Expressway between 31st Street and south city limits;

Dwight D. Eisenhower Expressway between Ashland Avenue and west city limits;

John F. Kennedy Expressway between north city limits and Ogden Avenue;

Stevenson Expressway between Ashland Avenue and west city limits;

If the expressways are closed for repairs, or if truck traffic is banned for some other reason, then the following streets are acceptable alternatives:

State Street between 95th Street and Cermak Road;

Milwaukee Avenue between north city limits and Elston Avenue and Elston Avenue between Milwaukee Avenue and Ashland Avenue.

(Prior code § 129.1-106.1)

15-24-1180 Applicability.

On and after the 1st day of January, 1952, it shall be unlawful, except as otherwise provided in Section 15-24-1190, to transport Class I flammable liquids by tank vehicle from any primary source of supply to any wholesale bulk plant or user bulk storage within or beyond the City of Chicago on or over any public street, avenue, public way or public place in the city which is not designated in this ordinance as a route or part of a route for such transportation.

(Prior code § 129.1-107)

15-24-1190 Exceptions.

(1) Nothing in Sections 15-24-1160 or 15-24-1180 shall be interpreted to prohibit the following:

(a) The operation of any tank vehicle upon any officially designated detour from any established flammable liquids route which has been closed to motor vehicle traffic;

(b) The delivery of such liquids by tank vehicle from primary supply sources to any wholesale bulk plant or user bulk storage which does not abut on an established route; provided, that in making any such excepted delivery the tank vehicle shall proceed on an established route and shall depart therefrom from an intersecting street which is nearest the destination to which such delivery is to be made and upon completion of such delivery shall return to the nearest established route; provided, however, that nothing contained in Sections 15-24-1160 to 15-24-1210, inclusive, shall authorize the operation of any tank vehicle upon any street, avenue or public place from which such vehicle is barred by any other ordinance of the City of Chicago or any governmental authority.

(2) In the event and during the time that any established route or part thereof or any highway outside the city connecting with an established route shall be rendered impassable or unsafe for the transportation of Class I flammable liquids by act of God or by reason of any accident, emergency or occurrence, any tank vehicle which would normally operate over such route may be operated over any other established route which will enable such vehicle most expeditiously to reach its destination, or such tank vehicle may be detoured around the impassable or unsafe portion of said route or highway by the shortest way available on streets, avenues or public ways upon which motor truck traffic is permissible.

(Prior code § 129.1-108)

15-24-1200 Exceptions.

Nothing in Sections 15-24-1160 to 15-24-1190, inclusive, shall apply to the transportation of such liquids to any retail service station or to the transportation of such liquids to any user or person not having bulk storage facilities except that tank vehicles while in such service shall so far as is possible without traveling additional mileage proceed to and from points of origin and delivery on or over the routes established by Section 15-24-1160.

(Prior code § 129.1-109)

15-24-1210 Manifests.

(1) The driver of every tank vehicle en route from any primary source of supply to any wholesale bulk plant or user bulk storage shall carry a manifest stating the point of origin and the destination of the trip which it is then making, the name of the consignor and of the consignee and the kind and quantity of the liquid carried and at any time upon demand of any police officer or authorized representative of the City of Chicago exhibit such manifest.

(2) The driver of any tank vehicle not subject to routing at any time upon demand of any police officer or authorized representative of the fire department of the City of Chicago shall bring such vehicle to a stop and shall give to such officer or such representative such information as may reasonably be required under the provisions of this ordinance as to the type of liquid being transported in such tank vehicle, the origin and the destination of the trip in which such tank vehicle is then engaged.

(Prior code § 129.1-110)

15-24-1220 Retroactivity.

The provisions of Sections 15-24-010 to 15-24-980, both inclusive, shall apply to all flammable liquid installations hereafter installed in any existing buildings including preordinance buildings and buildings hereafter constructed and shall also to any flammable liquid installation installed prior to the passage of this ordinance which was not installed in accordance with approved plans and permits.

(Prior code § 129.1-111)

ARTICLE XI. UNDERGROUND STORAGETANK VIOLATIONS. (15-24-1230 et seq.)

15-24-1230 Underground tank storage.

Any person who installs, maintains, repairs, removes or abandons in place any underground storage tank in violation of any section of Title 41, Chapter I, Part 170, Subparts B and D, Part 171 and Part 172 of the Illinois Administrative Code as amended from time to time or any administrative order issued under Section 2 of the Gasoline Storage Act, 430 ILCS 15/2, shall be considered to have violated this section. The fire department shall have the authority to: (1) enforce the above-cited provisions which are incorporated herein by reference; (2) obtain any and all applicable relief, including injunctions, court costs and fees; and (3) exercise such powers and perform such functions as may be delegated to the City by the Office of the State Fire Marshal pursuant to Section 2 of the Gasoline Storage Act, 430 ILCS 15/2. Any person found in violation of these provisions or any administrative order issued under Section 2 of the Gasoline Storage Act, 430 ILCS 15/2, shall be fined in an amount equal to the fine specified for the violation in the Gasoline Storage Act (430 ILCS 15) for each violation, and any such violation shall constitute a public nuisance. Each and every violation of any Section of Title 41, Chapter I, Part 170, Subpart B, Part 171 and Part 172 of the Illinois Administrative Code or any administrative order issued under Section 2 of the Gasoline Storage Act, 430 ILCS 15/2, shall constitute a separate and distinct violation. Each day on which such violation exists shall constitute a separate and distinct offense.

(Added Coun. J. 11-17-93, p. 43012; Amend Coun. J. 4-11-07, p. 102582, § 2; Amend Coun. J. 11-8-12, p. 38872, § 236)

CHAPTER 15-26

FUME AND FLAMMABLE COMPRESSED GASES

ARTICLE I. GENERAL (15-26-010 et seq.)

15-26-010 Licenses, permits and special exit requirements.

For licensing provisions and permit requirements, see Chapter 15-4. For special exit requirements, see Chapter 13-112.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-020 Definitions.

For purposes of this chapter, the following definitions apply.

Fume or Flammable Compressed Gas Building, Rooms and Gases.

(a) "Fume or flammable compressed gas building" means a building, or part of a building, designed, intended or used for the purpose of manufacturing, compressing or storing any fume hazard gas or any flammable compressed gas, either at a pressure of more than 15 pounds per square inch or in a quantity of more than 2,500 cubic feet.

(b) "Fume or flammable compressed gas room" means a room designed, intended or used for any of the purposes described under subsection (a) of this section and which is located in a building other than a fume or flammable compressed gas building.

(c) "Fume hazard gases" means ammonia gas, chlorine gas, phosgene gas, sulphur dioxide gas, chlororipicrin gas, cyanogen gas, hydrogen cyanide gas, nitrogen peroxide gas and other gas which has an equal or greater danger to life; and any other gas which, as determined by the committee on standards and tests, is in fact a poisonous irritant or corrosive gas and is not susceptible to fire or explosion, shall each be defined as a fume hazard gas.

(d) Flammable compressed gases, acetylene gas, ammonia gas, ether gas, ethyl chloride gas, ethylene gas, liquefied hydrocarbon gases, liquefied petroleum gases, hydrogen gas, illuminating gas, methyl chloride gas and any other gas which is a poisonous, irritant or corrosive gas and is also a gas susceptible to explosion under any condition or is not a poisonous, irritant or corrosive gas but is a gas susceptible to burning under any condition shall each be defined as a flammable compressed gas.

Fume or Flammable Compressed Gas. No sprinkler system shall be required for any fume or flammable compressed gas building of Type IA, IB or IC construction, nor for any room intended for the storage and use of chlorine gas for no purpose other than the operation of a water purification plant or refrigerating unit, nor for any unit of noncombustible construction used exclusively for the production of

manufactured gas.

The following definitions shall apply to sections regulating liquefied petroleum gas only:

1. “Containers” means all vessels, such as tanks, cylinders or drums used for transportation or storing of liquefied petroleum gas.

2. “Capacity of container” means the amount of liquefied petroleum gas that a container will hold. For Interstate Commerce Commission or Department of Transportation approved containers, this is expressed in pounds of liquefied petroleum gas. For American Society of Mechanical Engineers approved containers, this is expressed in gallons of water capacity.

3. “Liquefied petroleum gas” means and includes any material which is composed predominately of any of the following hydrocarbons, or mixtures of them: propane, propylene, butane (normal butane or isobutane) and butylenes.

4. “Excess flow valve” means a valve intended to prevent a flow rate greater than the maximum preset flow rate.

5. “Filling density” means the ratio of the weight of gas in a container to the weight of water the container will hold at 60 degrees Fahrenheit expressed as a percentage.

6. “Safety relief valve” means a valve intended to open upon buildup of excess pressure in the container.

7. “Vaporizer” means a device intended to change liquefied petroleum gas from a liquid state to a gaseous state.

8. “Used” or “in use” means connected to a system for use.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-030 Manufactured gas buildings – Exempted from chapter requirements – When.

Any building used exclusively for the production, distribution or storage of manufactured gas as a public utility shall be exempt from the requirements of this part of this chapter dealing with construction except the provisions of Section 15-24-170 for tanks for flammable liquids; provided, however, that such buildings shall be constructed, as provided in Section 13-104-020, entirely of noncombustible materials, with interior framing member either with or without fireproof covering.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-040 Public utility company rules.

Every system of gas supplied by a public utility company shall be installed and maintained in accordance with the rules of that public utility company.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-050 Acetylene lighting prohibited.

No system of artificial lighting and no lamp, torch or other device for illumination which employs acetylene shall be installed in any new or existing building.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-060 Portable acetylene lamps and stoves.

It shall be unlawful to use portable self-generating acetylene lamps or stoves inside of any completed building in the city.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

ARTICLE II. BUILDINGS AND ROOMS (15-26-070 et seq.)

15-26-070 Construction requirements – Gasholders.

General. Every fume or flammable compressed gas building shall be without any basement, except such a basement as is permitted for a hazardous chemical storage building.

Fume Hazard Gases. Type IA, IB, IC, II, IIIA, IIIB or IIIC construction shall be used for any building in which any fume hazard gas is manufactured, compressed or stored; provided, however, that a building may be of any type of construction permissible respectively for an industrial unit or a storage unit under the provisions of this Code, where any gas is permitted to be stored or used on the premises. Every such building of Type IIIA, IIIB or IIIC construction should be not more than one story above grade in height and shall have no mezzanine unless such building is equipped throughout with a standard system of automatic sprinklers.

Flammable Compressed Gases. Type IA, IB or IC construction shall be used for any building in which any flammable compressed gas is manufactured, compressed or stored; provided, however, that a building may be of any type of construction permissible respectively for an industrial unit or a storage unit under Chapter 13-48, where any such gas is permitted to be stored or used on the premises.

Refrigerating Systems. Any mechanical refrigerating system built in accordance with the provisions of Chapter 13-192 shall be exempt from the provisions of this section.

Natural and/or Manufacturing Gas Holders. It shall be unlawful to take out of service any gas holders containing flammable compressed gases, or to make any connections thereto within the city without first notifying the building commissioner 24 hours in advance, and without first emptying and purging such gas holders of all explosive gases, and without first making a physical disconnection of all connecting piping, taking out sections thereof to make such disconnections. Before making such repairs, the contents

of the gas holders shall be tested and the analysis of the mixture of air or inert gases therein shall be recorded and reported to the building commissioner. Every such gas holder or tank containing more than 2,500 cubic feet of gas shall be inspected at least once every five years by a recognized authority employed by the owner and approved by the building commissioner, and a report of all such inspections showing the condition of said gas holder or tank, together with a statement of necessary repairs and the further statement that such repairs have been made and that said gas holder or tank is in a good and safe condition with an expectancy that this condition will endure for the succeeding term of five years, shall be submitted to the building commissioner. A noncorrosive metal tag containing the date of every such inspection and approval shall be attached to each such gas holder following every such inspection. The provisions of this paragraph shall not apply to cylinders or containers meeting the requirements of the Interstate Commerce Commission regulations for interstate shipments.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-080 Fire-resistive separation.

(a) *General.* Every fume or flammable compressed gas room in a building of Type IA, IB or IC construction shall have an enclosure of two-hour fire- resistive construction, except as otherwise provided under this section. Every such room in a building of other than Type IA, IB or IC construction shall be enclosed by not less than one-hour fire-resistive construction; provided, however, that the requirements of subsections (b) and (c) of this section shall prevail where inconsistent with this subsection.

(b) *Water-Purifying Equipment.* No corrosive, explosive, flammable, irritant, poisonous, toxic or other noxious gas in a quantity exceeding ten pounds, whether in a container, cylinder, piping or other water-purifying equipment, shall be permitted in any assembly unit. All containers, cylinders, piping or other equipment containing more than ten pounds of such gases named in this section in any other building, shall be located within a room or space having a four-hour fire-resistive enclosure. Any such room shall have no opening except to an open court, private alley, public way or other open space not less than 100 feet in area. Nothing in the provisions of this section shall be construed as prohibiting the location of such equipment in the same room with a furnace, boiler or other heat-producing unit or incinerator, if such room is made to comply with the provisions of this section.

(c) *Cooling and Refrigerating Equipment.* Any room or space used for cooling or refrigerating equipment shall conform to the requirements of Chapter 13-192 for refrigerating systems.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-090 Flammable compressed gas – Restrictions.

No person shall manufacture or compress any fume or flammable compressed gas, as defined in Section 15-26-020, nor store more than 2,500 cubic feet of any such gas in any building other than a fume or flammable compressed gas building constructed in accordance with this Code.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-100 Safety clearances.

Every building hereafter designed, erected, altered or converted for the purpose of manufacturing or storing for resale any fume or flammable compressed gas in a quantity exceeding 2,500 cubic feet during any 24-hour period shall be freestanding and isolated by a safety clearance of not less than 250 feet. Every building hereafter designed, erected, altered or converted for the purpose of manufacturing, compressing or storing acetylene gas at a pressure of more than 15 pounds per square inch shall be freestanding and isolated by a safety clearance of not less than 250 feet.

Any building or group of buildings used for the purpose of the production, distribution or storage of any fume or flammable compressed gas shall be exempt from the provisions of the preceding paragraph with respect to any other building or structure within the same group and used for similar purposes. Any public utility engaged in the production, distribution or storage of illuminating gas shall also be exempt from the provisions of the preceding paragraph, except as prohibited or otherwise regulated in other provisions of this Code. Nothing in this section shall be construed as prohibiting the storage for use on the premises of acetylene gas in cylinders in a quantity of 2,500 cubic feet or less or the generation of any such gas for use on the premises in a quantity of 2,500 cubic feet or less at a pressure of 15 pounds or less per square inch, or the use of any number of cylinders of any such gas which is in actual use or attached ready for use in any industrial process. Any mechanical refrigerating system built in accordance with Chapter 13-192 shall be exempt from the provisions of this section.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-110 Floor area limits.

Fume or Flammable Compressed Gas Buildings. Every fume or flammable compressed gas building shall have a floor area limited by the provisions of Chapter 13-48 for industrial units.

Fume or Flammable Compressed Gas Rooms. No fume or flammable compressed gas room shall have a floor area of more than 600 square feet; provided, however, that this requirement shall not apply to a room used for no purpose other than the operation of a water purification plant or refrigerating unit. Two sides, or two ends, or one side and one end of every fume or flammable compressed gas room shall be enclosed by an outside wall. Not more than two fume or flammable compressed gas rooms shall be permitted in any building; provided, however, that in a building equipped throughout with a standard system of automatic sprinklers not more than six such rooms shall be permitted.

Manufactured Gas Building. Any building used exclusively for the production, distribution or storage of manufactured gas as public utility shall be exempt from the provisions of this section.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-120 Ventilation.

Every fume or flammable compressed gas room shall have means of natural ventilation as required under Section15-28-260 for material heating rooms. The combined area of ventilating openings with closures arranged to open automatically in case of explosion or fire shall be not less than five percent of the total wall area.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-130 Sign requirements.

Every fume or flammable compressed gas building and every fume or flammable compressed gas room shall have the words "DANGER – POISONOUS GAS" where any fume hazard gas occurs, or the words "DANGER – FLAMMABLE GAS" where any flammable compressed gas occurs, painted in a conspicuous position on the outside of every entrance thereto; provided, however, that no such sign shall be required for any building or room in which not more than two standard cylinders of such gas are present at any time. No-smoking signs shall also be provided wherever flammable compressed gas is stored.

Such wording shall be in plainly legible bright red letters on a white background with letters not less than six inches high and with the principal strokes thereof not less than three-fourths inch in width.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-140 Fume hazard gases – Storage and handling.

The storage or handling of fume hazard gases shall comply with the following requirements:

(1) Containers having a pressure of 15 psi or less or a quantity less than 2,500 feet may be stored in suitably ventilated cabinets located outside of the main building, adequately protected from extreme heat and accumulations of snow and ice; if within a building they shall be in rooms complying with the preceding sections. No combustible material shall be allowed in such rooms or within ten feet of an outside cabinet. Quantities in excess of the above limits shall not be allowed in any building other than a fume hazard building complying with the requirements of this chapter.

(2) Signs having a white field with red letters four inches high and having a stroke of one-half inch shall be conspicuously posted. Such signs shall read "TOXIC GAS – HANDLE WITH CARE".

(3) Defective containers which permit leakage or spillage shall be disposed of or repaired in an approved manner. No spilled materials shall be allowed to accumulate on floors or shelves.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-150 Tank storage.

Tanks which contain more than 55 gallons of fume hazard and/or flammable compressed gases shall be located outside of any building or buried below ground level. When above ground, said tank or tanks containing liquids shall be diked. Each dike shall have a capacity of not less than one and one-half times the combined capacity of the tank or tanks it surrounds. Dike construction shall be as specified in Section 15-24-170 of this Code; provided, however, the materials of the dike walls shall be inert with respect to the materials contained within the tank or tanks.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-160 Emergency controls.

The provisions of this section shall apply to all existing as well as newly installed tanks. All tanks, piping and fittings shall be compatible with the materials to be stored or handled. Outlets and inlets of all aboveground tanks shall have a shutoff valve as close as possible to the tank, with no branches or outlets between the tank and valve. All inlet pipes shall have an additional check valve as close as possible to the tank valve. In addition to any other valves, when the stored material is reactive with air or water there shall be a valve at each pipeline connection to any tank below the liquid level, which valve shall be effective inside the tank shell or head and can be operated manually to prevent the flow of liquid from the tank even though the pipelines are broken from the tank. All remote reach rods to valves shall be of substantial construction and shall be accessibly located and clearly marked "Emergency Shut-Off Valve". There shall be an effective flexible connection between that tank valve and piping system or the piping shall be so arranged with swing joints to prevent stress and strain between the piping system and tank. Where the exterior piping and sides of the tank are not inert to the material being stored, the piping, piping supports and tank shall be made inert by coating or some other means to one and one-half times the height of the dike.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-170 Tank and tank cars – Safety clearances.

Tanks or tank cars of fume hazard and/or flammable compressed gases of any capacity shall not be located within one-eighth mile from any school, institutional unit, multiple dwelling or place of public assembly.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-180 Neutralizing agents.

Whenever a fume hazard gas and/or flammable compressed gas can be chemically changed to a less dangerous and more stable

material, a qualified chemist of the manufacturer shall state in writing the safest and quickest method of changing the total capacity of the tank or tanks in case of a rupture, spillage or other emergency. The owner and/or operator of said tank or tanks shall keep sufficient quantities of the changing agent as hereinbefore determined so as to be readily available in the event of an emergency.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-190 Emergency equipment.

The name and address of the manufacturer or the nearest producer of the specific fume hazard and/or flammable compressed gas being used and a placard outlining emergency first aid directions shall be posted and remain posted in a conspicuous place at the points of unloading and use and in at least one other approved location.

Oxygen-generating or self-contained air or oxygen masks having a United States Bureau of Mines or National Institute for Occupational Safety and Health approval for a minimum of one-half-hour protection shall be maintained in a readily accessible location outside the areas of probable contamination and sufficient for all personnel associated with the operation.

Additional air or oxygen containers which will provide for a minimum of one-hour use of each mask shall be kept at the location of each gas mask. All personnel that may be required to use gas masks must be required at reasonable intervals to practice their application and use. Gas masks must be kept in condition, ready for immediate use at all times with fully charged containers.

An approved repair kit with all the necessary tools, appurtenances and material required to repair a leak or replace a defective valve or other part shall be kept in a location accessible to the tank and outside the probable area of contamination.

Protective clothing suitable for use with the materials stored shall be provided and be kept in good condition where its use will provide effective protection against the fume hazard gas.

Gas masks, repair kit and duplicate wrenches shall be kept in a conspicuous location and shall be conspicuously labeled for immediate identification.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

ARTICLE III. TRANSPORTATION (15-26-200 et seq.)

15-26-200 Trucks on public ways.

Vehicles carrying fume hazard or flammable compressed gases shall comply with Sections 15-24-1150 to 15-24-1210, inclusive. Wherever the phrase flammable liquids is used, it shall mean fume hazard and flammable compressed gases, and wherever the phrase truck, tank truck, semi-tank truck, or tank vehicle is used, it shall mean vehicles on which fume hazard and flammable compressed gases are transported. The truck shall meet applicable Department of Transportation and/or Interstate Commerce Commission regulations and all requirements of the Municipal Code of the City of Chicago.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-210 Tank cars – Special safety clearances.

No installation for the use or storage of liquefied fume hazard gases in single-unit tank cars shall be located within one-eighth mile from a school, church, institutional building, theater, multiple dwelling or place of public assembly.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-220 Tank cars – Unloading procedures.

Tank cars shall comply in all respects with Interstate Commerce Commission or Department of Transportation specifications. They shall be received and unloaded only on a private track of the consumer or on a leased track, protected as hereinafter provided.

The unloading track and unloading area for a distance of 50 feet in all directions from tank cars shall be maintained free of all combustible rubbish and vegetation at all times.

Portions of switch tracks on which such tank cars are placed for unloading shall be devoted solely to this purpose during the unloading period and, wherever possible, shall be a stub or dead-end track.

No more than two tank cars shall be on any licensed premises at one time, namely: the car in use and a replacement for the car in use when it is emptied. The second car shall be subject to all requirements for the first car as herein defined.

Immediately upon spotting a tank car on a siding for unloading, brakes shall be set and wheels shall be blocked to prevent any unauthorized movement thereof.

Unloading connections shall be securely attached before discharge valves are opened and immediately disconnected when unloading is completed.

If normal unloading operations are interrupted and it is necessary to discontinue unloading a tank car for any reason, all unloading connections shall be disconnected. All valves shall first be tightly closed, and the closures of all other openings securely applied.

The unloading lines shall be completely emptied of liquid when unloading is discontinued.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-230 Danger signs.

Caution signs which comply with the following regulations of the Interstate Commerce Commission or Department of Transportation regulations shall be provided and used.

Caution signs must be so placed on the track or car as to give necessary warning to persons approaching car from open end or ends of siding and must be left up until after car is unloaded and disconnected from discharge connection. Signs must be of metal, at least 12 by 15 inches in size and bear the words “STOP – TANK CAR CONNECTED” or “STOP – MEN AT WORK” and the word “STOP” being in letters at least four inches high and the other words in letters at least two inches high. The letters must be white on a blue background.

Such signs shall show the name of the specific fume hazard gas in the tank car.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-240 Dead-end sidings – Safety measures.

When tank cars are located on a dead-end siding, they shall be protected from any oncoming car by a locked switch which shall positively prevent collision with the tank car. If on an open siding, tank cars shall be protected by locked switches at both ends. Locked switches shall be located not less than 15 feet from either or both ends of tank cars. Keys for switches shall be available only to persons having certificates of fitness.

If unloading operations are carried on at night, an approved vaporproof red electric light shall be installed at the location of each locked switch and shall be kept lighted at all times when the tank car is connected to the unloading line.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-250 Tank cars – Building safety clearances.

Minimum tank car safety clearances from adjacent buildings or structures shall be in accordance with the following table:

Nature of Building Construction	*Min. Distance With Fender Wall*	*Min. Distance Without Fender Wall*
External walls of fire-resistive construction – no openings	15'	25'
External walls of fire-resistive construction – with openings	25'	50'
External walls not of fire-resistive construction	50'	75'

“Minimum distance” refers to distance between centerline of track and exterior face of building wall.

“No openings” means no windows, doors or other openings in wall opposite car for a distance equal to the length of the car plus 15 feet on both ends and for a height of 25 feet above tank car rail elevation.

“Fender wall” refers to a freestanding wall five feet longer at each end than the length and five feet higher than the greatest height of the tank cars to be used and shall be interposed between the tank car track and such building. The wall shall be of four-hour fire-resistive construction and shall have a fender or return wall at each end of the same height and thickness and extending at least three feet on the tank car side of such fender wall. It shall be located parallel to the siding and its centerline shall be not less than eight feet and not more than fifteen feet from the centerline of the track.

The minimum tank car safety clearances shall be construed to require a space open its entire area to the sky and shall apply to property dividing lines or adjacent property which may be built upon, to adjoining and adjacent public ways, and to any main line of a steam, electric or elevated railway or any other railway right-of-way.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-260 Switch engines and car pullers.

If the licensee does not have a private switch engine available at all times to withdraw the tank cars in event of impeding damage to the car, he may be required to install an approved car puller which can be used to pull the car to a position of safety.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-270 Tank cars – Piping systems.

Tank cars shall be unloaded through piping systems which comply with the following requirements:

Extra-heavy wrought steel pipe (ASTM Schedule 80) shall be used for all liquefied gas lines and no such pipe shall be larger than one and one-half inches nominal diameter. All joints shall be welded whenever possible. If flanges are required, they shall be of the 300-pound forged steel ammonia-type properly welded to the pipe with a continuous bead. Gaskets shall be of a material chemically resistant to the fluid in the line and suitable for the pressures and temperatures involved. Fittings shall be forged steel socket welding- type designed for temperatures and pressures to be encountered. Valves shall be of a type specifically designed and manufactured for the particular liquefied gas involved and shall be for a 300-pound minimum operating pressure. One valve shall be placed in the line near the car in an accessible position, and one valve shall be installed immediately before the line enters the building in which such gas is to be

used. In addition, one valve shall be provided for each 200 feet of line, one and one-half inches in diameter or smaller. Where piping is exposed to variations in temperature, provisions shall be made for expansion of the piping and for the liquid in the line. One or more expansion loops shall be installed to provide for expansion of the pipe. The number of loops to be provided shall be calculated on the length of the line and extremes of temperature to which the line will be exposed. Adequate anchors shall be provided so that expansion will be in the directions desired. To provide for liquid expansion, one or more expansion chambers shall be installed depending on the length of line. The expansion chamber shall be in accordance with ASME standards for pressure vessels of a size approximately equal to a 150-pound gas cylinder. One such chamber shall be provided for each 500 feet of line of one and one-half inch pipe size or smaller. The expansion chambers shall be inverted over the line and enclosed in an insulated box maintained at a temperature in excess of the critical temperature of the gas involved, at the operating pressure used. The unloading line shall be connected to the car by a semiflexible gooseneck or helical pipe connection that is flanged at one or both ends for connecting and disconnecting. Flexible connections shall be adequately supported and protected against damage.

Overhead lines shall be supported on steel, concrete columns or other noncombustible structures in a manner to conform with the code for pressure piping as approved by the American Society of Mechanical Engineers and American National Standards Institute. All horizontal lines and supporting structures shall have a minimum clearance of 23 feet over all roadways, over railroad rights-of-way and in other locations where they may be endangered by moving objects. In all other locations the minimum clearance between horizontal lines and supporting structures and the ground shall be 15 feet unless such lines are adequately protected from damage by a building of fire-resistive construction. All vertical and inclined risers at tank cars and at all other points where horizontal lines change from one elevation to another shall be protected by running them against the web of a wide flange beam weighing not less than 30 pounds per foot. In every case the web of the beam shall be between the pipe and the direction from which it might be struck. Such protective beams shall be supported and anchored so as to afford complete protection against damage to the pipeline.

Underground lines shall be installed in an approved reinforced concrete trench, drained and with removable covers. In lieu of the concrete trench, where not feasible or desirable, the steel conductor pipe shall be protected in the ground by a pipe having pressure-tight joints, acting as a continuous sleeve, fabricated of a material which will not be deteriorated unduly by any chemicals in the soil in which it is located. The conductor pipe and sleeve shall be installed sufficiently deep in the ground to protect against damage from loading on the surface of the ground. The pipe sleeve shall be sealed to the conductor pipe at its ends outside of the ground either by welding the sleeve to the conductor pipe or by a pressure-tight lead-caulked joint.

A pressure gauge shall be provided which will indicate pressure inside the sleeve in event of a leak in the conductor pipe. A compressed air pressure connection shall also be provided by which the sleeve can be tested for tightness. The vertical pipe from the flexible connection at the tank car to the ground shall be protected against damage by a steel beam as previously described.

Welding procedures shall be qualified under the regulations of the latest edition of the American National Standard Code for Pressure Piping, ANSI B-31.1, and shall meet the approval of the fire commissioner. Certificates of each welder's qualifications shall be presented before any work is started.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 5-18-16, p. 24131, § 148)

15-26-280 Warning signs and painting.

All exposed piping containing liquefied fume hazard gas located within or outside of a building shall be painted in accordance with ANSI Standard A-13, “Scheme for Identification of Piping Systems”, Class D. The liquid in such piping shall be designated by clear and legible lettering on the pipe, or, if the pipes are too small for legible lettering, by placards securely hung on the pipe. Labeling or placards shall be sufficiently frequent to make identification simple and easy, at all valves, and in each room within a building. Support columns for outdoor piping shall have ample identifying signs warning that piping carries a specific liquefied fume hazard gas and must not be bumped or damaged.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-290 Fire prevention requirements.

Adequate approved electric lighting shall be provided in all areas where unloading, connecting, disconnecting and valving operations are to be performed or where fume hazard gases are used or stored.

Tank cars shall be protected from undue heat or open flame. Installation of equipment shall be made to prevent pressure build-up in tank cars beyond normal safe tolerance, in accordance with Recommendations of the Manufacturing Chemist's Association.

Processing equipment shall be located at such an elevation that pressure in excess of tank car pressure shall not be necessary to force the liquid into the equipment.

Pressure in tank cars shall not be increased by introduction of any gas under pressure or by any other means.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-300 Safety measures.

The name and address of the manufacturer or the nearest producer of the specific gas being used and a placard outlining emergency first aid directions shall be posted and remain posted in a conspicuous place at the points of unloading and use and in at least one other approved location.

Adequate oxygen-generating or self-contained air or oxygen masks having a United States Bureau of Mines or National Institute for Occupational Safety and Health approval for a minimum of one-half hour protection shall be maintained in a readily accessible location, outside the areas of probable contamination. Additional air or oxygen containers which will provide for a minimum of one hour use of each mask shall be kept at the location of each gas mask. All personnel that may be required to use gas masks must be required at

reasonable intervals to practice their application and use. Gas masks must be kept in condition, ready for immediate use at all times with fully charged containers.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-310 Repair equipment.

An approved repair kit with all the necessary tools, appurtenances and material required to repair a leak or replace a defective valve or other part shall be kept in a location accessible to the tank car and outside the probable area of contamination.

A duplicate set of wrenches necessary to connect and disconnect all loading and unloading connections shall be kept in a readily accessible location at all times.

Gas masks, repair kit and duplicate wrenches shall be kept in a conspicuous location and shall be conspicuously labeled for immediate identification.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-320 Approved – Defined.

The word “approved”, as used in Sections 15-26-220 to 15-26-310, shall mean tested and approved by a nationally recognized testing organization such as Underwriters Laboratories, Inc., American Gas Association or some other agency, acceptable to the fire commissioner.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 5-18-16, p. 24131, § 149)

ARTICLE IV. GENERATION OF ACETYLENE GAS (15-26-330 et seq.)

15-26-330 Exceptions to regulations.

The provisions of this chapter relating to the generation of acetylene gas shall not apply to portable generators used exclusively for lighting, to generators used in connection with vehicle lighting, or to plants devoted to the manufacture and compression of dissolved acetylene for sale purposes.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-340 Prohibited in buildings with sleeping accommodations.

No acetylene generator shall be permitted in a building having sleeping accommodations.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-350 Marking of generators.

Acetylene generators shall be plainly marked with the maximum rate in cubic feet of acetylene per hour for which they are designed, the amount of carbide necessary for a single charge, the manufacturer's name and address, and the name and number or the type of machine.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-360 Warning and instruction cards – Posting requirements.

Printed warning and instruction cards provided by the maker shall be posted in a conspicuous position near the acetylene generator so that the operator may consult them conveniently from time to time.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-370 Repairs – Lighting requirements.

Any necessary repairs to the generator system shall be made during daylight hours by natural light, or by the fixed lights in the generator room. The use of portable lights is strictly prohibited.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-380 Appliances – Maintenance and installation.

All blowtorches, regulators and other appliances shall be maintained in good condition at all times. No appliances shall be installed in any line which causes or allows the mixture of air or other oxygen carrier with acetylene, except directly at the torch or burner. The use of an expansion tank or tanks in any part of the system is prohibited.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-390 Housing of generators.

Stationary acetylene gas generators shall be installed in a suitable building which shall be constructed and maintained in accordance with the building provisions of this Code applicable to buildings housing such apparatus.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-400 Piping and relief valves.

The connections from generators to service pipes shall be made with right and left thread nipples or long thread nipples with locknuts or approved unions. Unions depending on gaskets to make tight are prohibited in pipe sizes under two and one-half inches. Piping shall be arranged so that any moisture will drain to the generator, drip pots or seals. Each generator shall be provided with a gas escape or relief pipe to take care of over- or after-generation. Such gas escape or relief pipes shall be of galvanized iron of the following sizes:

Size of Machine (pounds)	*Minimum Diameter of Pipe*
Up to 25 inclusive	3/4 inch
26 to 100 inclusive	1 1/4 inch
101 to 200 inclusive	1 1/4 inch
Over 200	1 1/2 inch

The relief pipe shall be made as short and as free from bends as practicable. However, if it is more than 50 feet in length or has more than four right-angle bends, a pipe of one size larger than that required by this table shall be used. It shall be substantially installed without traps and in such manner that any condensation will drain back to the generator or its component parts. It shall be carried to a suitable point outside the building and shall terminate in an approved hood or bend at least 12 feet above the ground and remote from windows or other openings into buildings, and shall be so constructed that it cannot be obstructed by rain, snow, ice, insects or birds.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-410 Water supply connections.

In cases where the generators are supplied with water from city mains or house pipes, and where dangerous pressures might be built up, no direct pipe connection with the generator shall be permitted. In such cases the supply pipe shall terminate some distance above the regularly provided opening for filling, so that water can be observed as it enters the generator.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-420 Drain connections.

Machines of carbide-feed type shall not be fitted with continuous drain connections leading to sewers, but shall discharge into suitable open receptacles which may have such connections.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-430 Gasometers.

Gasometers, if used, shall be of the liquid-sealed inverted bell type, of such design that a pressure in excess of 15 pounds cannot be obtained.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-440 Portable generator – Defined.

"Portable generator" means an acetylene generator of not more than 30 pounds carbide capacity, which has been approved for portable use by the Underwriters Laboratories and included in the "List of Inspected Gas, Oil and Miscellaneous Appliances" dated November, 1973, of low-pressure and medium pressure acetylene generators.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-450 Portable generator – Permit required.

Portable generators shall not be installed or used inside of buildings unless a permit for such use in said location shall first be secured from the fire commissioner. It shall be the duty of the fire commissioner to inspect the premises wherein such generator is to be used, before issuing such permit. The person applying for a permit shall pay the comptroller a fee of $3.00 for such inspection. Should the inspection show compliance with the provisions of this section, the fire commissioner shall issue a permit for such installation and use.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 11-16-11, p. 13798, Art. I, § 11; Amend Coun. J. 5-18-16, p. 24131, § 150)

15-26-460 Portable generator – Prohibited locations.

Portable generators shall not be used in rooms of total volume less than 35 times the nominal aggregate gas-generating capacity per hour of all such generators in the room. Portable generators shall not be used in any room containing flammable liquids or gases, or in which any dust-producing process is carried on, or in which any highly combustible or explosive materials are contained. Portable generators shall not be used in any poorly ventilated room.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-470 Fire prevention and safety procedures.

Before any cutting or welding process, the floor shall be swept clean and, if of wood, shall be sprinkled with water. The scene of such work shall be inspected 30 minutes after every cutting or welding operation and all smoldering sparks shall be extinguished.

Extra gas cylinders shall not be stored in the same room in which a portable generator is used.

Generators shall be cleaned and recharged and the air mixture shall be blown off outside of the building. Generators, when charged, shall not be moved by crane or derrick. When not in use they shall not be stored in any room in which open lights or fires are used unless free of carbide and thoroughly purged of gas.

Storage rooms for portable generators shall be thoroughly ventilated.

Cutting and welding operations shall not be carried on within ten feet of any combustible material other than the floor.

Generators shall not be placed where water will freeze. Salt or other corrosive chemicals shall not be used as a protection against freezing.

Not more than one cutting or welding flame shall be used with any portable generator unless permanently attached and piped as required under Section 15-26-480 for semiportable installations.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-480 Portable generators – Installation requirements.

Portable generators shall not be installed in a permanent or semipermanent location unless provided with vent and relief piping, equipped with approved interlocking devices, to the open air outside of buildings.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-490 Fire extinguishers.

One or more standard fire extinguishers shall be located in a readily accessible position not more than 50 feet from the scene of every gas cutting or welding operation.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-500 Tanks and containers – Cutting and welding restrictions.

Gas cutting or welding operations upon tanks or containers which have at any time contained flammable liquids or gases is prohibited unless such tanks or containers shall first be purged of gas and heat-treated in the open air outside of buildings.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-510 Calcium carbide – Storage.

Calcium carbide in quantities not to exceed 600 pounds may be stored, when contained in approved metal packages, inside of buildings used for other purposes; provided, that the place of storage be dry, waterproof and well ventilated; and provided, also, that all but one of the packages of each size of carbide shall be sealed and the seals shall not be broken so long as there is carbide in excess of one pound in any other unsealed package in the building.

Calcium carbide in excess of 600 pounds shall be stored in accordance with the building provisions of this Code.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-520 Disposal of calcium carbide residuum.

In any plant for the manufacture of acetylene gas, provisions shall be made for the disposal of the residuum of calcium carbide outside the building and without discharging into any drain or sewer.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-530 Liquefied acetylene prohibited.

The manufacture, transportation, storage, sale or use of liquefied acetylene is hereby prohibited within the corporate limits of the city.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

ARTICLE V. LIQUEFIED PETROLEUM GAS (15-26-540 et seq.)

15-26-540 Where prohibited.

Except as otherwise provided, the storage, handling, keeping or using of any liquefied petroleum gas for any purpose is not permitted in any building or structure containing in whole or in part the following occupancies, except as provided in Sections 15-26-545, 15-26-550 and 15-26-570 of this Code.

1. Institutional units as defined in Section 13-56-050;
2. Assembly units as defined in Section 13-56-070;
3. Open air assembly units as defined in Section 13-56-110 of this Code;
4. Multiple dwellings, except those designed or intended for an occupancy of less than 20 persons;
5. Business units as defined in Section 13-56-120;
6. Mercantile units as defined in Section 13-56-130, except 50 one-pound cylinders may be stocked for resale to the general public.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 1-9-08, p. 18935, § 1)

15-26-545 Use of liquefied petroleum gas in industrial forklift trucks solely at McCormick Place Complex.

The fire commissioner may authorize the use of liquefied petroleum gas-fueled industrial forklift trucks in connection with events at McCormick Place and its adjacent grounds ("McCormick Place Complex"), subject to the following:

(1) Storage of all full and spare liquefied petroleum gas ("L.P.G.") cylinders, whether empty, full or partially full, will occur only in secured, vented and placarded, open metal cages marked with 12-inch-high lettering marked "Flammable Gas". Such open metal cages shall be located in designated locations as mutually agreed to by the Metropolitan Pier and Exposition Authority ("M.P.E.A.") and the fire commissioner. Information related to these locations shall be forwarded to the fire commissioner prior to the delivery of any L.P.G. to the McCormick Place Complex.

(2) Subject to the approval of the M.P.E.A.'s Assistant Director of Fire Safety or his/her designee, each Official Service Contractor ("contractor") will appoint a Refueling Safety Officer ("R.S.O.") for each event where L.P.G. may be used in industrial forklift trucks. The R.S.O. will be responsible for overseeing all contractor personnel, including licensed fireguards, assigned to the changing, handling and storage of L.P.G. cylinders for the period from the initial installation to the final dismantling of the event. The loading and handling of all propane cylinders shall be performed by licensed fireguards, at least one fireguard being a trained professional firefighter or retired professionally trained firefighter. The R.S.O. will be in cellular telephone and radio contact at all times throughout this period with the M.P.E.A. Security Control Center.

(3) All full and spare L.P.G. cylinders shall be transported by a specially assigned transport vehicle marked with 12-inch-high lettering marked "Flammable Gas".

(4) Changing of L.P.G. cylinders shall only occur outside of McCormick Place Complex buildings and be performed by a licensed fireguard. Industrial forklift trucks which are disabled because all of the L.P.G. in their fuel cylinders has been exhausted shall be towed to the tank change area by an independent service provider engaged by the M.P.E.A.

(5) Changeover procedures shall include the process of engine idling until all L.P.G. is exhausted from the fuel system line while the cylinder is turned off. The ignition switch shall be in the "off" position prior to the removal of any L.P.G. cylinder.

(6) Immediately after a full cylinder of L.P.G. has been installed on an industrial forklift truck, a licensed fireguard shall inspect the fittings using an approved / listed leak detection solution and / or approved / listed leak detection meter. While on duty, the R.S.O. shall have in his / her possession at least one approved / listed L.P.G. leak detector.

(7) Subject to the fire commissioner's review and approval, the M.P.E.A. will develop written procedures for L.P.G. cylinder off-loading, handling, transportation, changing, inspecting and storage. The M.P.E.A. will not be responsible for the actual training of certified fireguards.

(8) The contractor will be responsible for training the certified fireguards in accordance with the M.P.E.A.'s written procedures. These procedures must be based upon National Fire Protection Association ("NFPA") Standards 58 and 505. Documentation shall be established and kept on file by the contractor and M.P.E.A. sufficient to show a fireguard's knowledge and understanding of said standards. This documentation shall be made available to the fire commissioner upon request.

(9) "Care and Use" precautions will include the observance of manufacturer specifications with regard to the affixing of L.P.G. cylinders to the industrial forklift trucks. These L.P.G. cylinders will be securely mounted to prevent jarring, slipping or rotating loose. If the fire commissioner, M.P.E.A., R.S.O., or any person operating an industrial forklift truck or changing a L.P.G. cylinder finds that any L.P.G.-fueled industrial forklift truck is unsafe, then such forklift truck will be taken out of service and towed to a designated location outside the building for repairs. Designated locations shall be mutually agreed to by the M.P.E.A. and the fire commissioner.

(10) Industrial forklift trucks utilizing L.P.G. will not be parked, stored or otherwise left unattended near any source of excessive heat, open flame, or other source of ignition or near any emergency exit, fire hose cabinet, fire extinguisher cabinet, open pit, underground entrance or elevator shaft. In addition, no industrial forklift trucks will be permitted to be used, parked or left unattended in areas occupied by the public.

(11) Upon the discovery of an abandoned industrial forklift truck inside of any building within the McCormick Place Complex, the M.P.E.A. will notify the contractor, R.S.O., or other responsible party. If such industrial forklift truck is not removed within one hour of notification, then the industrial forklift truck will be towed out of the building by an independent service provider engaged by the M.P.E.A.

(12) Smoking shall be permitted only in exterior designated smoking areas in accordance with restrictions imposed by this Code and by State law, and in no circumstances shall any such area fall within 300 feet of the active L.P.G. cylinder industrial forklift truck operator or storage areas.

(13) L.P.G.-powered industrial forklift trucks shall be stored in designated locations outside of buildings within the McCormick Place Complex. In no case shall industrial forklift trucks be left unattended in areas of excessive heat or near sources of ignition.

(14) Fire extinguishers containing appropriate dry chemical agent will be readily available at each L.P.G. cylinder changing location.

(15) The L.P.G.-powered industrial forklift trucks shall only be used for move in and take down of the events contemplated by this section.

(16) The contractor and its employees and agents will be responsible for strictly complying with these procedures and policies. The Contractor will discipline any person found to be in violation of these procedures and policies.

(17) The contractor will be responsible for all L.P.G.'s cylinders and industrial forklift trucks, whether they are in use or stored at the McCormick Place Complex. Any cylinder found to be leaking or otherwise damaged, as well as any other industrial forklift truck or other equipment found to be leaking any L.P.G. will be removed at once by the contractor.

(18) It will be the responsibility of the contractor to have a qualified person inspect each industrial forklift truck for any potential safety problems prior to arrival and when a L.P.G. cylinder is being changed pursuant to the above provisions of this section at the McCormick Place Complex. It shall be the duty of M.P.E.A. to maintain a written record of the above inspections and provide copies to the fire commissioner upon request.

(19) The Chicago Fire Department may conduct periodic, unscheduled inspections of the McCormick Place Complex to insure the proper use and handling of L.P.G. and approved L.P.G. containers.

(20) M.P.E.A. is hereby authorized pursuant to this section to employ L.P.G. and L.P.G. containers for the purpose of (i) heating such tents as may be temporarily constructed on the adjacent grounds and parking lots solely at the McCormick Place Complex and (ii) powering "insect control devices" for outdoor activities at the McCormick Place Complex. However, no such heated tents or insect control devices shall, be located beneath the cantilevered roofing system of any M.P.E.A.-owned building within the McCormick Place Complex, nor shall any L.P.G. cylinders be placed less than 10 feet from the exterior wall of any tent. Prior to the installation of any tent, M.P.E.A. must obtain, or cause to be obtained by the licensee of the show or event requiring the use of such tent, all necessary permits.

(21) Any substantial or repeated deviation from the above-enumerated safety guidelines, as so determined by the fire commissioner, shall constitute a violation of this section. Any person, owner, agent, employee, tenant, licensee, contractor or occupant of the McCormick Place Complex violating any of the provisions of this section shall be fined not less than $200.00 nor more than $500.00 for each offense. Each day that a violation continues shall constitute a separate and distinct offense.

(22) The fire commissioner shall coordinate meetings with the M.P.E.A.'s Assistant Director of Fire Safety or his or her designee, as may be required to insure compliance with these procedures and policies.

(Added Coun. J. 1-9-08, p. 18935, § 1; Amend Coun. J. 5-18-16, p. 24131, § 151)

15-26-547 Use of liquefied petroleum gas at Navy Pier.

Notwithstanding any other provision of this Code, the use of liquefied petroleum gas-fueled heating units in connection with venues and events is permitted on the exterior portions of Navy Pier, including any open air assembly units as defined in 13-56-110, if the use is in accordance with rules and regulations promulgated by the Fire Commissioner regulating the safety of such use at Navy Pier.

(Added Coun. J. 9-8-11, p. 7539, § 1)

15-26-550 Repair and renovation use – Restrictions.

Containers of liquefied petroleum gas may be used in multiple-dwelling units, business units and mercantile units in connection with repair and renovation operations only under the following conditions:

1. The maximum water capacity of individual containers shall be 50 pounds (20 pounds of liquefied petroleum gas);

2. The number of liquefied petroleum gas containers shall not exceed the number of workmen assigned to using the liquefied petroleum gas;

3. Containers of greater than two and one-half pounds water capacity shall not be left unattended in such buildings.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-560 Labels required.

All containers of liquefied petroleum gas shall have a label designed in accordance with Title 49, Section 173.402(d) of the DOT Hazardous Material Regulations and shall have printed thereon the name of the gas supplier and the telephone number for emergency service.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-570 Industrial truck use in mercantile units.

Liquefied petroleum fueled industrial trucks may be used in mercantile units only under the following conditions:

1. All spare full and empty cylinders shall be stored outside in accordance with the safety clearances outlined in Section 15-26-700 of this Code;

2. Changing or charging of cylinders on the industrial truck shall be conducted outside in the area where spare cylinders are stored;

3. The number of liquefied petroleum fueled industrial trucks shall not exceed the number of employees operating same.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-580 Aggregate storage limit in buildings.

The maximum aggregate amount allowed to be stored in any building shall be 300 pounds of liquefied petroleum gas unless stored in a flammable compressed gas building.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-590 Container storage limit in buildings.

The maximum capacity of any individual containers used inside a building shall not exceed 100 pounds of liquefied petroleum gas.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-600 Aggregate container system capacity in buildings.

In buildings, the maximum aggregate amount of cylinders hooked into a manifold shall not exceed 300 pounds of liquefied petroleum gas capacity. Manifold of cylinders shall be separated by a distance of 20 feet.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-610 Portable heaters.

Portable heaters, including salamanders, shall be equipped with an approved automatic device to shut off the flow of gas to the main burner, and pilot if used, in the event of flame extinguishment. Such heaters having inputs above 50,000 British thermal units per hour shall be equipped with either a pilot which must be lighted and proved before the main burner can be turned on or an electric ignition system. These provisions do not apply to tar kettle, burners, torches or melting pots. The heat flow from portable heaters shall not be directed toward any liquefied petroleum gas cylinder.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-620 Containers – Construction standards.

All containers for liquefied petroleum gas shall be constructed in accordance with the applicable provisions of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section VIII Unfired Pressure Vessels, 1973 Edition or the Interstate Commerce Commission or Department of Transportation regulations. Each container shall have markings as required by the code under which it is manufactured. All containers shall be protected from mechanical injury whenever used or stored.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-630 Containers – Valves and piping.

Valves, fittings and accessories connected directly to the container, including primary shutoff valves, shall have a rated working pressure of at least 250 pounds per square inch gauge and shall be of material and design suitable for liquefied petroleum gas service. Cast iron shall not be used. Vapor piping with operating pressures not exceeding 125 pounds per square inch gauge shall be designed for that pressure. Vapor piping over 125 pounds per square inch gauge shall have a working pressure of at least 250 pounds per square inch gauge. All valves, fittings, accessories and piping shall be protected from mechanical injury.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-640 Containers – Relief valves.

All liquefied petroleum gas containers shall be provided with a spring-loaded safety relief valve as required by National Fire Protection Association Pamphlet No. 58 entitled “Standard for the Storage and Handling of Liquefied Petroleum Gas”, 1973 Edition.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-650 Excess flow valves.

An excess flow valve shall be installed wherever required by National Fire Protection Association Pamphlet No. 58 entitled “Standard for the Storage and Handling of Liquefied Petroleum Gas”, 1973 Edition.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-660 Shutoff valves.

Whenever a liquefied petroleum gas line enters a building, it should be arranged such that the flow of gas can be shutoff from the outside of the building. A shutoff valve shall also be provided at or as a part of each device using liquefied petroleum gas as a fuel.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-670 Gauging devices.

A suitable gauging device shall be provided to determine the liquid level in each container.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-680 Gas hoses.

All hose used inside buildings as a part of a liquefied petroleum gas system shall be of a type tested and approved by a recognized testing laboratory and be so marked. The maximum length of hose used inside a building on a salamander shall not exceed 20 feet and a shutoff valve shall be provided just ahead of the hose connection. Connections shall be tight and be capable of withstanding five times the working pressure to which they are subject. All hose shall be protected from mechanical injuries.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-690 Vaporizers.

Vaporizers shall be indirect or direct fired and shall be constructed in accordance with the applicable provisions of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section VIII Unfired Pressure Vessels, 1973 Edition. They shall be marked to indicate the allowable working pressure and temperature.

If installed in a building, the building shall only be occupied as a vaporizer house. The heat-producing parts shall comply with Chapter 13-180. Suitable means shall be provided to prevent the flow of liquid into the vapor area of the system. The following safety clearances, as defined in Section 15-24-250, shall be maintained:

Exposure	*Minimum Distance (feet)*
Container	10
Container shutoff valves	15
Location where connections and disconnections are made or where LP gas is vented to the atmosphere in the course of transfer operations	20
Nearest building or group of buildings or line of adjoining property. If rate over 100 gallons per hour, increase distance to 50 feet	25

(Coun. J. 12-9-92, p. 25465)

15-26-700 Container storage – Safety clearances.

Whenever one or more containers of liquefied petroleum gas are installed for use outside, the following safety clearances, as shown in Table 15-26-700 and as defined in Section 15-24-250, shall be maintained:

Table 15-26-700

Minimum Distances in Feet

Water Capacity Per Container	*Between Container and Other Buildings on Same Property*		*Between Container and Building Occupied in Whole or in Part as Institutional Assembly or Open Air Assembly*		
	Underground	*Aboveground*	*Underground*	*Aboveground*	*Between Aboveground Containers*
Less than 125 gals. (See Note 1)	10 (See Notes 2 & 3)	None	100	100	None
125 gals. to 500 gals.	10	10	150	150	3
501 gals. to 1,000 gals.	25	25	150	150	3
1,001 gals. to 30,000 gals.	50	50	250	250	5
30,001 gals. to 70,000 gals.	75	75	250	250	5
Less than 125 gallons (See Note 1)	10	10	15	15	
125 – 501	15	15	25	25	
501 – 1,000	25	25	50	50	
1,001 – 2,000	50	50	50	50	
2,001 – 10,000	50	50	75	75	
10,001 – 15,000	50	50	100	100	
15,001 – 30,000	75	75	100	100	
30,001 – 70,000	100	100	150	150	

Note 1. If the number of 100 lb. LP gas capacity cylinders in a multicylinder installation at a consumer site is greater than eight, the minimum distance shall comply with the appropriate portion of this table, applying the aggregate capacity rather than the capacity per container. If more than one installation is made, each installation shall be separated from another installation by at least 25 feet. Do not apply the minimum distances between aboveground containers to such installation.

Note 2. The filling connection and the vent from the liquid level gauges in containers, filled at point of installation, shall be not less than ten feet in any direction from air openings into sealed combustion system appliances or mechanical ventilation air intakes.

Note 3. The discharge from safety relief devices shall be located not less than three feet horizontally away from any building opening which is below the level of such discharge.

Whenever containers are discharging into a common manifold, the aggregate water capacity shall be used in determining the safety clearances; except that, when not more than three containers, none of which have an individual water capacity greater than 1,000 gallons, are manifolded, the individual capacity of the largest container shall be used in determining the safety clearances. (See Table 15-26-700.)

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-710 Temporary container storage – Safety clearances.

Whenever cylinders of liquefied petroleum gas are stored outside awaiting use in connection with buildings classed as industrial or storage or construction-sites, the safety clearances as shown in Table 15-26-710, and as defined in Section 15-24-250, shall be maintained. (See Table 15-26-710.)

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616; Amend Coun. J. 4-15-15, p. 106130, § 13)

Table 15-26-710

Minimum Distances in Feet

Aggregate Capacity of Cylinder Groups	*Groups of Cylinders and Buildings on the Same Property*	*Between Cylinder Storage Groups*	*Between Groups of Cylinders and Adjoining Property*	*Groups of Cylinders and Buildings Occupied as Institutional, Assembly or Open Air Assembly*
2,500 lbs. or less	None See Note 1 and 2	10	10	100
2,501 to 6,000 lbs.	25	25	25	250
6,001 to 10,000 lbs.	50	50	50	250
Over 10,000 lbs.	75	75	75	250

Note 1. Storage must be ten feet away from door opening.

Note 2. The discharge from safety relief devices shall be located not less than three feet horizontally away from any building opening which is below the level of such discharge.

15-26-720 Underground storage tank installation.

Underground tanks for liquefied petroleum gas shall be installed in accordance with Section 3126 of National Fire Protection Association Pamphlet No. 58 entitled “Standard for the Storage and Handling of Liquefied Petroleum Gas”, 1973 Edition.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-730 Filling density and procedure.

The maximum amount of liquid used to fill the container shall be determined by the filling density as given in National Fire Protection Association Pamphlet No. 58 entitled “Standard for the Storage and Handling of Liquefied Petroleum Gas”, 1973 Edition. The actual filling operation shall be conducted outside and be located 25 feet from any structure.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-740 Tank cars – Unloading procedure.

Tank car unloading of liquefied petroleum gas shall comply with Sections 15-26-220 through 15-26-270 and 15-26-290 through 15-26-320 inclusive, with the following exceptions:

1. The piping system shall comply with Section 23 of National Fire Protection Association Pamphlet No. 58 entitled “Standard for the Storage and Handling of Liquefied Petroleum Gas”, 1973 Edition. The maximum pipe size used shall be four inches;

2. One shutoff valve shall be installed near the tank car and near the tank or building, and both shall be accessible;

3. A hydrostatic relief valve shall be provided in accordance with the requirements of Section 236 of National Fire Protection Association Pamphlet No. 58 entitled “Standard for the Storage and Handling of Liquefied Petroleum Gas”, 1973 Edition;

4. Lines for liquefied petroleum gas need not be installed in concrete trenches or steel conductor pipe;

5. Pressure in tank cars may be increased to allow transfer by use of a compressor or some other suitable means.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-750 Tank trucks.

Tank trucks transporting liquefied gas and their loading and unloading facilities shall comply with Sections 15-26-200 and 15-24-1000 to 15-24-1070 in addition to the following:

1. All valves and fittings shall be protected against damage due to collision;

2. Liquid discharge openings shall have a remote-controlled internal shutoff valve including thermal actuation unless the tank capacity is less than 3,500 gallons water capacity.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-760 Repair, alteration or modification of LP containers – Procedure.

It shall be unlawful to make any repair, alteration and/or modification to any pressurized part of any liquefied petroleum gas container without first emptying and purging such containers of all flammable gas and without first making a physical disconnection of all connecting piping, taking out sections thereof to make such disconnections. Before making such repairs, alterations and/or modifications, the contents of the container shall be tested and the analysis of the mixture of air or inert gases therein shall be recorded. After completion of the repairs, alterations and/or modifications, the department of steam boilers, unfired pressure vessels and cooling plants shall be notified to allow an inspection to be made prior to filling. At that time, written evidence shall be provided to show that all repairs, alterations and/or modifications comply with the code under which the container was originally built.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-770 Labeling of aerosol container.

Each product packaged in aerosol form shall be labeled in accordance with the federal statutes and regulations applicable to it, including the Federal Hazardous Substances Act, the Poison Packaging Act, the Federal Food, Drug and Cosmetic Act, the Federal Environmental Pesticide Control Act, the Consumer Product Safety Act, and the regulations issued thereunder as published in the Code of Federal Regulations as they may be hereafter amended.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-780 Aerosol can filling restrictions.

Aerosol can filling operations using a propellant classed as extremely flammable or flammable under Code of Federal Regulations, Title 21, Part 191, shall not be conducted.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-790 Aerosol can storage.

Aerosol containers stored for resale in a mercantile occupancy exceeding an aggregate amount equal to the amount on display for retail sales shall be separated from all other areas of the building except storage areas of the same occupancy by a wall having a standard fire resistance rating of one hour and shall have sprinkler protection; except that, if a building has an approved sprinkler system installed therein, these requirements will not apply.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

ARTICLE VI. MISCELLANEOUS (15-26-800 et seq.)

15-26-800 Chlorine gas.

The sale, storage, use or handling of chlorine gas is hereby prohibited within the limits of the city unless chlorine gas is stored in buildings constructed and maintained in accordance with the building provisions of this Code in containers constructed in compliance with the Interstate Commerce Commission rules and regulations.

No combustible material of any kind shall be placed or kept in any room or building used for the storage of chlorine gas.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-810 Storage of oxygen cylinders.

Cylinders of oxygen shall never be stored in the same room or compartment used for the storage of calcium carbide or cylinders containing fuel gases, or in an acetylene generator compartment. Cylinders of oxygen, except those in actual use, shall be stored away from highly flammable material, especially oil, grease or any substance likely to cause or accelerate fire. Cylinders of oxygen shall be stored in locations where they are not likely to be struck by passing or falling objects. Oxygen cylinders shall be protected against excessive rise of temperature. Cylinders may be stored in the open, but in such cases shall be protected against extremes of weather. During winter, cylinders stored in the open shall be protected against accumulations of ice or snow.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-820 Bulk oxygen storage systems.

Bulk oxygen storage systems shall be located aboveground out of doors or shall be installed in a building of Type IA, IB, IC or II construction, adequately vented, and used for that purpose only. The minimum clearances to buildings shall be 50 feet, and ten feet to streets or sidewalks. Where stored as a liquid, asphaltic or bituminous paving shall not be used within ten feet.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-830 Oxygen container construction standards.

Liquid oxygen storage containers shall be constructed according to the American Society of Mechanical Engineers Boiler and Pressure Vessel Code Section VIII, Unfired Pressure Vessels, 1973 Edition.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-840 Oxygen piping and fittings.

Piping, tubing and fittings shall be suitable for oxygen service and for the pressures and temperatures involved.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-850 Bulk oxygen systems – Supervision of installation.

Installation of bulk oxygen systems shall be supervised by personnel familiar with proper operating practices. All installations shall be field tested and proved gastight at maximum operating pressure.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

15-26-860 Bulk oxygen – Sign requirements.

The bulk oxygen storage location shall be permanently placarded to read:

Oxygen

No Smoking

No Open Flames

Lettering shall be in accordance with Section 15-26-130 of this Code.

(Coun. J. 12-9-92, p. 25465; Amend Coun. J. 2-7-96, p. 15616)

CHAPTER 15-28

HAZARDOUS MATERIALS AND COMBUSTIBLE SOLIDS

ARTICLE I. GENERAL (15-28-010 et seq.)

15-28-010 License and permits.

For licensing provisions and permit requirements, see Chapter 15-4. For special exit requirements, see Chapter 13-112.

(Prior code § 92-1)

15-28-020 Definitions.

As used in this chapter:

“Corrosive liquid” means a liquid such as hydrochloric acid, nitric acid, sulphuric acid, hydrofluoric acid or any other corrosive acid, or other corrosive liquids, which when in contact with living tissue, will immediately cause severe damage of such tissue by chemical action; or in case of leakage will materially damage or destroy other containers or hazardous commodities by chemical action and cause the release of their contents; or are liable to cause a fire when in contact with organic matter or with certain chemicals.

"Corrosive liquid storage building" means a building or part of a building, designed, intended or used for no purposes other than that of the storage of corrosive liquids.

"Hazardous chemical" means a chemical such as aluminum powder, calcium carbide, calcium phosphide, metallic potassium, metallic sodium, phosphorus, sodium peroxide or any other chemical or material which, as determined by the committee on standards and tests will in fact create an equally or more serious flame hazard or an equally or more serious explosion hazard, or an equally or more serious flame and explosion hazard when coming in contact with water or moisture or any solid substance other than one classified as an explosive which is liable to cause fires through friction, through spontaneous chemical changes or as a result of retained heat from manufacturing or processing.

"Hazardous chemical room" means a room designed, intended or used for the purposes of storing or using of hazardous chemicals.

"Hazardous chemical storage building" means a building, or part of a building, designed, intended or used for no purpose other than that of the storage of any hazardous chemical.

"Highly toxic materials" means materials so toxic to man as to afford an unusual hazard to life and health during firefighting operations. Such materials as parathion, TEEP (tetraethyl phosphate), HETP (hexaethyl tetra phosphate) and similar insecticides or pesticides. Any material classed as Poison "A" or Poison "B" by the Federal Department of Transportation shall be considered highly toxic by this Code.

"Oxidizing materials" means chlorates, permanganates, inorganic peroxides or nitrates, and other substances which readily yield free oxygen when heated.

"Potentially explosive chemicals" means any chemical substance, other than one defined as an explosive or blasting agent, which has a tendency to be unstable and which can be exploded by heat or shock or a combination thereof. Among others, potentially explosive chemicals shall include organic peroxides, nitromethane, ammonium nitrate and others which have an equal or greater potential explosive hazard.

"Radioactive materials" means any material or combination of materials that spontaneously emits ionizing radiation.

"Sealed source" means a quantity of radiation so enclosed as to prevent the escape of any radioactive materials but at the same time permitting radiation to come out for use.

"Smokehouse" means a building, or part of a building, designed, intended or used for no purpose other than that of smoking meats or fish.

"Smokeroom" means an enclosure designed, intended or used for the smoking of meats or fish, located within any building other than a smokehouse.

(Prior code § 92-2)

15-28-030 Definition by Department of Transportation.

Any material classed as a corrosive liquid or oxidizing material by the Federal Department of Transportation shall be considered as a corrosive liquid or oxidizing material by this Code.

(Prior code § 92-3)

ARTICLE II. HAZARDOUS CHEMICALS (15-28-040 et seq.)

15-28-040 Storage requirements.

No hazardous chemicals, as defined in Section 15-28-020, shall be used for any purpose in any room other than a hazardous chemical room constructed as required.

It shall be unlawful to store in any building more than ten pounds of metallic potassium, metallic sodium, phosphorous or sodium peroxide, or more than 20 pounds of aluminum powder or calcium phosphide, or more than 600 pounds of calcium carbide or more of any other such chemical or material than is determined by the fire commissioner to be a safe limit except in a hazardous chemical storage building or vault constructed as required in Chapter 15-28 of this Code. If stored in a vault, such chemicals shall be stored upon a platform or upon a shelf or shelves not less than one foot, six inches above the floor. No such chemical or material shall be stored or used in any building room or vault now existing or hereafter designed, erected, altered or converted, which is equipped with a sprinkler system or sprinkler heads.

(Prior code § 92-4; Amend Coun. J. 6-14-95, p. 2841; Amend Coun. J. 5-18-16, p. 24131, § 152)

15-28-050 Construction requirements.

Type IA, IB, IC, II, IIIA, IIIB or IIIC construction shall be used for any hazardous chemical storage building. Every such building of Type IIIA construction shall be not more than two stories in height. Every such building of Type IIIB or IIIC construction shall not be more than one story in height and shall have no mezzanine. Every such building of any type of construction shall be without any basement except a basement provided and used solely for the purpose of a heating plant for the building which shall be separated from every other part of the building by a fire wall and shall have no doorway, window or other opening between such space and any other part of the building. Every such building shall be so constructed as to be dry.

(Prior code § 92-5)

15-28-060 General safety clearances.

Every building hereafter designed, erected, altered or converted for the purpose of storing more of any hazardous chemical than the limited quantity provided for such chemical in Section 15-28-040 shall be isolated by a safety clearance of not less than 100 feet except as otherwise provided by this section.

Class IA, IB or IC Construction. Every such hazardous chemical building of Type IA, IB or IC construction shall be isolated from any other building on the same premises by a safety clearance of not less than ten feet; provided, however, that such safety clearance shall not be required for any such building having no openings within ten feet of any openings in any other wall or building on the same premises, or for any such building which is separated from any adjoining buildings by a fire wall without openings therein.

Types II, IIIA, IIIB or IIIC Construction. Every such hazardous chemical building of Type II, IIIA, IIIB or IIIC construction shall be isolated from any other building on the same premises by a safety clearance of not less than 20 feet; provided, however, that such safety clearance will not be required for any such building having no openings within ten feet of any openings in any other wall or building on the same premises or for any such building which is separated from any adjoining building by a fire wall without openings therein.

(Prior code § 92-6)

15-28-070 Floor area limit.

No hazardous chemical room or storage building shall have a floor area of more than 600 square feet.

(Prior code § 92-7)

15-28-080 Ventilation.

Every hazardous chemical room shall have means of natural ventilation or vent flues as required by Section 15-28-260 for material heating rooms; provided, however, that the combined area of ventilating openings which shall have closures arranged to open automatically in case of explosion or fire shall be not less than five percent of the total wall area of the room.

(Prior code § 92-8)

15-28-090 Sprinklers – Where prohibited.

No sprinkler system shall be permitted in any hazardous chemical room or in any hazardous chemical storage building, where the chemical has the ability to react with water to produce substances or violent chemical reactions which increase the hazard. When the presence of water will not add to the hazard, a standard sprinkler system shall be required in such hazardous chemical room or building as directed in Chapter 15-16 of this Code.

(Prior code § 92-9)

15-28-100 Danger signs.

Every hazardous chemical room and every hazardous chemical storage building shall have the words “Hazardous Chemical – Use No Water” painted in a conspicuous position on the outside of every entrance door thereto. Such wording shall be in plainly legible bright red letters on a white background with letters not less than six inches high and with the principal strokes thereof not less than three-fourths inch in width.

(Prior code § 92-10)

15-28-110 Special safety clearances.

No hazardous chemical storage building shall be located nearer than 100 feet to any building in which there is an institutional, assembly or open air assembly unit, except as otherwise provided.

(Prior code § 92-11)

15-28-120 Fire prevention requirements.

The storage and handling of hazardous chemicals shall comply with the following requirements:

(1) Quantities in excess of the limits specified in Section 15-28-040 or in excess of one day's supply shall be stored or used in rooms or buildings complying with the requirements herein. Whenever one day's supply exceeds the amount specified in Section 15-28-040, a notarized letter from the user stating the amount used in one day shall be filed with the fire commissioner. Upon any change in that amount, the fire commissioner shall be notified within 24 hours.

(2) All shelving used in connection with the storage of such hazardous chemicals shall be of substantial noncombustible construction.

(3) No other combustible material or flammable liquids shall be permitted in any such room.

(4) Defective containers which permit leakage or spillage shall be disposed of or repaired in an approved manner. No spilled materials shall be allowed to accumulate on floors or shelves.

(5) Signs having a white field with red letters four inches high and a one-half-inch stroke shall be conspicuously posted. Such sign shall read “Hazardous Chemicals – Keep Fire Away”.

(Prior code § 92-12; Amend Coun. J. 5-18-16, p. 24131, § 153)

15-28-130 Fire-resistive separation.

Every hazardous chemical room, other than a vault for the storage of a hazardous chemical shall be separated from all other parts of the

building by a four- hour fire separation, with no window or other opening, except a doorway or doorways between such vault and any other part of a building protected with a single Class A fire door installed in accordance with Chapter 15-12.

(Prior code § 92-13)

15-28-140 Standard fireproof vaults.

Every vault for the storage of hazardous chemicals shall be a dry, waterproof, standard fireproof vault. No such vault shall be located in any floor or building in which it is prohibited under Section 13-112-140.

(Prior code § 92-14; Amend Coun. J. 6-14-95, p. 2841)

15-28-150 Tank storage.

Tanks, which contain more than 55 gallons of hazardous chemicals, shall be located outside of any building or buried below ground level. When aboveground, said tank or tanks containing liquids, shall be diked. Each dike shall have a capacity of not less than one and one-half times the combined capacity of the tank or tanks it surrounds. Dike construction shall be as specified in Section 15-24-170 of this Code; provided, however, the material of the dike walls shall be inert with respect to the materials contained within the tank or tanks.

(Prior code § 92-14.1)

15-28-160 Tank construction material.

The provisions of this section shall apply to all existing as well as newly installed tanks. All tanks, piping and fittings shall be compatible with the material to be stored or handled. Outlets and inlets of all aboveground tanks shall have a shutoff valve as close as possible to the tank, with no branches or outlets between the tank and valve. All inlet pipes shall have an additional check valve as close as possible to the tank valve. In addition to any other valves when the material stored is reactive with air or water, there shall be a valve at each pipeline connection to any tank below the liquid level which valve shall be effective inside the tank shell or head and can be operated manually to prevent the flow of liquid from the tank even though the pipelines are broken from the tank. All remote reach rods to valves shall be of substantial construction and shall be accessibly located and clearly marked “Emergency Shutoff Valve”. There shall be an effective flexible connection between that tank valve and piping system or the piping shall be so arranged with swing joints to prevent stress and strain between the piping system and tank. Where the exterior piping and sides of the tank are not inert to the material being stored, the piping, piping supports and tank shall be made inert by coating or some other means to one and one-half times the height of the dike.

(Prior code § 92-14.2)

15-28-170 Safety clearances.

Tanks or tank cars of hazardous chemicals of any capacity shall not be located within one-eighth mile from any school, institutional unit, multiple dwelling or place of public assembly.

(Prior code § 92-14.3)

15-28-180 Emergency requirements.

Whenever a hazardous chemical can be chemically changed to a less dangerous and more stable material, a qualified chemist of the manufacturer shall state in writing the safest and quickest method of changing the total capacity of the tank or tanks in case of a rupture, spillage or other emergency. The owner and/or operator of said tank or tanks shall keep sufficient quantities of the changing agent as hereinbefore determined so as to be readily available in the event of an emergency.

(Prior code § 92-14.4)

15-28-190 Breathing apparatus required.

The name and address of the manufacturer or the nearest producer of the specific hazardous material being used and a placard outlining emergency first aid directions shall be posted and remain posted in a conspicuous place at the points of unloading and use and in at least one other approved location.

Oxygen-generating or self-contained air or oxygen masks having a United States Bureau of Mines or National Institute of Occupational Safety and Health approval for a minimum of one-half hour protection shall be maintained in a readily accessible location, outside the areas of probable contamination and sufficient for all personnel associated with the operation.

Additional air or oxygen containers which will provide for a minimum of one hour use of each mask shall be kept at the location of each gas mask. All personnel that may be required to use gas masks must be required at reasonable intervals to practice their application and use. Gas masks must be kept in condition, ready for immediate use at all times with fully charged containers.

An approved repair kit with all the necessary tools, appurtenances and material required to repair a leak or replace a defective valve or other part, shall be kept in a location accessible to the tank car and outside the probable area of contamination.

Protective clothing suitable for use with the materials stored shall be provided and kept in good condition where its use will provide effective protection against the hazardous material.

Gas masks, repair kit and duplicate wrenches shall be kept in a conspicuous location and shall be conspicuously labeled for immediate identification.

(Prior code § 92-14.5)

ARTICLE III. OXIDIZING MATERIALS (15-28-200 et seq.)

15-28-200 Storage requirements.

Oxidizing materials shall be stored, kept or handled in rooms or buildings complying with the requirements for hazardous chemicals, except as permitted in Section 15-28-220 and except that the area of such buildings shall comply with Sections 13-48-070 and 13-48-080 for industrial or storage occupancies in buildings permitted in Chapter 13-112. The maximum heights of such buildings shall be determined by Chapter 13-112. Such buildings and rooms shall be equipped with a standard system of automatic sprinklers. Ventilation of such rooms shall be in accordance with Section 15-28-080 of this Code.

(Prior code § 92-15)

15-28-210 Safety clearances.

No oxidizing material building shall be located nearer than 100 feet to any building in which there is an institutional, assembly or open air assembly unit, except as otherwise provided.

(Prior code § 92-16)

15-28-220 Fire prevention requirements.

The storage and handling of oxidizing materials other than that used for retail sales in original sealed containers, located in mercantile units as defined in Section 13-56-130, shall comply with the following requirements:

(1) Quantities in excess of one day's supply shall be stored in buildings or rooms conforming to the requirements for hazardous chemicals. The user shall notify the fire commissioner by notarized letter of the amount used in one day. Upon any change in that amount, the fire commissioner shall be notified within 24 hours.

(2) The use of oxidizing materials in buildings shall be limited to use in rooms complying with the requirements for hazardous chemical rooms.

(3) Oxidizing materials shall be stored in dry locations and shall be separated from organic materials by walls conforming to the requirements of hazardous chemicals rooms.

(4) Bulk oxidizing materials shall not be stored on or against wooden surfaces.

(5) Defective containers which permit leakage or spillage shall be disposed of or repaired in an approved manner. No spilled materials shall be allowed to accumulate on floors or shelves.

(6) Signs having a white field with red letters four inches high and having a one-half-inch stroke shall be conspicuously posted. Such signs shall read “Oxidizing Materials – Keep Fire Away”.

(7) Tanks, which contain more than 55 gallons of oxidizing materials, shall be located outside of any building or buried below ground level. When aboveground, said tank or tanks containing liquids, shall be diked. Each dike shall have a capacity of not less than one and one-half times the combined capacity of the tank or tanks it surrounds. Dike construction shall be as specified in Section 15-24-170 of this Code; provided, however, the material of the dike walls shall be inert with respect to the materials contained within the tank or tanks.

(8) The provisions of this section shall apply to all existing as well as newly installed tanks. All tanks, piping and fittings shall be compatible with the material to be stored or handled. Outlets and inlets of all aboveground tanks shall have a shutoff valve as close as possible to the tank, with no branches or outlets between the tank and valve. All inlet pipes shall have an additional check valve as close as possible to the tank valve. In addition to any other valves when the material stored is reactive with air or water, there shall be a valve at each pipeline connection to any tank below the liquid level which valve shall be effective inside the tank shell or head and can be operated manually to prevent the flow of liquid from the tank even though the pipelines are broken from the tank. All remote reach rods to valves shall be of substantial construction and shall be accessibly located and clearly marked “Emergency Shutoff Valve”. There shall be an effective flexible connection between that tank valve and piping system or the piping shall be so arranged with swing joints to prevent stress and strain between the piping system and tank. Where the exterior piping and sides of the tank are not inert to the material being stored, the piping supports and tank shall be made inert by coating or some other means to one and one-half times the height of the dike.

(9) Tanks or tank cars of oxidizing materials of any capacity shall not be located within one-eighth mile from any school, institutional unit, multiple dwelling or place of public assembly.

(10) Whenever an oxidizing material can be chemically changed to a less dangerous and more stable material, a qualified chemist of the manufacturer shall state in writing the safest and quickest method of changing the total capacity of the tank or tanks in case of a rupture, spillage or other emergency. The owner and/or operator of said tank or tanks shall keep sufficient quantities of the changing agent as hereinbefore determined so as to be readily available in the event of emergency.

(11) The name and address of the manufacturer or the nearest producer of the specific oxidizing material being used and a placard outlining emergency first aid directions shall be posted and remain posted in a conspicuous place at the points of unloading and use and in at least one other approved location.

Oxygen-generating or self-contained air or oxygen masks having a United States Bureau of Mines or National Institute of Occupational Safety and Health approval for a minimum of one-half hour protection shall be maintained in a readily accessible location, outside the areas of probable contamination and sufficient for all personnel associated with the operation.

Additional air or oxygen containers which will provide for a minimum of one-hour use of each mask shall be kept at the location of

each gas mask. All personnel that may be required to use gas masks must be required at reasonable intervals to practice their application and use. Gas masks must be kept in condition, ready for immediate use at all times with fully charged containers.

An approved repair kit with all the necessary tools, appurtenances and material required to repair a leak or replace a defective valve or other part, shall be kept in a location accessible to the tank car and outside the probable area of contamination.

Protective clothing suitable for use with the materials stored shall be provided and be kept in good condition where its use will provide effective protection against the oxidizing material.

Gas masks, repair kit and duplicate wrenches shall be kept in a conspicuous location and shall be conspicuously labeled for immediate identification.

(Prior code § 92-17; Amend Coun. J. 5-18-16, p. 24131, § 154)

ARTICLE IV. NITROMETHANE (15-28-230 et seq.)

15-28-230 Storage requirements.

Nitromethane shall be stored only in outside storage areas in original drums. Such areas shall be equipped with a deluge-type automatic sprinkler system as directed in Chapter 15-16 unless provided with the minimum safety clearances specified in Section 15-28-250. Nothing in this chapter shall be construed as prohibiting the storage of nitromethane in underground tanks, installed in underground tanks complying with the requirements of Section 15-24-280. Nothing in this section shall be construed as prohibiting the storage of nitromethane in aboveground tanks complying with the requirements of Section 15-24-170 with safety clearances complying with Section 15-28-250 as given below.

(Prior code § 92-18)

15-28-240 Storage prohibited in buildings.

The storage and handling of nitromethane shall comply with the following requirements:

(1) Nitromethane shall not be stored in any building. Such nitromethane shall be stored in outside storage areas complying with the requirements below.

(2) The amount of nitromethane brought into any building shall be limited to that required for immediate use.

(Prior code § 92-19)

15-28-250 Safety clearances.

Nitromethane. Outside drum storage areas, if not equipped with a deluge-type automatic sprinkler system, shall be located in the following minimum distances from any building, combustible storage in the open, flammable liquid storage, lot line or public way:

Weight (Pounds)	*Distance (Feet)*
2,000	100
2,001 – 10,000	200
10,001 – 20,000	300
20,001 – 40,000	400
40,001 – 80,000	500

In no case shall a safety clearance of less than 500 feet be provided to any lot line of any plot of ground on which is situated a school, institutional, assembly or open air assembly building.

It shall be permissible to store nitromethane in underground tanks meeting the requirements of Section 15-24-280 or in aboveground tanks meeting the requirements of Section 15-24-170 and barricaded in accordance with the requirements of Section 15-20-140. However, in no case shall a clearance of less than 500 feet be provided to any lot line of any plot of ground on which is situated a school, institutional, assembly or open air assembly building.

(Prior code § 92-20)

ARTICLE V. ASPHALT, TAR, PITCH, RESIN AND PARAFFIN (15-28-260 et seq.)

15-28-260 Ventilation.

Every asphalt, tar, pitch, resin or paraffin heating room, shall be provided with one or more window, skylights or other ventilating opening facing a public way, private alley, yard or other open space not less than 15 feet wide, with closures arranged to open for natural ventilation and having a combined area of not less than five percent of the total wall area of the room. The required combined area of openings which are arranged to open for ventilation shall be provided with sashes or dampers, or other closures, which shall be hung, overbalanced and held in place in such manner that an explosion or fire within the room will cause such sash, damper or closure to open for its full area; provided, however, that in lieu of such requirements it shall be permissible to provide a vent flue or flues extending directly to the outside air, which shall be used solely for the purposes of ventilating such room, which shall have a combined area of not less than five percent of the total wall area of the room, with an enclosure of the same fire-resistive value as is required for the enclosures

of the room, and equipped with a normally closed noncombustible trap door arranged to open automatically in case of explosion or fire within the room. No such window, skylight, ventilating opening or vent flue required by this section shall be nearer than four feet, six inches to any other building or structure on the same premises or to any interior lot line.

(Prior code § 92-21)

15-28-270 Direct heating prohibited.

It shall be unlawful to boil or heat pitch, asphalt, tar, resin, turpentine or paraffin where direct heat is used, unless in or on a fireproof building, or in an open space at least 15 feet distant from any building. This section shall not apply to portable kettles used for roofing, waterproofing and street paving.

(Prior code § 92-22)

15-28-280 Fire-resistive separation.

Every room hereafter designed, erected, altered or converted for the purpose of heating asphalt, tar, pitch or resin by means of direct heat shall have an enclosure of not less than two-hour fire-resistive construction. Every doorway in any such room shall have a sill of six inches in height. Every inside doorway connecting any such room with another such room shall be provided with a Class B fire door.

(Prior code § 92-23)

15-28-290 Floor area limit.

No asphalt, tar or resin room shall have a floor area greater than 1,200 square feet.

(Prior code § 92-24)

ARTICLE VI. AMMONIUM NITRATE (15-28-300 et seq.)

15-28-300 Storage requirements.

Quantities of ammonium nitrate or ammonium nitrate fertilizer, having no organic coating, in the form of crystals, flakes, grains or pills including fertilizer grade, dynamite grade, nitrous oxide grade and technical grade ammonium and ammonium nitrate phosphate (containing 60 percent or more ammonium nitrate by weight) or more than 50 tons total weight shall be stored only in Type IA, IB, IC buildings.

Type IIIA, IIIB and IIIC may be used if such building is equipped with a complete system of automatic sprinklers as directed in Chapter 15-16 this Code.

The maximum height and areas of such buildings shall be in accordance with Chapter 13-48 for moderate hazard storage buildings. Quantities in excess of 2,500 tons shall be stored only in buildings of Type IA, IB, IC or II construction and such buildings shall also have a complete installation of automatic sprinklers. All such buildings shall have ventilation in accordance with the requirements of Section 15-28-260. The floor of such buildings shall be constructed of noncombustible materials having fire-resistive rating required for that type building.

There shall be no connections to the city sewer system nor shall there be allowed any drain, trap, basement pit into which any molten ammonium nitrate could flow and be confined in the event of a fire. The storage of ammonium nitrate, coated or mixed with organic anticaking materials except blasting agents permitted in Chapter 15-20, shall not be permitted.

(Prior code § 92-25)

15-28-310 Arrangement of storage.

The storage and handling of ammonium nitrate shall comply with the following requirements:

(1) Each storage pile of bags or other authorized packages and containers of such materials shall not exceed 15 feet in height, 20 feet in width and 50 feet in length. Such pile units shall be separated by a clear space of not less than 36 inches in width from the base to the top of the piles, serving as cross aisles. At least one service or main aisle in the storage area shall be not less than four feet in width. A clearance of not less than 30 inches shall be maintained from building walls and partitions and of not less than 36 inches from ceilings or roof structural members with a minimum of 18 inches from sprinkler deflectors.

(2) Ammonium nitrate storage areas shall be separated by a space of 30 feet or by a tight noncombustible partition having a fire-resistive rating of not less than one hour, from the storage of organic chemicals, corrosive liquids, compressed gases, flammable liquids and combustible materials or other contaminating substances such as sulphur, coal, flour and metallic power such as zinc, copper and magnesium where storage of such materials is permitted with ammonium nitrate.

(3) The storage of ammonium nitrate, coated or mixed with organic anticaking materials except blasting agents permitted in Chapter 15-20 shall not be permitted in the city.

(Prior code § 92-26)

15-28-320 Fire prevention requirements.

No vehicles shall be used or stored inside a building used for ammonium nitrate storage. Regular removal of all trash and debris shall be followed. Electric light bulbs shall have guards to protect against mechanical injury.

(Prior code § 92-27)

15-28-330 Open flames prohibited.

No open flames, no open flame lights or smoking shall be permitted inside a building used to store ammonium nitrate.

(Prior code § 92-28)

ARTICLE VII. ORGANIC PEROXIDES (15-28-340 et seq.)

15-28-340 Storage requirements.

Organic peroxides in excess of 50 pounds shall be stored in a separate building with walls constructed of materials having a fire-resistive rating of not less than two hours. The floor of such building shall be noncombustible. The roof of such building shall be insulated and constructed of lightweight noncombustible materials and be so installed so as to be freerising in the event of an explosion. Such building shall be one story and without basement. Ventilation shall conform to the requirements of Section 15-28-080. Each such building shall be equipped with a deluge-type automatic sprinkler system. The maximum amount of organic peroxides allowed in any one building shall be 5,000 pounds.

(Prior code § 92-29)

15-28-350 Fire prevention requirements.

The storage and handling of organic peroxides shall comply with the following provisions:

(1) Quantities in excess of ten pounds and less than 50 pounds shall be stored only in a separate room having a fire-resistive rating of not less than two hours. No other material shall be permitted in such rooms or buildings. Only one such storage room shall be permitted in any building.

(2) Provide means to prevent the exposures of organic materials to the direct rays of the sun. There shall be no source of heat in any storage room.

(3) The storage of organic peroxides shall be permitted only in the original I.C.C. regulated containers. Such materials shall not be repackaged in odd containers or other containers. The containers shall be plainly labeled to avoid misuse of the materials. Such labels shall properly identify, at all times, the trade name, the chemical composition and the net weight or volume of the material in the container. Care should be taken to completely empty the containers. The empty containers shall be immediately removed from the building and properly disposed.

(4) Containers of organic peroxide shall not be opened in the storage area. A special room or the outside area shall be designated for this purpose.

(5) No secondary or loose storage of organic peroxides shall be permitted in the manufacturing area. The organic peroxides brought into such areas shall be limited to that required for immediate use.

(6) When liquid organic peroxides are shipped in containers equipped with specially vented caps, no other type of cap shall be used.

(7) Organic peroxides shall be kept away from all sources of ignition.

(8) All processing equipment shall be properly grounded in conformity with Title 14E. Conductive and spark-resistant floors shall be provided in all manufacturing areas where organic peroxides are used. Conductive safety shoes shall be worn by all operating personnel. All scoops used for weighing the material shall be made of nonsparking materials.

(9) Containers of organic peroxides shall be provided with covers or kept closed.

(10) “NO SMOKING” signs conforming to Section 15-4-940 shall be posted in conspicuous places throughout the storage and manufacturing areas.

(11) Organic peroxides shall not be subjected to any frictional or grinding operation.

(12) Uncontaminated contents of broken or cracked bags, packages or other containers shall be transferred to new and clean containers before storing. Other spilled materials and discarded containers shall be promptly gathered up and destroyed in a safe and proper manner.

(13) Only wiring complying with the requirements of Title 14E shall be permitted. All electric lights shall be protected with suitable guards.

(14) Explosives or blasting agents shall not be permitted in the same building in which organic peroxides are stored or used.

(15) Appropriate warning signs shall be prominently displayed in all buildings where organic peroxides are stored or used. Such signs shall have a white field with red letters four inches high with a one- half-inch stroke and shall read “DANGER – HANDLE WITH CARE”.

(16) Internal combustion motor vehicles or lift trucks shall not be parked or stored in the room where such chemicals are stored or used.

(17) Extreme care shall be taken to avoid rough handling or contamination of organic peroxides.

(Prior code § 92-30; Amend Coun. J. 9-6-17, p. 55278, Art. II, § 60)

ARTICLE VIII. POTENTIALLY EXPLOSIVE CHEMICALS (15-28-360 et seq.)

15-28-360 Safety clearances.

Potentially explosive chemicals buildings or outside storage areas shall have a safety clearance to any building, combustible storage in the open, flammable liquid storage, lot line or public way. Such safety clearances shall be as follows:

Organic peroxides:

Weight (Pounds)	*Distance (Feet)*
50 – 100	35
101 – 500	50
501 – 1,000	65
1,001 – 3,000	100
3,001 – 5,000	150

In no case shall a safety clearance of less than 500 feet be provided to any lot line of any plot of ground on which is situated a school, hospital or other institutional building, assembly or open air assembly building.

(Prior code § 92-31)

15-28-370 Transportation.

Vehicles carrying potentially explosive chemicals shall comply with Sections 15-24-1150 to 15-24-1210 inclusive. Wherever the phrase flammable liquids is used, it shall mean potentially explosive chemicals and wherever the phrase truck, tank truck, semitank truck, or tank vehicle is used, it shall mean vehicles on which potentially explosive chemicals are transported. The truck shall meet applicable Department of Transportation and/or Interstate Commerce Commission regulations and all requirements of the Municipal Code of the City of Chicago.

(Prior code § 92-31.1)

ARTICLE IX. HIGHLY TOXIC MATERIALS (15-28-380 et seq.)

15-28-380 Storage and fire prevention requirements.

The storage and handling of highly toxic materials other than those used for retail sales in original, sealed containers, shall comply with the requirements for fume hazard gases, flammable liquids or hazardous chemicals, depending upon the nature of the material and shall also comply with the following requirements:

(1) Warning signs shall be conspicuously placed at all entrances to areas where such materials are stored or used. Such signs shall have a white field with red letters at least four inches high and shall have at least a one-half-inch stroke, such signs shall read “HIGHLY TOXIC MATERIALS – HANDLE WITH CARE”.

(2) Quantities in excess of one day's supply shall be stored, kept or handled in buildings or rooms conforming to the requirements for fume hazard gases, hazardous chemical or flammable liquids. The user shall notify the fire commissioner by notarized letter of the amount used in one day. Upon any change in that amount, the fire commissioner shall be notified within 24 hours.

(3) There shall be no other flammable liquids, hazardous chemical or other combustible material stored or handled in the same room in which highly toxic materials are stored or handled.

(4) Defective containers which permit leakage or spillage shall be disposed of or repaired in an approved manner. No spilled materials shall be allowed to accumulate on floors or shelves.

(5) Any room required by this section shall be without any drain connected to a house sewer, public sewer or sewage treatment plant.

(6) Tanks, which contain more than 55 gallons of highly toxic materials, shall be located outside of any building or buried below ground level. When aboveground, said tank or tanks containing liquids, shall be diked. Each dike shall have a capacity of not less than one and one-half times the combined capacity of the tank or tanks it surrounds. Dike construction shall be as specified in Section 15-24-170 of this Code; provided, however, the material of the dike walls shall be inert with respect to the materials contained within the tank or tanks.

(7) The provisions of this section shall apply to all existing as well as newly installed tanks. All tanks, piping and fittings shall be compatible with the material to be stored or handled. Outlets and inlets of all aboveground tanks shall have a shutoff valve as close as possible to the tank, with no branches or outlets between the tank and valve. All inlet pipes shall have an additional check valve as close as possible to the tank valve. In addition to any other valves, when the material stored is reactive with air or water, there shall be a valve at each pipeline connection to any tank below the liquid level which valve shall be effective inside the tank shell or head and can be operated manually to prevent the flow of liquid from the tank even though the pipelines are broken from the tank. All remote reach rods to valves shall be of substantial construction and shall be accessibly located and clearly marked “Emergency Shutoff Valve”. There shall be an effective flexible connection between that tank valve and piping system or the piping shall be so arranged with swing joints to prevent stress and strain between the piping system and tank. Where the exterior piping and sides of the tank are not inert to the material being stored, the piping, piping supports and tank shall be made inert by coating or some other means to one and one-half times the height of the dike.

(8) Tanks or tank cars of highly toxic materials of any capacity shall not be located within one-eighth mile from any school, institutional unit, multiple dwelling or place of public assembly.

(9) Whenever a highly toxic material can be chemically changed to a less dangerous and more stable material, a qualified chemist of the manufacturer shall state in writing the safest and quickest method of changing the total capacity of the tank or tanks in case of a rupture, spillage or other emergency. The owner and/or operator of said tank or tanks shall keep sufficient quantities of the changing agent as hereinbefore determined so as to be readily available in the event of an emergency.

(10) The name and address of the manufacturer or the nearest producer of the specific highly toxic material being used and a placard outlining emergency first aid directions shall be posted and remain posted in a conspicuous place at the points of unloading and use and in at least one other approved location.

Oxygen-generating or self-contained air or oxygen masks having a United States Bureau of Mines or National Institute of Occupational Safety and Health approval for a minimum of one-half hour protection shall be maintained in a readily accessible location, outside the areas of probable contamination and sufficient for all personnel associated with the operation.

Additional air or oxygen containers which will provide for a minimum of one-hour use of each mask shall be kept at the location of each gas mask. All personnel that may be required to use gas masks must be required at reasonable intervals to practice their application and use. Gas masks must be kept in condition, ready for immediate use at all times with fully charged containers.

An approved repair kit with all the necessary tools, appurtenances and material required to repair a leak or replace a defective valve or other part, shall be kept in a location accessible to the tank car and outside the probable area of contamination.

Protective clothing suitable for use with the materials stored shall be provided and be kept in good condition where its use will provide effective protection against the highly toxic material.

Gas masks, repair kit and duplicate wrenches shall be kept in a conspicuous location and shall be conspicuously labeled for immediate identification.

(Prior code § 92-32; Amend Coun. J. 5-18-16, p. 24131, § 155)

ARTICLE X. CORROSIVE LIQUIDS (15-28-390 et seq.)

15-28-390 Storage requirements.

No corrosive liquids shall be stored in any building other than a corrosive liquids storage building constructed as required below, except as otherwise provided by this section.

It shall be permissible to store corrosive liquids in one or more standard fireproof vaults in any building other than a corrosive liquids storage building.

(Prior code § 92-33)

15-28-400 Construction required.

Every corrosive liquid storage building shall be of Type IA, IB or IC construction and shall be without any basement, except a basement provided and used for purposes other than that of the storage of corrosive liquid.

(Prior code § 92-34)

15-28-410 Safety clearances.

No corrosive liquid storage building shall be located nearer than 100 feet to any building in which there is an institutional, assembly or open air assembly unit, except as otherwise provided.

(Prior code § 92-35)

15-28-420 Fire prevention requirements.

No person shall keep corrosive liquids in excess of one day's supply except in a separate suitable room or building. The user shall notify the fire commissioner by notarized letter of the amount used in one day. Upon any change in that amount, the fire commissioner shall be notified within 24 hours. Such room or building shall comply with the requirements of standard fireproof vault for flammable liquids. Defective containers which permit leakage or spillage shall be disposed of or repaired in an approved manner. No spilled materials shall be allowed to accumulate on floor or shelves.

(Prior code § 92-36; Amend Coun. J. 5-18-16, p. 24131, § 156)

15-28-430 Standard fireproof vault.

Corrosive Liquids. Whenever a standard fireproof vault is used for the storage of corrosive liquids, there shall be a sill at every doorway thereto, constructed of noncombustible materials and six inches high above the level of the floor of the vault. All floor drains in a vault used for storing or keeping corrosive liquids shall have no connections with the drainage system of the building, but shall be arranged to drain to a location outside of the building remote from all connections or drains to the sewer system.

(Prior code § 92-37)

15-28-440 Tank storage.

Tanks, which contain more than 55 gallons of corrosive liquids, shall be located outside of any building or buried below ground level. When aboveground, said tank or tanks containing liquids, shall be diked. Each dike shall have a capacity of not less than one and one-half times the combined capacity of the tank or tanks it surrounds. Dike construction shall be as specified in Section 15-24-170 of this Code; provided, however, the materials of the dike walls shall be inert with respect to the materials contained within the tank or tanks.

(Prior code § 92-37.1)

15-28-450 Tank construction materials.

The provisions of this section shall apply to all existing as well as newly installed tanks. All tanks, piping and fittings shall be compatible with the material to be stored or handled. Outlets and inlets of all aboveground tanks shall have a shutoff valve as close as possible to the tank, with no branches or outlets between the tank and valve. All inlet pipes shall have an additional check valve as close as possible to the tank valve. In addition to any other valves when the material stored is reactive with air or water there shall be a valve at each pipeline connection to any tank below the liquid level which valves shall be effective inside the tank shell or head and can be operated manually to prevent the flow of liquid from the tank even though the pipelines are broken from the tank. All remote reach rods to valves shall be of substantial construction and shall be accessibly located and clearly marked “Emergency Shutoff Valve”. There shall be an effective flexible connection between that tank valve and piping system or the piping shall be so arranged with swing joints to prevent stress and strain between the piping system and tank. Where the exterior piping and sides of the tank are not inert to the material being stored, the piping, piping supports and tank shall be made inert by coating or some other means to one and one-half times the height of the dike.

(Prior code § 92-37.2)

15-28-460 Safety clearances.

Tanks or tank cars of corrosive liquids of any capacity shall not be located within one-eighth mile from any school, institutional unit, multiple dwelling or place of public assembly.

(Prior code § 92-37.3)

15-28-470 Emergency requirements.

Whenever a corrosive liquid can be chemically changed to a less dangerous and more stable material, a qualified chemist of the manufacturer shall state in writing the safest and quickest method of changing the total capacity of the tank or tanks in case of a rupture, spillage or other emergency. The owner and/or operator of said tank or tanks shall keep sufficient quantities of the changing agent as hereinbefore determined so as to be readily available in the event of an emergency.

(Prior code § 92-37.4)

15-28-480 Breathing apparatus required.

The name and address of the manufacturer or the nearest producer of the specific corrosive liquid being used and a placard outlining emergency first aid directions shall be posted and remain posted in a conspicuous place at the points of unloading and use and in at least one other approved location.

Oxygen-generating or self-contained air or oxygen masks having a United States Bureau of Mines or National Institute of Occupational Safety and Health approval for a minimum of one-half hour protection shall be maintained in a readily accessible location, outside the areas of probable contamination and sufficient for all personnel associated with the operation.

Additional air or oxygen containers which will provide for a minimum of one-hour use of each mask shall be kept at the location of each gas mask. All personnel that may be required to use gas masks must be required at reasonable intervals to practice their application and use. Gas masks must be kept in condition, ready for immediate use at all times with fully charged containers.

An approved repair kit with all the necessary tools, appurtenances and material required to repair a leak or replace a defective valve or other part, shall be kept in a location accessible to the tank car and outside the probable area of contamination.

Protective clothing suitable for use with the materials stored shall be provided and be kept in good condition where its use will provide effective protection against the corrosive liquid.

Gas masks, repair kit and duplicate wrenches shall be kept in a conspicuous location and shall be conspicuously labeled for immediate identification.

(Prior code § 92-37.5)

ARTICLE XI. RADIOACTIVE MATERIALS (15-28-490 et seq.)

15-28-490 Storage and fire prevention requirements.

The storage and handling of radioactive materials shall comply with the following provisions:

(1) Clearly visible signs warning of radiation dangers shall be placed at all entrances to areas or rooms where radioactive materials are stored, used or transported shall bear a clearly visible, appropriate warning sign. Such signs shall bear the three-bladed radiation symbol in magenta or purple on a yellow background in keeping with the practices of the United States Atomic Energy Commission.

(2) Signs are not required for the storage of manufactured articles other than liquids; such as instruments or clock dials or electronic tubes or apparatus of which radioactive materials are a component part, and luminous compounds, where securely packed in strong containers, provided the gamma radiation at any surface of the package is less than ten milliroentgen in 24 hours.

(3) When not in use, radioactive materials shall be kept in adequately shielded fire-resistive containers of such design that the gamma radiation will not exceed 20 milliroentgen per hour or equivalent to any point of readily accessible surface. Such containers shall be stored in separate rooms having a fire-resistive rating of not less than one hour.

(Prior code § 92-38)

ARTICLE XII. COMBUSTIBLE SOLIDS (15-28-500 et seq.)

15-28-500 Definitions.

As used in this chapter:

"Highly flammable material storage building" means a building or part of a building designed, intended, or used for the purpose of storing for resale, transfer or for processing at a date beyond reasonable usage requirements hay, straw, broom corn, hemp, jute, sisal, moss, sawdust, or wood dust, shavings, excelsior, hair (except for packing house byproduct type), cotton, henequen, istle (ixtle), tow, cocoa fiber, oakum, baled waste, kapok or moss except in those cases where any of the above mentioned combustible fibers are packed or baled in special containers, or covered with suitable wrappings so as to prevent the ready ignition of loose surface fiber.

"Highly flammable material storage room" means a room designed, intended or used only for the purposes described under the preceding paragraph, which is located in a building other than a highly flammable material storage building.

"Highly hazardous material, product, article or substance" means any material, product, article or substance which is liable to burn with rapidity, or while burning to emit poisonous or noxious fumes or while burning to cause explosions.

"Nitrocellulose" means any substance, material or compound composed in whole or in part of soluble cotton or similar tetranitrate or higher nitrate of cellulose, including pyroxylin, plastic, celluloid, fibroid, viscoloid, pepalin and all similar substances, materials and compounds, including both new and reclaimed substances.

"Nitrocellulose building" means a building, or part of a building, designed, intended or used for no purpose other than the nitration, manufacture or storage of nitrocellulose, or a building in which nitrocellulose is nitrated, or a building in which discarded scraps of nitrocellulose are reclaimed.

"Nitrocellulose product" means any article or product either in the process of manufacture or fabrication or in the finished or completed state, which is composed wholly or in part of nitrocellulose including positive or negative nitrocellulose motion picture film, nitrocellulose, photographic film, nitrocellulose X-ray films, or pens, pencils, toilet articles, novelties or other articles or products composed either wholly or partly of nitrocellulose, excepting flammable liquids otherwise classified.

"Nitrocellulose products building" means a building, or part of a building, designed, intended or used for no purpose other than the manufacture, fabrication, assembly, completion, receiving, shipping, distributing or storing of either finished or unfinished nitrocellulose products or parts of such products.

"Weight (nitrocellulose and nitrocellulose products)" means the weight of the nitrocellulose only, not including the weight of any article or material to which the nitrocellulose is attached or fastened nor the weight of any wrapping or packing material, carton or other shipping container.

(Prior code § 92-39)

15-28-510 Picker and shredder room area limits.

No picker or shredder rooms shall have a floor area of more than 1,000 square feet.

(Prior code § 92-40)

15-28-520 Picker and shredder room construction requirements.

Every room used for the picking or shredding of any highly flammable material named under Section 15-28-500 shall meet the requirements for two-hour fire-resistive construction. Any opening for a stock spout through the enclosure for any such room shall be provided with a fire door as required by Chapter 15-12 of this Code for a doorway through a separation of equal fire-resistive value.

(Prior code § 92-41)

15-28-530 Ventilation.

Every highly flammable material storage room and every picker or shredder room shall be provided with one or more windows, skylights or other ventilating opening facing a public way, private alley, yard or other open space not less than 15 feet wide, with closures arranged to open for natural ventilation and having a combined area of not less than five percent of the total wall area of the room. The required combined area of openings which are arranged to open for ventilation shall be provided with sashes or dampers, or other closures which shall be hung overbalanced and held in place in such manner that an explosion or fire within the room will cause such sash, damper or closure to open for its full area; provided, however, that in lieu of such requirements it shall be permissible to provide a vent flue or flues extending directly to the outside air, which shall be used solely for the purposes of ventilating such room, which shall have a combined area of not less than five percent of the total wall area of the room, with an inclosure of the same fire-resistive value as is required for the inclosures of the room, and equipped with a normally closed noncombustible trap door arranged to open automatically in case of explosion or fire within the room. No such window, skylight, ventilating opening or vent flue required by this section shall be nearer than four feet, six inches to any other building or structure on the same premises or to any interior lot line.

(Prior code § 92-42)

15-28-540 Fire protection equipment.

Where a supply of steam at not less than five pounds pressure is available, a steam jet shall be installed in every picker or shredder room with a control valve outside of the room. Where such a supply of steam is not available, a standard two and one-half gallon fire extinguisher shall be kept outside the entrance door to every such room and adjacent thereto, with an opening 12 inches square provided through the inclosure of the room, through which the nozzle of the extinguisher may be directed into the room. Such opening shall be provided with a noncombustible cover, removable from the outside.

(Prior code § 92-43)

15-28-550 Instructions.

Every valve required for the control of the discharge of steam through a steam jet in a picker or shredder room, shall be marked with a metal sign which shall bear the words “STEAM FIRE LINE”. Every such sign shall meet the requirements of Section 15-28-120 for lettering.

(Prior code § 92-44)

15-28-560 Heating.

In every picker or shredder room, all heating shall be by steam or hot water radiation equipped with guards as provided for a standard drying room.

(Prior code § 92-45)

15-28-570 General construction requirements.

A highly flammable material storage building may be of any type of construction permitted under the provisions of this Code for a storage unit.

(Prior code § 92-46)

15-28-580 Danger signs.

Every building or room for the use or storage of highly flammable materials, shall have the words “FLAMMABLE – KEEP FIRE AWAY” painted in a conspicuous position on the outside thereof. Such wording shall be in plainly legible bright red letters on a white background with letters not less than six inches high and with the principal strokes thereof not less than three-fourths inch in width.

(Prior code § 92-47)

15-28-590 General safety clearances.

Two thousand five hundred cubic feet of loose highly flammable material may be stored in an entirely detached “loose” house. Such “loose” house shall be not nearer than 100 feet to any adjoining lot line except the minimum distance to any lot line on which is situated an institution, assembly school or open air assembly building shall be 200 feet. Such “loose” house shall be constructed of any suitable noncombustible materials with all openings properly protected against the entrance of sparks, flying brands or other fire hazard. Such “loose” house shall be used for no other purpose.

(Prior code § 92-48)

15-28-600 Special safety clearances.

It shall be unlawful to store in a loose condition, not in suitable bales or packages, any highly flammable materials, as defined in Section 15-28-500, whether housed or in the open within 100 feet of any adjoining lot line except as hereinafter specified. No such material shall be stored within 200 feet to any lot line on which an institution, school, assembly or open assembly building is situated. It shall be unlawful to store any highly flammable material in any basement of any building.

Quantities of loose highly flammable materials up to and including 100 cubic feet shall be permitted to be stored in any building provided it shall be kept in bins constructed of wood plank lumber, not less than two- inch nominal thickness, lined with sheet metal of not less than No. 26 gauge and be equipped with a self- closing, hinged cover and equipped with a fusible link so arranged to close the cover automatically in the event of a fire. A bin constructed of sheet metal not less than No. 26 gauge with a hinged self-closing cover and equipped with a fusible link so arranged to close the cover automatically in the event of a fire. Each such bin shall have a capacity not exceeding 50 cubic feet. Quantities stored in excess of 100 cubic feet shall be in rooms or buildings complying with the applicable sections below.

No person shall keep, pile, store or accumulate within the city, shavings, sawdust or excelsior in any quantity exceeding 20,000 pounds, unless such person shall first submit to the fire commissioner the written consents of the property owners representing the majority of the total frontage in feet of any lot or plot of ground lying wholly or in part within the lines 150 feet distant from and parallel to the boundaries of the lot or plot of ground upon which said storage is to be installed; provided, however, that for the purpose of this section only the frontage of any such lot or plot of ground, or that part of the frontage of any part of such lot or plot of ground, or that part of the frontage of any part of such lot or plot of ground as comes within the 150 feet limit herein prescribed shall be considered; and provided further, that all petitions containing such consents of property owners shall be based on and contain the legal descriptions of the property affected. Whenever the lot or plot of ground in which said storage is to be installed is in any other shape than rectangle, the 150 feet limiting line aforementioned shall not exceed in distance 150 feet from any point in the boundaries of such lot or plot of ground. No such storage yard shall be installed in any lot or plot of ground where any of the boundaries of such lot or plot of ground are within 200 feet of the nearest boundary of any lot or plot of ground used for a church, school or hospital.

(Prior code § 92-49; Amend Coun. J. 5-18-16, p. 24131, § 157)

15-28-610 Arrangement of storage.

Baled highly flammable materials as defined in Section 15-28-500 shall be stored only in buildings complying with the applicable sections of Chapter 4-256 with the following special provisions:

(a) No single block or pile shall contain more than 25,000 cubic feet of highly flammable material exclusive of aisles or clearances. Blocks or piles of baled highly flammable materials shall be separated from adjacent storage by aisles not less than five feet wide; or barriers consisting of continuous sheets of noncombustible material extending from the floor to height of at least one foot above the highest point of the piles and shall project at least one foot beyond the sides of the piles.

(b) Sisal and other highly flammable materials in bales bound with combustible tie ropes, also jute and other baled highly flammable materials that are liable to swell when wet, shall be stored to allow for the expansion in any direction without endangering the building walls, ceilings or columns.

(c) Not less than 18 inches clearance shall be provided between the sprinkler pipes and the tops of the piles.

(Prior code § 92-50)

15-28-620 Fire-resistive separation.

When the quantity of loose highly flammable materials stored exceeds 100 cubic feet, rooms separating such area from every other part of the building shall be required. Such rooms shall have separations providing the following fire-resistive ratings:

Quantity of Highly Flammable Materials	*Fire-resistive Rating*
100.1 to 500 cubic feet	1-hour
500.1 to 2,500 cubic feet	2-hour
Exceeding 2,500 cubic feet	4-hour

Baled storage rooms shall comply with the following:

Quantity of Highly Flammable Materials	*Fire-resistive Rating*
500 to 2,500 cubic feet	1-hour
2,500.1 to 5,000 cubic feet	2-hour
Exceeding 5,000 cubic feet	4-hour

(Prior code § 92-51)

15-28-630 Fire doors.

Openings through four-hour separations shall be protected by a Class A fire door. Opening through one- hour and two-hour separations shall be protected by a single Class B door.

(Prior code § 92-52)

15-28-640 Exterior access.

Every such room as required by Section 15-28-620 shall have at least one exterior wall open to a clear space of at least 15 feet.

(Prior code § 92-53)

15-28-650 Ventilation.

Every such room as required by Section 15-28-620 shall be vented directly to the outside. Such vents shall be constructed in accordance with the requirements of Section 15-28-530 and shall be arranged to open in case of fire or explosion.

(Prior code § 92-54)

15-28-660 Scuppers or drains.

Every such highly flammable material storage room required to be sprinklered shall be provided with floor scuppers or drains to effectively drain away any excess water that may accumulate during fire- extinguishing operations.

(Prior code § 92-55)

15-28-670 Smoking prohibited.

Smoking shall not be permitted in any highly flammable material storage room.

(Prior code § 92-56)

ARTICLE XIII. SMOKEHOUSES AND SMOKEROOMS (15-28-680 et seq.)

15-28-680 Construction requirements.

(a) *Smokehouses.* Every smokehouse shall be of Type IA, IB or IC construction, and no combustible material shall be used in the construction thereof.

(b) *Smokerooms.*

(1) *General.* Every smokeroom 30 square feet or less in floor area, or having a volume of 210 cubic feet or less, shall be enclosed with not less than three-hour fire-resistive construction, and every smokeroom of greater floor area or of greater volume shall be enclosed by a four-hour fire separation. No combustible material shall be used in the construction of any smokeroom.

(2) *Floor Construction.* Every smokeroom 30 square feet or less in area, which is supported by the floor construction of the building in which located, shall be built upon a standard furnace foundation, meeting the requirements of Chapter 18-28 of this Code installed on top of the building floor.

(3) *Superimposed Smokerooms.* For smokerooms superimposed one above another, in a building of other than Type IA, IB or IC construction, the enclosing walls shall be supported by independent foundations and shall carry no floor or roof load other than a smokeroom floor or roof load. Any floor separation between such rooms in a building of any type of construction may be an open grillwork of metal designed for a uniformly distributed live load of 75 pounds per square foot. The ceiling or roof of the uppermost room shall be of Type IA regardless of the type of construction of the building in which located.

(c) *Fire Pits.* Every fire pit for a smokehouse or smokeroom shall have a floor and walls of not less than four-hour fire-resistive construction, except as otherwise provided for a fire pit in a portable smokeroom under Section 15-28-690.

(d) *Doors and Frames.* Every doorway to a smokehouse or smokeroom shall be provided with a door formed of iron or steel not less than 100 and nine-thousandths inch thick, stiffened around all edges and crosswise at intervals of three feet or less in height with angles, tees or other iron or steel shapes. Every such door shall be hung in an iron or steel frame, not less in thickness at any point than three-sixteenths inch anchored to the wall construction.

(e) *Openings for Trolleys.* It shall be permissible to provide an opening for a trolley in or above any door to a smokehouse or smokeroom; provided, however, that every such opening shall have an iron or steel cover of the same thickness as required for the door, and so equipped that in case of fire, it shall close automatically by the release of a fusible link or the actuation of a thermostatic device.

(f) *Smoke Flues.* Every smoke flue for a smokehouse of smokeroom shall meet the requirements of Chapter 13-152 of this Code where applicable to the character of flue used, except as otherwise provided for a smoke flue for a portable smokeroom under Section 15-28-690 of this Code.

(g) *Windows.* Any window provided in a smokehouse or smokeroom shall be a fire window.

(Prior code § 92-57; Amend Coun. J. 11-9-16, p. 36266, § 33)

15-28-690 Portable smokerooms.

It shall be permissible to install and use a smokeroom having an enclosure of metal construction in lieu of the construction required under Section 15-28-680 of this Code.

Foundations. Every portable smokeroom shall be built upon a standard furnace foundation as described in Chapter 18-28 of this Code; provided, however, that such a foundation shall not be required for a portable smokeroom in a building of Type IA, IB or IC construction, unless there is a combustible finish on such floor.

Walls and Ceilings. The walls and ceiling of every portable smokeroom shall consist of an inner and outer shell of sheet metal, not less than three-eightieths inch thick, with riveted or welded seams and joints secured to a rigid framework of suitable iron or steel shapes. The inner and outer metal shells shall be separated not less than one and one-half inches, the space between being filled solid with fused noncombustible insulating material not less than one and one-fourth inches thick.

Fire Pits. The fire pit in every portable smokeroom shall be entirely of metal and set upon legs with the bottom of the pit not less than two inches above the floor surface.

Smoke Flues. Every smoke flue for a portable smokeroom shall be a metal flue connected with a masonry chimney, or a metal flue extended through the roof of the building. Every metal smoke flue shall be formed of sheet metal not less than one-sixteenth inch thick with riveted or welded seams and joints. Where a metal smoke flue is extended through combustible construction, the flue shall be passed through a double wall, ventilated metal sleeve as required by Chapter 13-152 of this Code.

Doors. Every doorway to any portable smokeroom shall be provided with a door formed of sheet metal as required by Section 15-28-680 for smokerooms.

Clearances. No part of a wall or ceiling of any portable smokeroom shall be located nearer to any combustible construction than is permitted under Chapter 13-180 of this Code for low-pressure boiler breechings.

(Prior code § 92-58; Amend Coun. J. 11-9-16, p. 36266, § 33)

15-28-700 Noncombustible equipment.

Every rack, hanger, trolley, rail, groove or other piece of equipment in any smokehouse or smokeroom shall be of noncombustible material.

(Prior code § 92-59)

ARTICLE XIV. LUMBER DRY KILNS (15-28-710 et seq.)

15-28-710 Construction requirements.

A kiln or room designed, erected, altered or converted for the purposes of drying lumber, wood products or wooden articles by artificial heat shall have an enclosure of two-hour fire-resistive construction, if it has a floor area of 500 square feet or less, and of three-hour fire-resistive construction if it has a floor area of more than 500 square feet. No such kiln or room shall have any opening except a doorway or doorways between such room and any other part of the building. Every doorway into any such room shall be provided with a door of the character as required by Chapter 15-12 of this Code.

(Prior code § 92-60)

15-28-720 Heating.

Only steam or hot water shall be used for heating a kiln or room for the drying of lumber.

(Prior code § 92-61)

ARTICLE XV. MISCELLANEOUS COMBUSTIBLES (15-28-730 et seq.)

15-28-730 Reserved.

Editor's note – Coun. J. 2-19-20, p. 14473, Art. VI, § 26, repealed § 15-28-730, which pertained to storage or baling of wastepaper.

15-28-740 Disposal of wastepaper.

Except as otherwise herein specifically provided, the floor of every room used for the manufacture or sale of flammable articles or merchandise, or upon which there accumulates any amount of flammable waste material, or waste material tending to produce spontaneous combustion, shall be thoroughly cleaned and all such waste material shall be removed therefrom at least once every 24 hours.

All such material shall be either destroyed as soon as removed, as required by this section, or it may be kept in a room, the construction and location of which shall be subject to the approval of the fire commissioner, and in such case all such material shall be removed from such room and from the building in which such room is located at least once a week.

(Prior code § 92-63; Amend Coun. J. 5-18-16, p. 24131, § 158)

15-28-750 Coal storage.

Soft coal shall be stored away from the brick work of boilers and furnaces and shall be kept only in a room, the partitions of which are of incombustible material or two-inch plank, or its equivalent. Such coal shall not be piled closer than 24 inches to combustible ceilings.

Wherever coal in storage shows indication of spontaneous ignition or gives off gases, it shall be the duty of the owner or agent, or person in charge or control of the premises where such coal is stored to turn over or overhaul such coal pile and remove all portions of the coal showing indication of ignition or coking. Such work shall be done under the supervision of the fire commissioner.

(Prior code § 92-64; Amend Coun. J. 5-18-16, p. 24131, § 159)

15-28-755 Storage of hazardous materials prohibited.

(a) *Definitions.* For purposes of this section, the following definitions apply:

"Commissioner" means the commissioner of health.

"Corrosive liquid", "Hazardous chemical", "Highly toxic materials", "Oxidizing materials", "Potentially explosive chemicals" and "Radioactive materials" shall have the meaning ascribed to those terms in Section 15-28-020 of this Code.

"Flammable compressed gas" shall have the meaning ascribed to that term in Section 15-26-020 of this Code.

"Flammable liquids" shall have the meaning ascribed to that term in Section 15-24-020 of this Code.

"Regulated material" means any corrosive liquid, flammable compressed gas, hazardous chemical, highly toxic materials, oxidizing materials, potentially explosive chemicals, radioactive materials and flammable liquids.

"Required notice" shall mean a statement setting forth the prohibition of subsection (b) of this section and the penalty for any violation of this section.

"Residential building" means any building classified as a Class A-2 multiple dwelling unit pursuant to Section 13-56-040 of this Code.

"Residential storage facility" shall mean any common area available to the residents of a residential building for storage, whether or not the storage space is divided into individual compartments.

"Self-service storage facility" shall have the meaning ascribed to the term "self-service (public) storage facility" in Section 13-4-010 of this Code.

(b) No person shall store any regulated material in any self-service storage facility or any residential storage facility.

(c) The owner, manager or person in control of each self-service storage facility or residential storage facility shall post, in a

conspicuous manner, a sign at the storage facility setting forth the required notice.

(d) (1) The owner, manager or person in control of each self-service storage facility or residential storage facility shall:

(A) Within 60 days after the effective date of this ordinance provide to each current lessee the required notice; and

(B) Include in all leases entered into or renewed after the effective date of this ordinance, a provision setting forth the required notice and further stating that it is a precondition to the use of the storage facility that the user understands and agrees to abide by the provision.

If use of the storage facility is provided without a lease, then the owner, manager or person in control of such facility shall provide the required notice to each user of the storage facility within 60 days after the effective date of this ordinance, or at the time of the initial use of the storage facility by the person, whichever is later.

(2) Within 60 days after the effective date of this ordinance, each condominium association that has a residential storage facility shall provide to every condominium unit owner, the required notice.

(e) Violations of this section shall be punished by a penalty of $250.00 to $500.00 for first offense, $500.00 to $1,000.00 for the second offense, and $1,000.00 to $2,000.00 for the third and each subsequent offense. Each day that the violation continues shall be deemed a separate offense.

(f) (1) A violation of this section shall be deemed and is hereby declared to be a public nuisance and, as such, subject to abatement; provided that the owner, manager or person in control of a self-service storage facility or residential storage facility shall not be liable for the penalties or abatement requirements of this section if he or she has complied with the requirements of subsections (c) and (d) of this section.

(2) *Emergency abatement.* In the event that commissioner or fire commissioner determines that any activity in violation of this section has created, or is creating, an imminent and substantial threat to the environment or the public's health, safety, or welfare, then the commissioner or fire commissioner shall order the person storing the regulated material in violation of this section to abate the threat in the manner and within a time frame prescribed by the commissioner or fire commissioner. In the event that any person fails to abate such threat in accordance with the commissioner's or fire commissioner's order, the commissioner or fire commissioner may proceed to control, remove, dispose of or otherwise abate the threat.

(3) *Non-emergency abatement.* In the event that the commissioner or fire commissioner determines that any activity in violation of this section has not created, or is not creating, an imminent and substantial threat to the public's health, safety or welfare, the commissioner or fire commissioner shall provide the person storing the regulated material in violation of this section with written notice to abate the nuisance in the manner prescribed by the commissioner or fire commissioner within three days from receipt of the notice. In the event that any person fails to abate such nuisance in accordance with the notice to abate, the commissioner or fire commissioner may proceed to control, remove, dispose or otherwise abate the nuisance.

(4) In addition to any other penalties imposed in subsection (e) of this section, the city shall be entitled to recover a penalty in the amount equal to three times the cost or expense incurred by the city in abating the nuisance in an appropriate action instituted by the corporation counsel.

(Added Coun. J. 4-6-05, p. 45585, § 2; Amend Coun. J. 11-16-11, p. 13798, Art. II, § 6; Amend Coun. J. 9-11-13, p. 59869, § 6)

ARTICLE XVI. MANUFACTURE, TRANSPORTATION OR SALE OF MATCHES (15-28-760 et seq.)

15-28-760 Parlor or double-dipped matches.

No person shall manufacture, store, sell, offer for sale, or otherwise dispose of or distribute, white phosphorus, single-dipped, strike-anywhere matches of the type popularly known as “parlor matches”; or manufacture, store, sell, offer for sale, or otherwise dispose of or distribute, white phosphorus, double- dipped, strike-anywhere matches; or manufacture, store, sell, offer for sale, or otherwise dispose of or distribute, any other type of double-dipped matches, unless the bulb or first dip of such match is composed of a so- called safety or inert composition, nonignitible on an abrasive surface; or manufacture, store, sell, offer for sale or otherwise dispose of or distribute, matches which when packed in a carton of 500 approximate capacity and placed in an oven maintained at a constant temperature of 212 degrees Fahrenheit will ignite in eight hours; or manufacture, store, sell, offer for sale, or otherwise dispose of or distribute, blazer or so-called wind matches, whether of the so-called safety or strike-anywhere type.

(Prior code § 92-65)

15-28-770 Packing.

All matches shall be placed in boxes or suitable packages containing not more than 700 matches in any one box or package; provided, however, that when more than 300 matches are packed in any one box or package, the said matches shall be arranged in two nearly equal portions, the heads of the matches in the two portions shall be placed in opposite directions, and all boxes containing 350 or more matches shall have placed over the matches a center holding or protecting strip made of chip board not less than one and one-fourth inches wide, and said strip shall be flanged down to hold the matches in position when the box is nested into the shuck or withdrawn from it.

All match boxes or packages shall be packed in strong shipping containers or cases; the maximum number of boxes or packages of strike-anywhere matches, respectively, contained in any one shipping container or case shall not exceed the following number:

Number of Boxes	*Nominal Number of Matches Per Box*

1/2 gross	700
1 gross	500
2 gross	400
3 gross	300
5 gross	200
12 gross	100
20 gross	over 50 and under 100
25 gross	under 50

No shipping container or case containing strike- anywhere matches constructed of fiberboard, corrugated fiberboard or wood, nailed or wire-bound, shall exceed a weight, including its contents, of 75 pounds; and no lock-cornered wood case containing strike-anywhere matches shall exceed a weight, including its contents, of 85 pounds; nor shall any other article or commodity be packed with any matches in any such container or case; and all such containers and cases in which are packed strike-anywhere matches, or strike-on-box matches, shall have plainly marked on the outside of the container or case the words “STRIKE-ANYWHERE MATCHES” or “STRIKE-ON-BOX MATCHES”.

(Prior code § 92-66)

15-28-780 Marking of packages.

No person shall offer for sale, sell or otherwise dispose of or distribute, any matches unless the package or container in which such matches are packed bears plainly marked, on the outside thereof, the name of the manufacturer and the brand or trademark under which such matches are sold, disposed of or distributed.

(Prior code § 92-67)

15-28-790 Opening of packages.

Not more than one case of each brand of matches of any type or manufacture shall be opened at any one time in the retail store where matches are sold or otherwise disposed of.

(Prior code § 92-68)

15-28-800 Storage requirements.

At wholesale establishments and wherever matches exceeding the quantity specified in Section 15-28-770 are stored, shipping containers containing matches shall be arranged in piles not exceeding ten feet in height with aisles at least four feet wide. Where other materials or commodities are stored on the same floor with matches, a corner or other portion of the room shall be devoted to match storage exclusively, and a clear space of not less than four feet maintained between match storage and such other materials and commodities. No matches shall be stored within ten feet of any open elevator shaft, elevator shaft opening, open stairway or other vertical opening.

Where shipping containers containing matches are opened, the contents of such broken containers shall be removed and stored in metal or metal-lined bins, equipped with spring self-closing metal or metal-lined covers. Where matches are sold at retail, original sealed packages may be stored on shelves. When such packages are broken, individual boxes shall be stored in metal or metal-lined bins, as described above.

(Prior code § 92-69; Amend Coun. J. 6-14-95, p. 2841)

ARTICLE XVII. NITROCELLULOSE PRODUCTS (15-28-810 et seq.)

15-28-810 General provisions.

Sections 15-28-280 to 15-28-930 shall apply to all nitrocellulose products except nitrocellulose film used in the motion picture industry. For regulation covering motion picture nitrocellulose film, see Sections 15-28-1000 to 15-28-1040 of this Code.

(Prior code § 92-70)

15-28-820 License.

It shall be unlawful for any person to manufacture, store or keep any nitrocellulose products, in excess of 25 pounds, without first obtaining a license therefor.

(Prior code § 92-71)

15-28-830 Building regulations.

No license shall be issued to any person for the storage or manufacture of nitrocellulose products and no person shall store or manufacture nitrocellulose products in any building in which a hazardous use, as defined by Chapter 13-56 of this Code, is prohibited.

No person shall manufacture, fabricate, assemble, adapt, mold, press, develop or complete within any 24-hour period more than 25 pounds of nitrocellulose products in other than a nitrocellulose building or a nitrocellulose room constructed as required hereafter.

(Prior code § 92-72)

15-28-840 Storage of products.

Nitrocellulose products in the process of manufacture, fabrication, assembly, adaptation or completion, including finished and wrapped products not packed in the final shipping containers, but not including products wrapped and packed in final shipping containers, shall be stored on shelving meeting the requirements for standard fireproof vaults under Section 15-24-370 of this Code.

It shall be unlawful to store any nitrocellulose products which are finished, wrapped and packed in the final shipping containers in any building except in a standard fireproof vault, or in a standard fireproof cabinet or in a nitrocellulose room constructed as required hereafter.

(Prior code § 92-73)

15-28-850 Floor area limits.

Any nitrocellulose products room other than a standard fireproof vault shall not exceed the limits of floor area required by Section 15-28-830 for certain types of fire-resistive construction.

(Prior code § 92-74)

15-28-860 Fire-resistive separation.

Every nitrocellulose products room shall have an enclosure of two-hour fire-resistive construction, if it has a floor area of 1,000 square feet or less and of three- hour fire-resistive construction of solid masonry or concrete if it has a floor area exceeding 1,000 square feet but not more than 2,000 square feet; and of four- hour fire-resistive construction if it has a floor area exceeding 2,000 square feet; provided, however, that these requirements shall not apply to a standard fireproof vault intended for any of the purposes of such a room.

(Prior code § 92-75)

15-28-870 Heating.

A nitrocellulose products room shall be heated by hot water or steam, by either direct or indirect means. Any steam radiator or steam pipe, in which the working pressure exceeds five pounds per square inch, shall be located not less than four feet from the floor. Every steam or hot water radiator or pipe which is less than four feet from the floor, or which is so located that any nitrocellulose material or waste might come in contact with it, shall be protected by a guard of No. 18 U.S. gauge galvanized wire screen of one-fourth-inch mesh. Such guard shall be not less than three inches from the radiator or pipe at all points, and the tops, if any, shall slope at an angle of not less than 45 degrees from the horizontal so as to prevent the use of the tops as shelves. No floor register shall be used with any indirect system of heating, and no wall register shall have an opening nearer than six inches from the floor. Every furnace or other equipment for the heating of air in an indirect system shall be located in an independent room separated from every nitrocellulose products room by not less than two-hour fire-resistive construction.

(Prior code § 92-76)

15-28-880 Ventilation.

Every nitrocellulose products room shall have means of natural or mechanical ventilation as required by Section 15-28-080 for hazardous chemical rooms.

(Prior code § 92-77; Amend Coun. J. 6-14-95, p. 2841)

15-28-890 Construction requirements.

A nitrocellulose products building not more than one story above grade in height may be of any type of construction permissible for industrial or storage units under the provisions of this Code, except Type IVA or IVB construction. Types IIIB and IIIC construction shall not be used for any nitrocellulose products building exceeding two stories above grade in height. A basement shall be permitted in any nitrocellulose products building; provided, however, that no basement in such building shall be designed, constructed, altered or converted for the purposes of manufacturing, fabricating, assembling, adapting, completing or storing any nitrocellulose product.

(Prior code § 92-78)

15-28-900 Special safety clearances.

It shall be unlawful for any person to store or manufacture nitrocellulose products in any building which is situated within 100 feet of any building occupied as a school building, hospital, institutional, or any other place of public assembly.

(Prior code § 92-79)

15-28-910 Heating products.

Softening or heating nitrocellulose products when not done by hot water shall be done on steam or electric heaters, dies, and so forth, with at least six inches clearance to all combustible material.

(Prior code § 92-80)

15-28-920 Machinery used.

Stamping, perforating and similar machines shall be equipped with a metal receptacle containing water for receiving waste material.

Metal receptacles with automatic or self-closing covers shall be provided for nitrocellulose scraps and clippings, and said scraps and clippings shall be removed from the premises each evening and disposed of in a manner approved by the fire commissioner.

(Prior code § 92-81; Amend Coun. J. 5-18-16, p. 24131, § 160)

15-28-930 Drying boxes.

Every box for the drying of nitrocellulose products shall be provided with one automatic sprinkler head for each 60 cubic feet of volume.

(Prior code § 92-82)

ARTICLE XVIII. NITROCELLULOSE (15-28-940 et seq.)

15-28-940 Safety clearances.

Every nitrocellulose building shall be freestanding and isolated by a safety clearance computed at the rate of five feet per 1,000 pounds or fraction thereof of nitrocellulose manufactured or reclaimed; provided, however, that such safety clearance shall in no case be less than 50 feet; and provided further, that the requirements of this paragraph shall not apply to any buildings in which 25 pounds or less of nitrocellulose are manufactured or reclaimed during any 24-hour period.

(Prior code § 92-83)

15-28-950 Construction requirements.

Every nitrocellulose building shall be of Type IA, IB or IC construction.

(Prior code § 92-84)

15-28-960 Fire-resistive separation.

Every nitrocellulose room shall have a separation between it and any other room permitted in the same building of not less than two-hour fire-resistive construction.

(Prior code § 92-85)

15-28-970 Standard fireproof cabinets.

The maximum capacity of a standard fireproof cabinet shall be 200 pounds of nitrocellulose material or nitrocellulose product, or other high hazard material for which such vault is intended. All standard fireproof cabinets shall be constructed of metal. The bottom, top and sides shall be made of sheet metal not less than No. 18 U.S. standard gauge in thickness, and such cabinet shall be double-walled with not less than one and one- half inches air space between the double walls. All joints in the sheet metal shall be riveted or welded. All doors shall be of construction equal to the cabinet, and shall have a three point lock and self-closing device. Any standard fireproof cabinet having more than one compartment shall have a separate partition constructed of not less than No. 18 U.S. standard gauge sheet metal, double-walled, with an air space not less than one and one-half inches between the surface thereof.

(Prior code § 92-86)

15-28-980 Capacity regulations.

Not more than 25 pounds of nitrocellulose shall be manufactured or reclaimed in other than a nitrocellulose building or a nitrocellulose room constructed as required; provided, however, that completely manufactured nitrocellulose enclosed within sealed shipping containers, meeting the regulations of the Interstate Commerce Commission for containers for nitrocellulose may be stored in one or more standard fireproof vaults located in any building, except as prohibited under this Code.

(Prior code § 92-87; Amend Coun. J. 6-14-95, p. 2841; Amend Coun. J. 6-6-12, p. 28356, § 45)

15-28-990 Restrictions.

The business or process for recovery of nitrocellulose base shall not be permitted within the city.

(Prior code § 92-88)

ARTICLE XIX. MOTION PICTURE TRIAL EXHIBITION ROOMS (15-28-1000 et seq.)

15-28-1000 General requirements.

Any person lawfully engaged in the business of manufacturing, dealing, selling, leasing, renting or exchanging motion picture films shall have the right to project pictures from nitrocellulose films by means of motion picture machines for exhibition to prospective purchasers, renters or lessees of films, in a room meeting the requirements of this chapter in respect thereto, which room shall not be required to conform to the special provision in the building provisions of this Code, governing theaters, public assembly units or other places where motion pictures are permitted to be shown.

Exhibition Room. Any motion picture trial exhibition room shall have a floor of the same type of construction as required for the building in which located and shall have both walls and ceiling of one- hour fire-resistive construction.

Projection Room. Every motion picture trial exhibition room shall have a projection room, which shall have an enclosure of the same character as required by Section 13-84-120 for a projection block in a theater. If the floor of the projection room is above the level of the

floor of the exhibition room, the projection room shall be supported on structural members of noncombustible materials. Every opening in such room for the purposes of picture screen observation or operation of a projector shall be equipped with a closure such as required by Section 13-84-120 for a projection room in a theater.

(Prior code § 92-89)

15-28-1010 Ventilation.

Every motion picture trial exhibition room shall have ventilation as required by Chapter 13-176 of this Code for motion picture studios.

(Prior code § 92-90)

15-28-1020 Seating requirements.

In every motion picture trial exhibition room, seats provided for spectators shall be fixed seats.

(Prior code § 92-91)

15-28-1030 Area limitations.

Every room used for the examination or repair of motion picture films shall be occupied by not more than eight persons at one time, and the floor area shall exceed 400 square feet, inclusive of a space of not less than four feet, six inches which shall be allowed between tables for aisles leading to exits.

(Prior code § 92-92)

15-28-1040 Capacity limitations.

The capacity of a motion picture trial exhibition room shall not exceed 50 persons, with an allowance of not less than ten square feet of floor area for each seat.

(Prior code § 92-93)

ARTICLE XX. HAZARDOUS DUSTS (15-28-1050 et seq.)

15-28-1050 Definitions.

As used in this chapter:

"Grain elevator, malt house and similar building" means a building designed, intended or used for the purpose of receiving, storing, delivering, working with or treating grain in bulk.

"Grinding or dust-producing rooms" means a room containing a machine or device for grinding, pulverizing, buffing, cutting, polishing or any other operation which produces dust, lint, shavings or other fine particles of matter liable to spontaneous ignition or explosion, or a room in which it is proposed to install any such machine or device.

(Prior code § 92-94)

15-28-1060 Special safety clearances.

No grain bleacher, grain elevator, malt house or similar building shall be located nearer than 100 feet to any building in which there is an institutional, assembly or open air assembly unit, except as otherwise provided below.

(Prior code § 92-95)

15-28-1070 Construction requirements.

Every grinding or dust-producing room, located in any building other than a building of Type IA, IB or IC construction which is also equipped throughout with a standard system of automatic sprinklers, shall be constructed in accordance with the requirements of this section. Any such room, with a floor area of not more than 600 square feet, shall have a floor of any type of construction permitted for the building in which located and shall have both walls and ceiling of one-hour fire- resistive construction. Any such room, with a floor area of more than 600 square feet and not more than 1,200 square feet, may have a floor of any type of construction permitted for the building in which located, and shall have both walls and ceiling of two-hour fire-resistive construction. Any such room with a floor area of more than 1,200 square feet, shall be separated from every other part of the building by not less than four-hour fire- resistive construction. No such rooms shall have any opening except a doorway or doorways between such room and any part of the building. Every doorway through any such wall or separation shall be provided with a door of the character required by Chapter 15-12 for fire doors. Nothing in this section shall be construed as prohibiting or preventing the installation of noncombustible piping or conveyors or similar dust- tight enclosed mechanical devices between floors or stories in such rooms or buildings.

(Prior code § 92-96)

15-28-1080 Ventilation.

Every grinding or dust-producing room, shall have means of natural ventilation or vent flues as required by Section 15-28-260 for material heating rooms; provided, however, that the combined area of ventilating opening which shall have closures arranged to open automatically in case of explosion or fire shall be not less than ten percent of the floor area of the room, and the combined area of vent flues, in lieu of ventilating openings shall be not less than eight percent of the floor area.

(Prior code § 92-97; Amend Coun. J. 6-14-95, p. 2841)

15-28-1090 Inspection of ventilators.

Ventilators. All ventilators, overbalanced sash and similar devices, required by this Code, designed to afford pressure relief in case of explosion, shall be inspected at intervals sufficiently frequent to insure their constant operating efficiency.

(Prior code § 92-98)

15-28-1100 Grounding of equipment.

In every grinding or dust-producing area, all metal parts of machinery or equipment shall be positively grounded to prevent static electricity buildup and smoking or the use of any device employing an open flame is prohibited.

(Prior code § 92-99)

15-28-1110 Grain bleachers.

Every grain bleacher shall be separated by a distance of not less than six feet from any other building; provided, however, that no grain bleacher shall be nearer than 25 feet to any window, or doorway of any other building unless such window is a fire window, or unless such doorway is provided with Class D fire floor.

(Prior code § 92-100)

15-28-1120 Grain elevators and malt houses.

Every grain elevator, malt house and similar building shall be so situated that it will not be so hazardous as to constitute a nuisance or be a menace to the safety of the public or to the adjacent property.

(Prior code § 92-101)

15-28-1130 Construction of grain bleachers.

Every grain bleacher shall be of Type IA construction. No combustible construction shall be used between a grain bleacher and any other building.

(Prior code § 92-102)

15-28-1140 Construction of cereal, feed, flour, grist and starch mills.

Every building, or part of a building, designed, erected, altered or converted for the purposes of a cereal mill, feed mill, flour mill, grist mill, or starch mill and in which more than 500 pounds of any cereal, feed, flour, grist or starch is produced during any 24-hour period shall be of Type IA, IB or IC construction.

(Prior code § 92-103)

15-28-1150 Construction of grain elevators and malt houses.

Every grain elevator, malt house and similar building shall be of Type IA construction.

(Prior code § 92-104)

15-28-1160 Marine tower.

In any existing grain elevator, malt house or similar building, the exterior walls of the marine tower, which is defined as that part of the structure in which is located the machinery for conveying grain from boats to the conveying bridge, and thence to the bins; and the exterior walls of cupolas and conveyor bridge, which is that part of the structure housing the conveying and elevating machinery above the fireproof bins, may, if the same require replacement, be replaced with galvanized corrugated steel, protected metal or asbestos corrugated material fastened to the steel structure by rust-proof bolts.

(Prior code § 92-105)

15-28-1170 Bleaching operations.

(a) *Storage.* Sodium peroxide and sulfur in excess of one day's supply shall be stored in a separate and suitable building. The user shall notify the fire prevention bureau, by notarized letter, of the amount used in 24 hours. Upon any change in that amount, the user shall notify the fire prevention bureau within 24 hours.

(b) *Construction of Pots.* Sulfur pots shall be so constructed that if the sulfur boils over it cannot drop on combustible material. In broom corn factories, metal hoods shall be provided to prevent corn falling into or against the pots.

(c) *Location of Grain Bleachers.* Grain bleachers shall be set at least 25 feet from frame grain elevators but may be set not closer than six feet to a brick or fireproof elevator; provided, however, there are no unprotected openings in the elevator wall within 25 feet of the bleacher. Metal spouts connecting the bleacher with the elevator shall each be provided with two automatic dampers, one damper at each end of metal spout. All conveyors connecting the bleacher with the elevator shall be metal screw conveyors in metal or concrete casings. No combustible material shall be used between bleacher and elevator.

(d) *Location of Sulfur Furnace.* The sulfur- burning furnace shall be set at least 25 feet distant from bleacher in the opposite direction from the elevator and shall be of fireproof construction and unenclosed, unless it be an enclosure of fireproof construction; provided, however, that when conditions are such that the sulfur furnace cannot be located 25 feet from the bleacher, it may be located closer, but the length of the sulfur fumes pipe shall in no case be less than 25 feet.

(Prior code § 92-106)

15-28-1180 Equipment.

Every conveyor, duct, and spout between a grain bleacher and any grain elevator or other building shall be enclosed in a casing constructed of noncombustible material. Conveyors, ducts and spouts shall have an automatic closing fire damper at each end, having a fire- resistive value of not less than 45 minutes. Every sulfur- burning furnace for a grain bleacher shall be so located that the length of the sulfur fumes pipe will not be less than 25 feet, and every such furnace shall be separated by a distance of not less than 25 feet from any grain elevator, and from any other building except a grain bleacher.

(Prior code § 92-107)

15-28-1190 Fire protection.

Every conveyor and spout between a grain bleacher and any other building shall be provided with a damper at each end. Such dampers shall be of construction having a 60-minute fire-resistive value, and shall be so arranged and equipped as to close automatically in case of fire by the release of a fusible link or by the actuation of a standard thermostatic releasing device.

(Prior code § 92-108)

15-28-1200 Dust removal.

(a) *Daily Removal.* In all grain elevators, grain bleachers and other buildings or rooms housing dust- producing processes or occupancies, accumulations of dust shall be prevented by daily removal. Dust collecting systems, required under Chapter 15-28 of this Code, shall be maintained in efficient operating condition.

(Prior code § 92-109)

15-28-1210 Dust collection system.

Every existing or dust-producing room and every grinding or dust-producing room hereafter constructed shall have mechanical means of collecting and disposing of the lint, dust, shavings or other fine particles of matter produced therein, and the heating of such room shall be by steam or hot water pipes, equipped with guards as provided under Section 15-24-880 for a drying room. Every such means of collecting dust shall be provided with a dust arrester, collector or precipitator, which will prevent the exhausting of particles of matter heavier than air into the atmosphere.

1. *General.*

(a) Where grinding, polishing, buffing, scratch brushing or abrasive cutting-off wheels, grinding and polishing straps or belts are used in operation producing metallic dust, there shall be provided in the area where dusts vapors, gases or fumes are generated, hoods that are connected to exhaust systems which will remove such dusts, vapors, gases or fumes, and such exhaust systems shall be operated continuously during any such operations on aforesaid equipment and such exhaust systems shall be provided with dust arresters, collectors, separators or precipitators to collect the dust before the air or gases from such exhaust systems are discharged therefrom.

(b) All exhaust systems used to collect metallic dust as aluminum, magnesium or zinc shall be provided with an interlocking electrical control connected to the exhaust fan motor and the electric power source for running polishing, buffing and grinding machines. The interlock shall be so designed that in the event of a power failure in connection with the exhaust fan, it will cut out the power source controlling the polishing, buffing and grinding equipment. In the event a wet-type dust collector is made use of, additional interlocking electrical controls should be provided in connection with the water supply, and should be so designed and installed that in the event of a waterflow failure or inadequate liquid level, there will be an automatic cut-out of the power sources controlling the exhaust fan and the polishing, buffing and grinding equipment.

(c) All exhaust systems intended for the removal of potentially explosive dusts, other than those containing magnesium shall be provided with either a wet-type dust or a dry-type separator.

(d) In instances where the dusts consist principally of magnesium or its alloys, a wet-type collector shall be provided. The exhaust fan shall be on the clean air side of the collector.

(e) All dry-type separators shall be located on the outside of the building. The exhaust duct leading to the separators shall be of the shortest possible length.

(f) The exhaust discharge from all dust arresters, collectors, separators or precipitators shall be direct to out-of-doors and at such a point to preclude the possibility of the reentry of the exhaust air into the building or adjacent buildings.

(g) The dust removed in dry-type separators shall be discharged into enclosures, bins or receptacles, located on the outside of the building. Their construction shall be of noncombustible materials; cleanout doors shall be provided. Explosion relief vents shall be provided having a net open area of not less than one square inch for each 0.7 cubic foot or fraction thereof. Such vent flue shall be located not less than ten feet measured horizontally or vertically from any wall, roof, or opening.

(h) Exhaust carrier duct systems shall be cleaned at least once a week. Dust collector enclosures or bins and wet-type collector sludge tanks shall be cleaned daily. The deposits shall be removed from the premises and disposed of in a safe manner. Under no circumstances shall dry particles and/or sludge be discharged into the sewer. Written records of cleaning operations shall be maintained on the premises and shall be open for examination at all times.

2. *Exhaust System Design Requirements.*

(a) All branch pipes shall enter the header pipe at an angle of 45 degrees or less. All bends, turns, or elbows used in exhaust pipes shall be made with a throat radius of two pipe diameters except greater or smaller throat radii may be used to clear obstructions.

(b) All branch pipes shall connect with a header pipe. The area of the header pipe at any point shall not be less than the combined areas of the branch pipes joining it between such point and the small end of the header. Such header pipes shall be connected to an exhaust fan to produce a minimum air velocity in the branch pipes of 4,500 feet per minute or such greater air velocity reasonably required to remove dusts, vapors, gases or fumes generated. Where cradles are used for handling the parts to be ground, polished or buffed, or where swing grinders are used, and large partial enclosures to house the complete operation are required, the opening in such enclosures shall have a minimum average air velocity of 200 feet per minute and shall be connected to branch pipes of an exhaust system of such area as to produce a minimum air velocity of 4,500 feet per minute in the branch pipes.

(c) Dust shall be removed by means of suitable mechanically exhausted hoods or enclosures at each operation. Such hoods shall be so designed, located and placed that the dust or dirt particles will fall or be projected or drawn into the hoods in the direction of the air flow. No wheels, discs, straps or belts, shall be operated in such manner and in such direction that will cause the dust and dirt particles to be thrown into the operator's breathing zone.

(d) The exhaust outlet of the hoods and the branch pipes connected thereto, of grinding wheels on floor stands, pedestals, benches, swing framed are special purpose grinding machines and abrasive cutting- off wheels shall have not less than the following minimum inside diameter. (See Table 15-28-1210(d).)

(e) The exhaust outlet in the hood and branch pipes connected thereto of brush wheels over six inches diameter and all buffing and polishing wheels mounted on floor stands, pedestals, benches or special purpose machines shall have not less than the following minimum inside diameter. (See Table 15-28-1210(e).)

Table 15-28-1210(d)

Size of Grinding or Abrasive Cutting-off Wheel – Inches	*Minimum Inside Diameter of Hood Outlet and Branch Pipe – Inches*	*Maximum Wheel Surface (Sq. In.)*
Up to 9" dia. incl. not over 1 1/2" thick	3	43
Over 9" dia. to 16" dia. incl. not over 2" thick	4	101
Over 16" dia. to 19" dia. incl. not over 3" thick	4-1/2	180
Over 19" dia. to 24" dia. incl. not over 4" thick	5	302
Over 24" dia. to 30" dia. incl. not over 5" thick	6	472
Over 30" dia. to 36" dia. incl. not over 6" thick	7	679

Table 15-28-1210(e)

Size of Buffing, Polishing and Scratch Brush Wheel – Inches	*Minimum Inside Diameter of Hood Outlet and Branch Pipe – Inches*	*Maximum Wheel Surface (Sq. In.)*
Up to 9" dia. incl. not over 2" thick	3-1/2	57
Over 9" dia. to 16" dia. incl. not over 3" thick	4-1/2	151
Over 16" dia. to 19" dia. incl. not over 4" thick	5	239
Over 19" dia. to 24" dia. incl. not over 5" thick	5-1/2	377
Over 24" dia. to 30" dia. incl. not over 6" thick	6-1/2	565

(f) In case a grinding, polishing, buffing or scratch brushing wheel is thicker than given in the tables set out herein, the diameter of the hood outlet and branch pipe connected thereto shall not be less than called for by its wheel surface.

When the grinding, polishing, buffing or scratch brushing wheel surface exceeds 679 square inches, the inside area of the hood outlet and branch pipe connected thereto shall be increased in size in the ratio of one square inch of opening to 17 square inches of wheel surface.

(g) Grinding wheels or discs for horizontal single- spindle disc grinders shall be hooded to collect the dust or dirt generated by the grinding operation and the hoods shall be connected to branch pipes of the following minimum diameters:

Table 15-28-1210(g)

Size of Wheel or Disc – Inches	*Minimum Inside Diameter of Hood Outlet and Branch Pipe (Inches)*
Up to 12" diameter	3
Over 12" to 19" dia. incl.	4
Over 19" to 30" dia. incl.	5
Over 30" to 36" dia. incl.	6

(h) Grinding wheels or discs for double-spindle disc grinders shall have a hood enclosing the grinding chamber and such hood shall be connected to one or more branch pipes of the following minimum diameters:

Table 15-28-1210(h)

Size of Wheel or Disc – Inches	*Minimum Number and Inside Diameter of Hood Outlet and Branch Pipe (Inches)*
Up to 19" dia. incl.	1 pipe – 5"
Over 19" dia. to 25" dia. incl.	1 pipe – 6"
Over 25" dia. to 30" dia. incl.	1 pipe – 7"
Over 30" dia. to 53" dia. incl.	2 pipes – 6"
Over 53" dia. to 72" dia. incl.	4 pipes – 8"

(i) Grinding wheels or discs for vertical single- spindle disc grinders shall be encircled with a hood to remove the dust generated in the operation and such hoods shall be connected to one or more branch pipes of the following minimum inside diameters:

Table 15-28-1210(i)

Size of Disc – Inches	*Minimum Number and Inside Diameter of Hood Outlet and Branch Pipe (Inches)*
Up to 20" dia.	1 pipe – 4 1/2"
Over 20" dia. to 30" dia. incl.	2 pipes – 4"
Over 30" dia. to 53" dia. incl.	2 pipes – 6"
Over 53" dia. to 72" dia. incl.	2 pipes – 8"

(j) Grinding and polishing straps and belts shall be provided with hoods to remove dust or dirt generated in the operation and such hoods shall be connected to branch pipes of the following minimum inside diameters:

Table 15-28-1210(j)

Strap or Belt Size –Inches	*Minimum Inside Diameter of Hood Outlet and Branch Pipe (Inches)*
Up to 2" wide	3"
Over 3" wide	For each 2" or fraction thereof increase in strap or belt width, add 1/2" or fraction thereof to the hood outlet and branch pipe size.

In instances where potentially explosive dusts are removed, an additional branch pipe connection shall be provided at each point of rotational direction change.

(k) Cleanout openings shall be provided in all horizontal runs of ducts, at ten-foot intervals, at such other points as will permit proper cleaning, and wherever dust settlement is likely to occur, such as near bends, pipe junctions and vertical duct risers.

Cleanout openings shall be of a size that will permit ready access to the duct interior. Wherever practical, cleanout openings should be located on the underside of the ducts. Removable caps shall be provided at all horizontal duct tail-ends.

(l) 1. Branch pipe junctions to main pipe shall be made at an angle not greater than 45 degrees and should, for least resistance and

best practice, be 30 degrees or less, measured on the centerline of the two pipes.

2. Junctions shall be made at the side or top of the larger end of a transformation piece, except that for specific reasons of balancing the flow, junction may be made with the main pipe section of uniform pipe diameter.

3. *Transformation Pieces.* Transformation pieces shall be tapered at an included angle not greater than 30 degrees. Transformation pieces shall increase in area by an amount necessary to maintain the air velocity required in the system, and shall be constructed of material equal in gauge to the material of the connecting pipe at the large end.

(m) 1. *Materials of Construction.* All pipes shall be constructed of not less than the following gauges of metal, or other noncombustible and moisture-resisting material of equivalent strength:

Table 15-28-1210(m)

Diameter of Pipe – Inches	*U.S. Standard Gauge*
Up to 8" inclusive	20
Over 8" to 18" incl.	18
Over 18" to 30" incl.	16
Over 30"	14

2. *Elbows and Bends.* All elbows and bends shall be made from material at least two gauges heavier than is required for straight piping of the same diameter, except that for No. 14 gauge and heavier, the elbows and straight pipe may be of the same gauge.

3. *Material.* Exhaust piping shall be of galvanized or painted black sheet iron or other noncombustible materials of required strength, corrosion and abrasion-resisting properties.

4. Compliance with mechanical exhaust test requirements shall be determined in accordance with Sections 13-176-220* and 13-176-240.*

*** Editor's note** – Repealed by Coun. J. 7-9-03, p. 3609, § 1.

5. *Precleaning Metallic Surfaces.* All metallic parts, prior to being subjected to grinding, polishing or buffing processes, shall be thoroughly cleansed of all adhering oils, greases and corrosion- protective materials. All parts surfaces shall be free of solvents before being subjected to grinding, polishing or buffing operations. Every tank or vat containing a volatile flammable cleaning solvent shall be provided with an automatically closing close-fitting cover.

6. *Electrical Controls.* All electrical controls shall be installed as provided in Title 14E.

(Prior code § 92-110; Amend Coun. J. 9-6-17, p. 55278, Art. II, § 61)

ARTICLE XXI. UNDERGROUND STORAGE TANK VIOLATIONS. (15-28-1220 et seq.)

15-28-1220 Underground tank storage.

Any person who installs, maintains, repairs, removes or abandons in place any underground storage tank in violation of any section of Title 41, Chapter I, Part 170, Subparts B and D, Part 171 and Part 172 of the Illinois Administrative Code as amended from time to time or any administrative order issued under Section 2 of the Gasoline Storage Act, 430 ILCS 15/2, shall be considered to have violated this section. The fire department shall have the authority to: (1) enforce the above-cited provisions which are incorporated herein by reference; (2) obtain any and all applicable relief, including injunctions, court costs and fees; and (3) exercise such powers and perform such functions as may be delegated to the City by the Office of the State Fire Marshal pursuant to Section 2 of the Gasoline Storage Act, 430 ILCS 15/2. Any person found in violation of these provisions or any administrative order issued under Section 2 of the Gasoline Storage Act, 430 ILCS 15/2, shall be fined in an amount equal to the fine specified for the violation in the Gasoline Storage Act (430 ILCS 15) for each violation, and any such violation shall constitute a public nuisance. Each and every violation of any Section of Title 41, Chapter I, Part 170, Subpart B, Part 171 and Part 172 of the Illinois Administrative Code or any administrative order issued under Section 2 of the Gasoline Storage Act, 430 ILCS 15/2, shall constitute a separate and distinct violation. Each day on which such violation exists shall constitute a separate and distinct offense.

(Added Coun. J. 11-17-93, p. 43012; Amend Coun. J. 4-11-07, p. 102582, § 3; Amend Coun. J. 11-8-12, p. 38872, § 237)

CHAPTER 15-30

RESERVED*

*** Editor's note** – Coun. J. 5-17-00, p. 32564, § 1, renumbered Ch. 15-30 as Ch. 8-28 and amended the provisions thereof, which pertained to liability for fire suppression and other emergency services costs.