City of Chicago

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Office of the City Clerk

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Meeting Date:	7/21/2021
Sponsor(s):	Lightfoot (Mayor)
Type:	Ordinance
Title:	Amendment of Municipal Code Chapter 18-28 regarding mechanical systems and building provisions, and coordinating amendments of Chapters 2-116, 4-344, 4-376, 11-20, 14A-1, 14M-1 and 18-36
Committee(s) Assignment:	Committee on Zoning, Landmarks and Building Standards

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OFFICE OF THE MAYOR

CITY OF CHICAGO

LORI E. LIGHTFOOT
MAYOR

July 21, 2021

TO THE HONORABLE, THE CITY COUNCIL
OF THE CITY OF CHICAGO

Ladies and Gentlemen:

At the request of the Commissioner of Buildings, I transmit herewith an ordinance amending the mechanical and building provisions of the Municipal Code.

Your favorable consideration of this ordinance will be appreciated.

Very truly yours,

Lori E. Lightfoot

Mayor

ORDINANCE

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHICAGO:

This ordinance is organized into 16 articles, as follows:

Article I:	Amendments to Chapter 18-28, Article I
Article II:	Amendments to Chapter 18-28, Article II
Article III:	Amendments to Chapter 18-28, Article III
Article IV:	Amendments to Chapter 18-28, Article IV
Article V:	Amendments to Chapter 18-28, Article V
Article VI:	Amendments to Chapter 18-28, Article VI
Article VII:	Amendments to Chapter 18-28, Article VII
Article VIII:	Amendments to Chapter 18-28, Article VIII
Article IX:	Amendments to Chapter 18-28, Article IX
Article X:	Amendments to Chapter 18-28, Article X
Article XI:	Amendments to Chapter 18-28, Article XI
Article XII:	Amendments to Chapter 18-28, Article XII
Article XIII:	Amendments to Chapter 18-28, Article XIII
Article XIV:	Amendments to Chapter 18-28, Article XV
Article XV:	Coordinating Amendments
Article XVI:	Implementation and Effective Date

ARTICLE I.
AMENDMENTS TO CHAPTER 18-28, ARTICLE I

SECTION 1. Section 18-28-102 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-102 Applicability

(omitted text is not affected by this ordinance)

18-28-102.5 Change in occupancy.
It shall be unlawful to change the occupancy of any structure if that change will subject the structure to any provision of the ~~building code~~ Chicago Construction Codes applicable to the new occupancy without ~~approval by the Building Commissioner. The Building Commissioner shall certify that such structure meets the intent of the provisions of law governing building construction for the proposed new occupancy and that such change of occupancy does not result in any hazard to public health, safety or welfare.~~ first obtaining a building permit.

(omitted text is not affected by this ordinance)

18-28-102.7 Moved buildings.
Except as ~~determined by~~ provided in Section 18-28-102.2 and Title 14R, ~~Existing Installations,~~ mechanical systems that are a part of buildings or structures moved into or within the corporate

limits of the City of Chicago shall comply with the provisions of ~~the building code~~ this chapter for new installations.

18-28-102.8 Referenced chapters and standards.
The codes and standards referenced in this chapter shall be those that are listed in Chapter 18-36~~, Reference Standards~~. Such codes and standards shall be considered as part of the requirements of this chapter to the prescribed extent of each such reference. Where differences occur between provisions of this chapter and the referenced standards, the provisions of this chapter shall apply.

18-28-102.9 Requirements not covered by this chapter.
Requirements necessary for the strength, stability or proper operation of an existing or proposed mechanical system, or for public safety, health and general welfare, not specifically covered by the ~~building code~~ Chicago Construction Codes, shall be determined by the Building Commissioner.

SECTION 2. Section 18-28-105.3 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-105.3 Required testing.
Whenever there is insufficient evidence of compliance with the provisions of this chapter or evidence that a material or method does not conform to the requirements of this chapter, or in order to substantiate claims for alternative materials or methods, the Building Commissioner shall have the authority to require tests as evidence of compliance to be made at no expense to ~~its jurisdiction~~ the City of Chicago.

SECTION 3. Section 18-28-106 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety.

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ARTICLE II.
AMENDMENTS TO CHAPTER 18-28, ARTICLE II

SECTION 1. Section 18-28-201.3 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-201.3 Terms defined in other codes provisions.
If a term is not defined in this ~~chapter~~ article and is defined in Title 14A, 14B, 14C, 14E, 14F, 14N, 14P, 14R or 14X, or other chapters of ~~Titles 13, 15 and~~ Title 18, the term shall have the meanings ascribed to it in those ~~chapters~~ provisions, unless the context clearly requires otherwise.

SECTION 2. Section 18-28-202 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-202 ~~General definitions~~ Definitions.

(omitted text is not affected by this ordinance)

ALTERATION. ~~A change in a mechanical system that involves an extension, addition or change to the arrangement, type or purpose of the original installation.~~ As defined in Chapter 14R-2.

APPLIANCE. A device or apparatus that is manufactured and designed to utilize energy and for which ~~the building code~~ this chapter provides specific requirements.

APPLIANCE, EXISTING. Any appliance regulated by ~~the building code~~ this chapter which was legally installed prior to the effective date of ~~the building code~~ this chapter, or for which an installation permit has been issued.

(omitted text is not affected by this ordinance)

APPROVED. Acceptable to the Building Commissioner.

(omitted text is not affected by this ordinance)

BATHROOM. A room containing a bathtub, shower, spa or similar bathing fixture.

(omitted text is not affected by this ordinance)

BUILDING. ~~Any structure occupied or intended to support occupancy or to shelter any occupants.~~ As defined in Chapter 14B-2.

(omitted text is not affected by this ordinance)

CHICAGO BUILDING CODE. Title 14B of the Municipal Code of Chicago.

CHICAGO CONSTRUCTION CODES. As defined in Chapter 14A-2.

CHICAGO ELECTRICAL CODE. Title 14E of the Municipal Code of Chicago.

CHICAGO ENERGY CONSERVATION CODE. Title 14N of the Municipal Code of Chicago.

CHICAGO FIRE PREVENTION CODE. Title 14F of the Municipal Code of Chicago.

CHICAGO PLUMBING CODE. Title 14P of the Municipal Code of Chicago.

(omitted text is not affected by this ordinance)

CLOTHES DRYER. An appliance used to dry wet laundry by means of heat. ~~Dryer classifications are as follows:~~

~~*Type 1.* Factory-built package, multiple production. Primarily used in family living environment. Usually the smallest unit physically and in terms of function output.~~

~~*Type 2.* Factory-built package, multiple production. Used in a business to benefit customer. Not designed for use in an individual family living environment.~~

~~CODE. These regulations, including any subsequent amendments thereto and any emergency rule or regulation lawfully adopted by the Building Commissioner or other authority with regulatory jurisdiction.~~

COMBUSTIBLE ASSEMBLY. Any wall, floor, ceiling or other assembly constructed of one or more component materials that ~~are combustible~~ do not meet the definition of noncombustible.

(omitted text is not affected by this ordinance)

COMBUSTION. In the context of ~~the building code~~ this chapter, refers to the rapid oxidation of fuel accompanied by the production of heat or heat and light.

(omitted text is not affected by this ordinance)

CONSTRUCTION DOCUMENTS. ~~All of the written, graphic and pictorial documents, drawn to an appropriate scale and prepared or assembled to describe the design, location and physical characteristics of the elements of a project, that are necessary to obtain a building permit.~~ As defined in Chapter 14A-2.

(omitted text is not affected by this ordinance)

~~DWELLING. A building or portion thereof that contains not more than two dwelling units.~~

DWELLING UNIT. ~~A single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, eating, cooking and sanitation.~~ As defined in Chapter 14B-2.

(omitted text is not affected by this ordinance)

ENERGY RECOVERY VENTILATION SYSTEM. A system that employs air-to-air heat exchangers to recover energy from or reject energy to exhaust air for the purpose of preheating, precooling, humidifying or dehumidifying outdoor ventilation air prior to supplying such air to a space, either directly or as part of an heating, ventilation or air conditioning system.

EQUIPMENT. All piping, ducts, vents, control devices and other components of any system other than appliances which are permanently installed and integrated to control environmental conditions in a building. This definition shall also include other systems specifically regulated by ~~the building code~~ this chapter.

EQUIPMENT, EXISTING. Any equipment regulated by ~~the building code~~ this chapter which was legally installed prior to the effective date of ~~the building code~~ this chapter, or for which a permit to install has been issued.

(omitted text is not affected by this ordinance)

FLAME SPREAD INDEX. ~~The numerical value assigned to a material tested in accordance with ASTM E 84.~~ As defined in Chapter 14B-2.

(omitted text is not affected by this ordinance)

FLOOD ZONES. Areas determined in accordance with Chapter 16-6.

Flood-hazard zone. Areas that have been determined to be prone to flooding, but not subject to high-velocity waters or wave action.

High-hazard zone. Areas of tidal influence determined ~~by the department of water management~~ to be subject to wave heights in excess of 3 feet (914 mm) or subject to high-velocity wave run up or wave-induced erosion.

(omitted text is not affected by this ordinance)

HAZARDOUS LOCATION. Any location considered to be a fire hazard for flammable vapors, dust, combustible fibers or other highly combustible substances. The location is not necessarily categorized in the ~~building code~~ Chicago Building Code as a high-hazard use group classification.

(omitted text is not affected by this ordinance)

LABELED. ~~Devices, equipment, appliances or materials affixed with a label, seal, symbol or other identifying mark of a nationally recognized testing laboratory, inspection agency or other organization that evaluates products, periodically inspects the production of the above-labeled items and by whose label the manufacturer attests to compliance with applicable nationally recognized standards.~~ As defined in Chapter 14B-2.

LARGE-DIAMETER CEILING FAN. A ceiling fan that is greater than 7 feet (2134 mm) in diameter. These fans are also referred to as high-volume, low-speed (HVLS) fans.

(omitted text is not affected by this ordinance)

LISTED. ~~Equipment, appliances or materials included in a list published by a nationally recognized testing laboratory, inspection agency or other organization that evaluates products, periodically inspects the production of listed equipment, appliances or materials, and whose listing states either that the equipment, appliance or material meets nationally recognized standards or have been tested and found suitable for use in a specified manner. Not all testing laboratories, inspection agencies and other organizations that evaluate products use the same means to identify listed equipment, appliances or materials. Some do not recognize equipment, appliances or materials as listed unless they are also labeled. The Building Commissioner shall utilize the system employed by the listing organization to identify a listed product.~~ As defined in Chapter 14B-2.

(omitted text is not affected by this ordinance)

MECHANICAL SYSTEM. A system specifically addressed and regulated ~~in the building code~~ by this chapter and comprising components, devices, appliances and equipment.

(omitted text is not affected by this ordinance)

SHAFT. ~~An enclosed space extending through one or more stories of a building, connecting vertical openings in successive floors, or floors and the roof.~~ As defined in Chapter 14B-2.

SHAFT ENCLOSURE. ~~The walls or construction that forms the boundaries of the shaft.~~ As defined in Chapter 14B-2.

SLEEPING UNIT. As defined in Chapter 14B-2.

SMOKE DAMPER. ~~A listed device designed to resist the passage of air and smoke. The device operates automatically, is controlled by a smoke detection system, and when required and if required, is capable of being positioned manually from a remote command station.~~ As defined in Chapter 14B-2.

SMOKE-DEVELOPED INDEX. ~~A numerical value assigned to a material tested in accordance with ASTM E 84.~~ As defined in Chapter 14B-2.

(omitted text is not affected by this ordinance)

STORY. ~~That portion of a building included between a floor's upper surface and the upper surface of the floor immediately above; provided, however, that the topmost story is that portion of a building included between the upper surface of the top most floor and the ceiling or roof above.~~ As defined in Chapter 14B-2.

(omitted text is not affected by this ordinance)

THIRD-PARTY CERTIFICATION AGENCY. An approved agency operating a product or material certification system that incorporates initial product testing, assessment and surveillance of a manufacturer's quality control system.

THIRD-PARTY CERTIFIED. Certification obtained by the manufacturer indicating that the function and performance characteristics of a product or material have been determined by testing and ongoing surveillance by an approved third-party certification agency. Assertion of certification is in the form of identification in accordance with the requirements of the third-party certification agency.

THIRD-PARTY TESTED. Procedure by which an approved testing laboratory provides documentation that a product, material or system conforms to specified requirements.

(omitted text is not affected by this ordinance)

TOILET ROOM. A room containing a water closet and, frequently, a lavatory, ~~or~~ but not a bathtub, shower, spa or similar bathing fixture.

(omitted text is not affected by this ordinance)

~~UNUSUALLY TIGHT CONSTRUCTION. Construction which meets the following requirements:~~

~~1. Walls and ceilings exposed to the outside atmosphere having a continuous water vapor retarder with a rating of 1 perm (57 ng/s x m 2 x Pa) or less with openings gasketed or sealed;~~

~~2. Storm windows or weather-stripping on operable windows and doors; and~~

~~3. Caulking or sealants applied to areas, such as joints around window and door frames, between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical and gas lines, and at other openings.~~

UNVENTED ALCOHOL FUEL-BURNING DECORATIVE APPLIANCE. A stationary, self-contained appliance intended to be permanently secured to a wall or floor and not intended for duct connection. Such appliance burns alcohol and is made in a manufacturing facility for subsequent delivery to the installation site.

(omitted text is not affected by this ordinance)

ARTICLE III.
AMENDMENTS TO CHAPTER 18-28, ARTICLE III

SECTION 1. Section 18-28-301 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-301 General.

18-28-301.1 Scope.
This chapter shall govern the approval and installation of all equipment and appliances that are part of a building's mechanical systems regulated by ~~the building code~~ this chapter in accordance with Section 18-28-101.2~~, Scope~~.

18-28-301.2 Energy utilization.
The heating, ventilating and air-conditioning systems of all structures shall be designed and installed for efficient utilization of energy in accordance with ~~Chapter 18-13, Energy Conservation~~ the Chicago Energy Conservation Code.

18-28-301.3 ~~Listed and labeled~~ Identification.
~~All appliances regulated by the building code shall be listed and labeled by the Underwriters Laboratories, the Canadian Standards Association or the American Gas Association.~~ Each length of pipe and tubing and each pipe fitting utilized in a mechanical system shall bear the identification of the manufacturer.

18-28-301.4 ~~Deliberately omitted~~ Plastic pipe, fittings and components.
Plastic pipe, fittings and components shall be third-party certified as conforming to NSF 14.

18-28-301.5 Third-party testing and certification.
Piping, tubing and fittings shall comply with the applicable referenced standards, specifications and performance criteria of this chapter and shall be identified in accordance with Section 18-28-301.3. Piping, tubing and fittings shall either be tested by an approved third-party testing agency or certified by an approved third-party certification agency.

18-28-301.6 Fuel gas appliances and equipment.
The approval and installation of fuel gas distribution piping and equipment, fuel gas-fired appliances and fuel gas-fired appliance venting systems shall be in accordance with Article 14 of this chapter.

18-28-301.7 Listed and labeled.
Appliances regulated by this chapter shall be listed and labeled for the application in which they are installed and used, unless otherwise approved in accordance with Chapter 14A-10.

Exception: Listing and labeling of equipment used for refrigeration shall be in accordance with Section 18-28-1101.2.

18-28-301.8 Deliberately omitted.

18-28-301.9 Label information.
A permanent factory-applied nameplate shall be affixed to all appliances. The nameplate shall contain the following information about the appliance in legible lettering: the manufacturer's name or trademark, the model number, the serial number and a seal or mark of ~~approval by a nationally-recognized listing~~ the approved agency. ~~If required, a label containing the following information shall be affixed to the appliance:~~ A label shall include the following:

1. *Electrical equipment and appliances.* Electrical rating in volts, amperes and motor phase; identification of individual electrical components in volts, amperes or watts; motor phase; Btu/h (W) output; and required clearances.

(omitted text is not affected by this ordinance)

~~**18-28-301.6 Conflicts.**~~
~~If a conflict exists between this chapter and the conditions of the listing or the manufacturer's installation instructions, the more stringent provision shall apply.~~

~~**18-28-301.7**~~ **18-28-301.10 Electrical.**

(omitted text is not affected by this ordinance)

~~**18-28-301.8**~~ **18-28-301.11 Plumbing connections.**
Potable water supply and building drainage system connections to equipment and appliances regulated by this chapter shall be in accordance with ~~Chapter 18-29, Plumbing Systems~~ the Chicago Plumbing Code.

~~**18-28-301.9**~~ **18-28-301.12 Fuel types.**

(omitted text is not affected by this ordinance)

~~**18-28-301.10**~~ **18-28-301.13 Vibration isolation.**

(omitted text is not affected by this ordinance)

~~**18-28-301.11**~~ **18-28-301.14 Repair.**

(omitted text is not affected by this ordinance)

~~**18-28-301.12**~~ **18-28-301.15 Wind resistance.**
Mechanical equipment, appliances and supports exposed to wind shall be designed and installed to resist wind pressures ~~as required by the building code~~ determined in accordance with Chapter 16 of the Chicago Building Code.

~~**18-28-301.13**~~ **18-28-301.16 Flood hazard.**

(omitted text is not affected by this ordinance)

~~**18-28-301.14 Deliberately omitted.**~~

18-28-301.17 Rodentproofing.
Buildings containing rooms or spaces in which people live, sleep or work, or in which feed, food or foodstuffs are stored, prepared, processed, served or sold, shall be constructed to protect against the entrance of rodents in accordance with Section 1210 of the Chicago Building Code.

18-28-301.18 Seismic resistance.
Where earthquake loads are applicable in accordance with the Chicago Building Code, mechanical system supports, anchorage and bracing shall be designed and installed for seismic forces in accordance with Chapter 16 of the Chicago Building Code.

SECTION 2. Section 18-28-302.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-302.1 Penetrations of floor/ceiling assemblies and fire-resistance-rated assemblies. Penetrations of floor/ceiling assemblies and assemblies required to have a fire-resistance rating shall be protected in accordance with ~~both Chapters 15-8 and 15-12 or Chapter 14B-7 of this Code, as applicable~~ Chapter 7 of the Chicago Building Code.

SECTION 3. Section 18-28-303.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-303.1 General.
The location of all equipment and appliances shall be governed by the requirements of this section, by specific requirements found elsewhere in ~~the building code~~ this chapter and by the conditions of the equipment and appliance listing.

SECTION 4. Table 18-28-305.4 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

Table 18-28-305.4
Piping Support Spacing [a]

(omitted text is not affected by this ordinance)

a. See Section ~~18-28-301.14~~ 18-28-301.18.

(omitted text is not affected by this ordinance)

SECTION 5. Section 18-28-307.2.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-307.2.1 Condensate disposal.

(omitted text is not affected by this ordinance)

1. Units larger than 6 tons (21.1 kW) nominal capacity shall discharge to a sanitary sewer drain, storm sewer drain or a French drain constructed in accordance with

Section 18-28-307.2.1.1. If condensate is discharged to a sanitary sewer, such drains shall be indirectly connected in accordance with ~~the Chapter 18-29 of~~ the Chicago Plumbing Code.

(omitted text is not affected by this ordinance)

SECTION 6. Section 18-28-308 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-308 Clearance Reduction.

(omitted text is not affected by this ordinance)

18-28-308.8 Masonry chimneys.
The clearance reduction methods specified in Table 18-28-308.6 shall not be used to reduce the clearances required for masonry chimneys as specified in Article ~~VIII~~ 8 of this chapter and ~~Chapter 13-152 or Chapter 14B-21 of this Code, as applicable~~ Chapter 21 of the Chicago Building Code.

(omitted text is not affected by this ordinance)

18-28-308.10 Masonry fireplaces.
The clearance reduction methods specified in Table 18-28-308.6 shall not be used to reduce the clearances required for masonry fireplaces as specified in Article 8 of this chapter and ~~the building code~~ Chapter 21 of the Chicago Building Code.

(omitted text is not affected by this ordinance)

SECTION 7. Section 18-28-309 of the Municipal Code of Chicago is hereby repealed in its entirety and replaced, as follows:

18-28-309 Temperature Control.

18-28-309.1 General.
Temperature control for interior spaces shall be provided in accordance with Section 1203 of the Chicago Building Code.

SECTION 8. Section 18-28-310 of the Municipal Code of Chicago is hereby repealed in its entirety and replaced, as follows:

18-28-310 Explosion Control.

18-28-310.1 General.
Structures occupied for purposes involving explosion hazards shall be provided with explosion control where required by the Chicago Fire Prevention Code.

SECTION 9. Section 18-28-311 of the Municipal Code of Chicago is hereby repealed in its entirety and replaced, as follows:

18-28-311 Smoke and Heat Removal.

18-28-311.1 General.
Buildings shall be provided with smoke and heat vents or mechanical smoke removal systems where required by the Chicago Building Code.

SECTION 10. Section 18-28-312 of the Municipal Code of Chicago is hereby repealed in its entirety and replaced, as follows:

18-28-312 Heating and Cooling Load Calculations.

18-28-312.1 Load calculations.
Heating and cooling system design loads for the purpose of sizing systems shall be determined in accordance with the procedures described in ASHRAE/ACCA Standard 183. Alternatively, design loads shall be determined by an approved equivalent computation procedure using the design parameters specified in Chapter 3 [CE] of the Chicago Energy Conservation Code.

ARTICLE IV.
AMENDMENTS TO CHAPTER 18-28, ARTICLE IV

SECTION 1. Sections 18-28-401.5, 18-28-401.5.1, 18-28-401.5.1.1, 18-28-401.5.1.2, 18-28-401.5.1.3 and 18-28-401.5.1.4 of the Municipal Code of Chicago are hereby repealed in their entirety.

SECTION 2. Section 18-28-402.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-402.1 Natural ventilation.
~~See Chapter 13-172 or 14B-12, as applicable.~~ Natural ventilation shall comply with Chapter 12 of the Chicago Building Code.

SECTION 3. Section 18-28-403.1.3 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-403.1.3 Systems with water economizers.
If a system is equipped with a ~~Water Economizer~~ water economizer in accordance with the Chicago Energy ~~Conversion~~ Conservation Code, the amount of outside air delivered by the mechanical air handling system shall be no less than 1/3 of the code-required supply air. The area of the outside air intake shall be sized so that at least 1/3 of the code-required supply air

can be taken from outdoors at velocities not in excess of 1,000 feet per minute (304.8 mpm) through the free area. The remaining air may be supplied by a recirculating air system if the system is equipped with devices to control temperature and dust content. The total quantity of air delivered to the space shall be 100 percent of the code-required air.

SECTION 4. Table 18-28-403.3 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

Table 18-28-403.3
Ventilating Requirements*

(omitted text is not affected by this ordinance)

Sleeping Rooms		4	0	0	See ~~Chapter 13-172 or~~ Chapter 14B-12~~, as applicable~~; may exhaust through toilet room.
	4		0.3	0.3	
(omitted text is not affected by this ordinance)					
Sleeping Rooms (Dormitories)		4	NV	NV	See ~~Chapter 13-172 or~~ Chapter 14B-12~~, as applicable~~.
(omitted text is not affected by this ordinance)					
Living Quarters			NV	NV	See ~~Chapter 13-172 or~~ Chapter 14B-12~~, as applicable~~.
(omitted text is not affected by this ordinance)					
~~Residential Dryers~~	~~NA~~	~~NA~~	~~0~~		~~See Notes 3 and 4.~~
(omitted text is not affected by this ordinance)					
~~Garages,~~ Private Garages (less than 6 cars)			RO	RO	1.0 sf of opening per car.

(omitted text is not affected by this ordinance)

Note 3. ~~Provide a minimum room exhaust of 110 CFM per electric dryer.~~ [Reserved.]

(omitted text is not affected by this ordinance)

SECTION 5. Section 18-28-403.3.7 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety.

SECTION 6. Section 18-28-403.15 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-403.15 ~~Miscellaneous spaces~~ Generator rooms.
~~1. *Generator Rooms.*~~ A room ~~or rooms with generator(s)~~ containing a generator shall meet the air flow and combustion air requirements ~~as noted~~ in the Chicago Electrical Code~~, 18-27-701*, Legally Required Standby Generating Systems - Ventilating Air~~.

SECTION 7. Section 18-28-406 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-406 ~~Deliberately omitted~~ Ventilation of Uninhabited Spaces.

18-28-406.1 General.
Uninhabited spaces, such as crawl spaces and attics, shall be provided with natural ventilation openings as required by Chapter 12 of the Chicago Building Code or shall be provided with a mechanical exhaust and supply air system. The mechanical exhaust rate shall be not less than 0.02 cfm per square foot (0.00001 $m^3/s \cdot m^2$) of horizontal area and shall be automatically controlled to operate when the relative humidity in the space served exceeds 60 percent.

ARTICLE V.
AMENDMENTS TO CHAPTER 18-28, ARTICLE V

SECTION 1. Section 18-28-501.4 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-501.4 Pressure equalization.
Mechanical exhaust systems shall be sized to remove the quantity of air required by this article to be exhausted. The system shall operate when air is required to be exhausted. Where mechanical exhaust is required in a room or space in occupancies other than in Groups R-3, R-4 and R-5 and dwelling units in Group R-2, such space shall be maintained with a neutral or negative pressure. If a greater quantity of air is supplied by a mechanical ventilating supply system than is removed by a mechanical exhaust system for a room, adequate means shall be provided for the natural ~~exit~~ or mechanical exhaust of the excess air supplied. If only a mechanical exhaust system is installed for a room or if a greater quantity of air is removed by a mechanical exhaust system than is supplied by a mechanical ventilating supply system for a room, adequate means shall be provided for the natural supply of the deficiency in the air supplied. ~~Mechanical exhaust system shall have the capacity to exhaust air to the out-of-doors equal to or greater than 90% of the total outside air required by Article 4, Ventilation. This requirement can be met through the use of mechanical exhaust systems, relief openings where allowed per Article 4, Ventilation, or a combination of both.~~

SECTION 2. Section 18-28-502.3 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

18-28-502.3 Battery-charging areas for powered industrial trucks and equipment.
Ventilation shall be provided in an approved manner in battery-charging areas for powered industrial trucks and equipment to prevent a dangerous accumulation of flammable gases.

SECTION 3. Section 18-28-502.4 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-28-502.4 Stationary storage battery systems.
Stationary storage battery systems shall be regulated and ventilated in accordance with the general requirements of this article and Chapter 12 of the Chicago Fire Prevention Code.

SECTION 4. Section 18-28-502.6.2 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

18-28-502.6.2 Limited spraying spaces.
Positive mechanical ventilation which provided a minimum of six complete air changes per hour shall be installed in limited spraying spaces. Such system shall meet the requirements of the Chicago Fire Prevention Code for handling flammable vapors. Explosion venting is not required.

SECTION 5. Section 18-28-502.7.1 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-502.7.1 Storage in excess of the maximum allowable quantities.

(omitted text is not affected by this ordinance)

Exception: Storage areas for flammable solids complying with the requirements of the Chicago Fire Prevention Code.

18-28-502.7.1.1 System requirements.

(omitted text is not affected by this ordinance)

1. The installation shall be in accordance with the ~~building code~~ Chicago Building Code.

(omitted text is not affected by this ordinance)

SECTION 6. Section 18-28-502.8.5 of the Municipal Code of Chicago and its subsections are hereby amended by inserting the language underscored, as follows:

18-28-502.8.5 Flammable and combustible liquids.

(omitted text is not affected by this ordinance)

Exception: This section shall not apply to flammable and combustible liquids that are exempt from the Chicago Fire Prevention Code.

(omitted text is not affected by this ordinance)

18-28-502.8.5.2 Storage rooms and warehouses.
Liquid storage rooms and liquid storage warehouses for quantities of liquids exceeding those specified in the Chicago Fire Prevention Code shall be ventilated in accordance with Section 18-28-502.7.1.

18-28-502.8.5.3 Cleaning machines.
Areas in which machines used for parts cleaning in accordance with the Chicago Fire Prevention Code are located shall be adequately ventilated to prevent accumulation of vapors.

(omitted text is not affected by this ordinance)

SECTION 7. Section 18-28-502.8.8 of the Municipal Code of Chicago and its subsections are hereby amended by inserting the language underscored, as follows:

18-28-502.8.8 Highly toxic and toxic compressed gases – quantities exceeding the maximum allowable per control area.

(omitted text is not affected by this ordinance)

18-28-502.8.8.2 Local exhaust for portable tanks.
A means of local exhaust shall be provided to capture leakage from indoor and outdoor portable tanks. The local exhaust shall consist of portable ducts or collection systems designed to be applied to the site of a leak in a valve or fitting on the tank. The local exhaust system shall be located in a gas room. Exhaust shall be directed to a treatment system where required by the Chicago Fire Prevention Code.

18-28-502.8.8.3 Piping and controls – stationary tanks.
Filling or dispensing connections on indoor stationary tanks shall be provided with a means of local exhaust. Such exhaust shall be designed to capture fumes and vapors. The exhaust shall be directed to a treatment system where required by the Chicago Fire Prevention Code.

(omitted text is not affected by this ordinance)

18-28-502.8.8.5 Treatment system.
The exhaust ventilation from gas cabinets, exhausted enclosures and gas rooms, and local exhaust systems required in Sections 18-28-502.8.8.2 and 18-28-502.8.8.3 shall be directed to a treatment system where required by the Chicago Fire Prevention Code.

18-28-502.8.8.6 Process equipment.
Effluent from indoor and outdoor process equipment containing highly toxic or toxic compressed gases which could be discharged to the atmosphere shall be processed through an exhaust scrubber or other processing system. Such systems shall be in accordance with the Chicago Fire Prevention Code.

SECTION 8. Section 18-28-502.9 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-502.9 Hazardous production materials (HPM).
Exhaust ventilation systems and materials for ducts utilized for the exhaust of HPM shall comply with this section, other applicable provisions of ~~the building code~~ this chapter, the Chicago Building Code and the Chicago Fire Prevention Code.

18-28-502.9.1 Where required.
Exhaust ventilation systems shall be provided in the following locations in accordance with the requirements of this section.

1. *Fabrication areas.* Exhaust ventilation for fabrication areas shall comply with requirements for ~~Hazardous Use Units~~ Group H occupancies and the Chicago Fire Prevention Code. Additional manual control switches shall be provided at exits from the fabrication area.
2. *Workstations.* A ventilation system shall be provided to capture and exhaust fumes and vapors at workstations.
3. *Liquid storage rooms.* Exhaust ventilation for liquid storage rooms shall comply with Section 18-28-502.7.1.1 and requirements for ~~Hazardous Use Units~~ Group H occupancies and the Chicago Fire Prevention Code.
4. *HPM rooms.* Exhaust ventilation for HPM rooms shall comply with Section 18-28-502.7.1.1 and ~~other applicable codes~~ the Chicago Building Code.

(omitted text is not affected by this ordinance)

18-28-502.9.3 Treatment systems.
Treatment systems for highly toxic and toxic gases shall comply with the Chicago Fire Prevention Code.

SECTION 9. Section 18-28-502.13 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-502.13 Motor vehicle operation.

(omitted text is not affected by this ordinance)

2. This section shall not apply to ~~one- and two-family dwellings~~ Group R-5 occupancies and Group U private garages.

(omitted text is not affected by this ordinance)

SECTION 10. Section 18-28-502.15.2 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

18-28-502.15.2 Operation.

(omitted text is not affected by this ordinance)

1. Mechanical ventilation systems that are interlocked with a gas detection system designed in accordance with the Chicago Fire Prevention Code.

(omitted text is not affected by this ordinance)

SECTION 11. Section 18-28-504 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-28-504 Clothes Dryer Exhaust.

18-28-504.1 Installation.
Clothes dryers shall be exhausted in accordance with the manufacturer's instructions. Dryer exhaust systems shall convey the moisture and any products of combustion to the outside of the building.

> **Exception:** This section shall not apply to listed and labeled condensing (ductless) electric clothes drying machines plumbed to drains in accordance with the Chicago Plumbing Code.

18-28-504.2 Exhaust penetrations.
Where a clothes dryer exhaust duct penetrates a wall or ceiling membrane, the annular space shall be sealed with noncombustible material, approved fire caulking or a noncombustible dryer exhaust duct wall receptacle. Ducts that exhaust clothes dryers shall not penetrate or be located within any fireblocking, draftstopping or any wall, floor/ceiling or other assembly required by the Chicago Building Code to be fire-resistance rated unless such duct is constructed of galvanized steel or aluminum of the thickness specified in Section 18-28-603.3 and the fire-resistance rating is maintained in accordance with the Chicago Building Code. Fire dampers and similar devices that will obstruct the exhaust flow shall be prohibited in clothes dryer exhaust ducts.

18-28-504.3 Cleanout.
Each vertical riser shall be provided with a means for cleanout.

18-28-504.4 Exhaust installation.
Dryer exhaust ducts for clothes dryers shall terminate on the outside of the building and shall be equipped with a backdraft damper. Screens shall not be installed at the duct termination. Ducts shall not be connected or installed with sheet metal screws or other fasteners that will obstruct the exhaust flow. Clothes dryer exhaust ducts shall not be connected to a vent connector, vent or chimney. Clothes dryer exhaust ducts shall not extend into or through ducts or plenums. Clothes dryer exhaust ducts shall be sealed in accordance with Section 18-28-603.8.

> **18-28-504.4.1 Termination location.**
> Exhaust duct terminations shall be installed in accordance with the dryer manufacturer's instructions. Where the manufacturer's instructions do not specify a termination location, the exhaust duct shall terminate not less than 3 feet (914 mm) in any direction from openings into buildings, including openings in ventilated soffits. Exhaust duct terminations shall not be located in exterior walls which are not permitted to have unprotected openings in accordance with the Chicago Building Code.

> **18-28-504.4.2 Exhaust termination outlet and passageway size.**
> The passageway of dryer exhaust duct terminals shall be undimiminshed in size and shall provide an open area of not less than 12.5 square inches (8065 mm^2).

18-28-504.5 Dryer exhaust power ventilators.
Domestic dryer exhaust duct power ventilators shall be listed and labeled to UL 705 for use in dryer exhaust duct systems. The dryer exhaust duct power ventilator shall be installed in accordance with the manufacturer's instructions.

18-28-504.6 Booster fans prohibited.
Domestic booster fans shall not be installed in dryer exhaust systems.

18-28-504.7 Makeup air.
Installations exhausting more than 200 cfm (0.09 m^3/s) shall be provided with makeup air. Where a closet is designed for the installation of a clothes dryer, an opening having an area of not less than 100 square inches (0.0645 m^2) shall be provided in the closet enclosure or makeup air shall be provided by other approved means.

18-28-504.8 Protection required.
Protective shield plates shall be placed where nails or screws from finish or other work are likely to penetrate the clothes dryer exhaust duct. Shield plates shall be placed on the finished face of all framing members where there is less than 1 1/4 inches (32 mm) between the duct and the finished face of the framing member. Protective shield plates shall be constructed of steel, have a thickness of 0.062 inch (1.6 mm) and extend not less than 2 inches above sole plates and below top plates.

18-28-504.9 Domestic clothes dryer ducts.
Exhaust ducts for domestic clothes dryers shall conform to the requirements of Sections 18-28-504.9.1 through 18-28-504.9.6 or Section 18-28-504.11.

18-28-504.9.1 Material and size.
Exhaust ducts shall have a smooth interior finish and shall be constructed of metal not less than 0.016 inch (0.4 mm) in thickness. The exhaust duct size shall be 4 inches (102 mm) nominal in diameter.

18-28-504.9.2 Duct installation.
Exhaust ducts shall be supported at 4-foot (1219 mm) intervals and secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Ducts shall not be joined with screws or similar fasteners that protrude more than 1/8 inch (3.2 mm) into the inside of the duct.

Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation.

18-28-504.9.3 Transition ducts.
Transition ducts used to connect the dryer to the exhaust duct system shall be a single length that is listed and labeled in accordance with UL 2158A. Transition ducts shall not be greater than 8 feet (2438 mm) in length and shall not be concealed within construction.

18-28-504.9.4 Duct length.
The maximum allowable exhaust duct length shall be determined by one of the methods specified in Sections 18-28-504.9.4.1 through 18-28-504.9.4.3.

18-28-504.9.4.1 Specified length.
The maximum length of the exhaust duct shall be 35 feet (10 668 mm) from the

connection to the transition duct from the dryer to the outlet terminal. Where fittings are used, the maximum length of the exhaust duct shall be reduced in accordance with Table 18-28-504.9.4.1.

Table 18-28-504.9.4.1
Dryer Exhaust Duct Fitting Equivalent Length

Dryer Exhaust Duct Fitting Type	Equivalent Length
4" radius mitered 45-degree elbow	2 feet 6 inches
4" radius mitered 90-degree elbow	5 feet
6" radius smooth 45-degree elbow	1 foot
6" radius smooth 90-degree elbow	1 foot 9 inches
8" radius smooth 45-degree elbow	1 foot
8" radius smooth 90-degree elbow	1 foot 7 inches
10" radius smooth 45-degree elbow	9 inches
10" radius smooth 90-degree elbow	1 foot 6 inches

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 degree = 0.0175 rad.

18-28-504.9.4.2 Manufacturer's instructions.
The maximum length of the exhaust duct shall be determined by the dryer manufacturer's installation instructions. The Building Commissioner shall be provided with a copy of the installation instructions for the make and model of the dryer. Where the exhaust duct is to be concealed, the installation instructions shall be provided to the Building Commissioner prior to the concealment inspection. In the absence of fitting equivalent length calculations from the clothes dryer manufacturer, Table 18-28-504.9.4.1 shall be used.

18-28-504.9.4.3 Dryer exhaust duct power ventilator length.
The maximum length of the exhaust duct shall be determined by the dryer exhaust duct power ventilator manufacturer's installation instructions.

18-28-504.9.5 Length identification.
Where the exhaust duct equivalent length exceeds 35 feet (10 688 mm), the equivalent length of the exhaust duct shall be identified on a permanent label or tag. The label or tag shall be located within 6 feet (1829 mm) of the exhaust duct connection.

18-28-504.9.6 Exhaust duct required.
Where space for a clothes dryer is provided within a dwelling unit, an exhaust duct system shall be installed.

Exception: Where a listed and labeled condensing electric clothes dryer plumbed to a drain is installed prior to occupancy of the structure and a permanent label or tag is installed within 6 feet (1829 mm) of the connection point stating "CONNECTION FOR CONDENSING CLOTHES DRYERS ONLY. DO NOT INSTALL CLOTHES DRYER REQUIRING EXHAUST TO OUTDOORS."

Where a clothes dryer is not installed at the time of occupancy, the exhaust duct shall be capped at the location provided for the future dryer.

18-28-504.10 Commercial clothes dryers.
The installation of dryer exhaust ducts serving commercial clothes dryers shall comply with the appliance manufacturer's installation instructions. Exhaust fan motors installed in exhaust systems shall be located outside of the airstream. In multiple installations, the fan shall operate continuously or be interlocked to operate when any individual unit is operating. Ducts shall have a minimum clearance of 6 inches (152 mm) to combustible materials. Clothes dryer transition ducts used to connect the appliance to the exhaust system shall be limited to single lengths not to exceed 8 feet (2438 mm) in length and shall be listed and labeled for the application. Transition ducts shall not be concealed within construction.

18-28-504.11 Common exhaust systems for clothes dryers located in multistory structures.
Where a common multistory duct system is designed and installed to convey exhaust from multiple clothes dryers in a building equipped throughout with an automatic sprinkler system in accordance with the Chicago Building Code, the construction of the system shall be in accordance with all of the following:

1. The shaft in which the duct is installed shall be constructed and fire-resistance rated as required by the Chicago Building Code.
2. Dampers shall be prohibited in the exhaust duct. Penetrations of the shaft and ductwork shall be protected in accordance with Section 717.5.3 of the Chicago Building Code, Exception 1.1.
3. Rigid metal ductwork shall be installed within the shaft to convey the exhaust. The ductwork shall be constructed of sheet metal having a minimum thickness of 0.0187 inch (0.4712 mm) (No. 26 gage) and in accordance with SMACNA Duct Construction Standards.
4. The ductwork within the shaft shall be designed without offsets.
5. The exhaust fan motor design shall be in accordance with Section 18-28-503.2.
6. The exhaust fan motor shall be located outside of the airstream.
7. The exhaust fan shall run continuously and shall be connected to a standby power source.
8. Exhaust fan operation shall be monitored and shall initiate an audible or visible signal at a constantly attended location or at each connection point when the fan is not in operation.
9. Makeup air shall be provided for the exhaust system.
10. A cleanout opening shall be located at the base of the shaft to provide access to the duct to allow for cleaning and inspection. The finished opening shall be not less than 12 inches by 12 inches (305 mm by 305 mm).
11. Screens shall not be installed at the termination.
12. The common multistory duct system shall serve only clothes dryers and shall be independent of other exhaust systems.

(remainder of this page intentionally blank)

SECTION 12. Section 18-28-505 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-28-505 Domestic Cooking Exhaust.

18-28-505.1 General.
Domestic cooking exhaust equipment shall comply with the requirements of this section.

18-28-505.2 Domestic cooking exhaust.
Where domestic cooking exhaust equipment is provided, it shall comply with the following, as applicable:

1. The fan for overhead range hoods and downdraft exhaust equipment not integral with the cooking appliance shall be listed and labeled in accordance with UL 507.
2. Overhead range hoods and downdraft exhaust equipment with integral fans shall comply with UL 507.
3. Domestic cooking appliances with integral downdraft exhaust equipment shall be listed and labeled in accordance with UL 858 or ANSI Z21.1.
4. Microwave ovens with integral exhaust for installation over the cooking surface shall be listed and labeled in accordance with UL 923.

18-28-505.3 Exhaust ducts.
Domestic cooking exhaust equipment shall discharge to the outdoors through sheet metal ducts constructed of galvanized steel, stainless steel, aluminum or copper. Such ducts shall have smooth inner walls, shall be airtight and shall be equipped with a backdraft damper. Installation in Group I-1 and I-2 occupancies shall be in accordance with the Chicago Building Code.

> **Exception:** Within Group R dwelling units or sleeping units, where installed in accordance with the manufacturer's instructions and where mechanical or natural ventilation is otherwise provided in accordance with Article 4, listed and labeled ductless (recirculating) range hoods shall not be required to discharge to the outdoors.

18-28-505.4 Makeup air required.
Exhaust hoods capable of exhausting in excess of 400 cfm (0.19 m^3/s) shall be provided with mechanical makeup air at a rate approximately equal to the exhaust air rate. Such makeup air systems shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system.

18-28-505.5 Common exhaust systems for domestic kitchens located in multistory structures.
Where a common multistory duct system is designed and installed to convey exhaust from multiple domestic kitchen exhaust systems in a building equipped throughout with an automatic sprinkler system in accordance with the Chicago Building Code, the construction of the system shall be in accordance with all of the following:

1. The shaft in which the duct is installed shall be constructed and fire-resistance rated as required by the Chicago Building Code.
2. Dampers shall be prohibited in the exhaust duct, except as specified in Section 18-28-505.3. Penetrations of the shaft and ductwork shall be protected in accordance with Section 717.5.3 of the Chicago Building Code, Exception 1.1.

3. Rigid metal ductwork shall be installed within the shaft to convey the exhaust. The ductwork shall be constructed of sheet metal having a minimum thickness of 0.0187 inch (0.4712 mm) (No. 26 gage) and in accordance with SMACNA Duct Construction Standards.

4. The ductwork within the shaft shall be designed without offsets.

5. The exhaust fan motor design shall be in accordance with Section 18-28-503.2.

6. The exhaust fan motor shall be located outside of the airstream.

7. The exhaust fan shall run continuously and shall be connected to a standby power source.

8. Exhaust fan operation shall be monitored and shall initiate an audible or visible signal at a constantly attended location or at each connection point when the fan is not in operation.

9. Makeup air shall be provided for the exhaust system.

10. A cleanout opening shall be located at the base of the shaft to provide access to the duct to allow for cleaning and inspection. The finished opening shall be not less than 12 inches by 12 inches (305 mm by 305 mm).

11. Screens shall not be installed at the termination.

12. The common multistory duct system shall serve only domestic kitchen exhaust and shall be independent of other exhaust systems.

18-28-505.6 Other than Group R.
In other than Group R occupancies, where domestic cooktops, ranges and open-top broilers are used for domestic purposes, domestic cooking exhaust systems shall be provided.

SECTION 13. Section 18-28-506.3.7 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

18-28-506.3.7 Clearances.

(omitted text is not affected by this ordinance)

Exception: Listed and labeled factory-built commercial kitchen grease ducts installed in accordance with the Chicago Fire Prevention Code.

SECTION 14. Section 18-28-506.3.11 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-506.3.11 Duct enclosure.
A grease duct serving a Type I hood that penetrates a ceiling, wall or floor shall be enclosed from the point of penetration to the outlet terminal. A duct shall only penetrate exterior walls at locations where unprotected openings are permitted by ~~building code~~ the Chicago Building Code.

(omitted text is not affected by this ordinance)

SECTION 15. Section 18-28-506.3.13.2 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-506.3.13.2 Termination through an exterior wall.
Exhaust outlets shall be permitted to terminate through exterior walls where the smoke, grease, gases, vapors, and odors in the discharge from such terminations do not create a public nuisance or a fire hazard. Such terminations shall not be located where protected openings are required by the ~~building code~~ Chicago Building Code. Other exterior openings shall not be located within 10 feet (914 mm) of such terminations. Horizontal runs shall be direct from hood to exterior wall termination, without passing through any wall separating one business enterprise from another.

SECTION 16. Section 18-28-506.4.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-506.4.1 Type II exhaust outlets.
Exhaust outlets for ducts serving Type II hoods shall comply with Sections 18-28-401.5 and 18-28-401.5.2. Such outlets shall be protected against local weather conditions and shall meet the provisions for exterior wall opening protectives in accordance with the ~~building code~~ Chicago Building Code.

SECTION 17. Chapter 18-28 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-28-506.5, as follows:

18-28-506.5 Exhaust equipment.
Exhaust equipment, including fans and grease reservoirs, shall comply with Sections 18-28-506.5.1 through 18-28-506.5.6 and shall be of an approved design or shall be listed for the application.

18-28-506.5.1 Exhaust fans.
Exhaust fan housings serving a Type I hood shall be constructed as required for grease ducts in accordance with Section 18-28-506.3.2.

Exception: Fans listed and labeled in accordance with UL 762.

18-28-506.5.1.1 Fan motor.
Exhaust fan motors shall be located outside of the exhaust airstream.

18-28-506.5.1.2 In-line fan location.
Where enclosed duct systems are connected to in-line fans not located outdoors, the fan shall be located in a room or space having the same fire-resistance rating as the duct enclosure. Access shall be provided for servicing and cleaning of fan components. Such rooms or spaces shall be ventilated in accordance with the fan manufacturer's installation instructions.

18-28-506.5.2 Pollution-control units.
The installation of pollution-control units shall be in accordance with all of the following:

1. Pollution-control units shall be listed and labeled in accordance with UL 8782.
2. Fans serving pollution-control units shall be listed and labeled in accordance with UL 762.
3. Bracing and supports for pollution-control units shall be of noncombustible material securely attached to the structure and designed to carry gravity and seismic loads within the stress limitations of the Chicago Building Code.
4. Pollution-control units located indoors shall be listed and labeled for such use. Where enclosed duct systems, as required by Section 18-28-506.3.11, are connected to a pollution-control unit, such unit shall be listed and labeled in accordance with UL 2221 or ASTM E2336, for location in an enclosure having the same fire-resistance rating as the duct enclosure. Access shall be provided for servicing and cleaning of the unit. The space or enclosure shall be ventilated in accordance with the manufacturer's installation instructions.
5. Clearances shall be maintained between the pollution-control unit and combustible material in accordance with the listing.
6. Roof-mounted pollution-control units shall be listed for outdoor installation and shall be mounted not less than 18 inches (457 mm) above the roof.
7. Exhaust outlets for pollution-control units shall be in accordance with Section 18-28-506.3.13.
8. An airflow differential pressure control shall be provided to monitor the pressure drop across the filter sections of a pollution-control unit. Where the airflow is reduced below the design velocity, the airflow differential pressure control shall activate a visual alarm located in the area where cooking operations occur.
9. Pollution-control units shall be provided with a factory-installed fire suppression system.
10. Service space shall be provided in accordance with the manufacturer's instructions for the pollution-control unit and the requirements of Section 18-28-306.
11. Wash-down drains shall discharge through a grease interceptor and shall be sized for the flow. Drains shall be sealed with a trap or other approved means to prevent air bypass. Where a trap is utilized, it shall have a seal depth that accounts for the system pressurization and evaporation between cleanings.
12. Protection from freezing shall be provided for the water supply and fire suppression systems where such systems are subject to freezing.
13. Duct connections to pollution-control units shall be in accordance with Section 18-28-506.3.3.3. Where water splash or carryover can occur in the transition duct as a result of a washing operation, the transition duct shall slope downward toward the cabinet drain pan for a length not less than 18 inches (457 mm). Ducts shall transition to the full size of the unit's inlet and outlet openings.
14. Extra-heavy-duty appliance exhaust systems shall not be connected to pollution-control units except where such units are specifically designed and listed for use with solid fuels.

15. Pollution-control units shall be maintained in accordance with the manufacturer's instructions.

18-28-506.5.3 Exhaust fan discharge.
Exhaust fans shall be positioned so that the discharge will not impinge on the roof, other equipment or appliances, or parts of the structure. A vertical discharge fan shall be manufactured with a drain outlet at the lowest point of the housing to permit drainage of grease to a grease reservoir.

18-28-506.5.4 Exhaust fan mounting.
Upblast fans serving Type I hoods and installed in a vertical or horizontal position shall be hinged, supplied with a flexible weatherproof electrical cable to permit inspection and cleaning and shall be equipped with a means of restraint to limit the swing of the fan on its hinge. The ductwork shall extend not less than 18 inches (457 mm) above the roof surface.

18-28-506.5.5 Clearances.
Exhaust equipment serving a Type I hood shall have a clearance to combustible construction of not less than 18 inches (457 mm).

18-28-506.5.6 Termination location.
The outlet of exhaust equipment serving Type I hoods shall be in accordance with Section 18-28-506.3.13.

> **Exception:** The minimum horizontal distance between vertical discharge fans and parapet-type building structures shall be 2 feet (610 mm), provided that such structures are not higher than the top of the fan discharge opening.

SECTION 18. Section 18-28-507.2 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

18-28-507.2 Where required.

(omitted text is not affected by this ordinance)

3. For electric cooking appliances where an approved testing agency provides documentation that the appliance effluent contains 5 mg/m^3 or less of grease when tested at an exhaust flow rate of 500 cfm (0.236 m^3/s) in accordance with UL 710B.

4. Commercial dishwashing machines and commercial food heat processing appliances that produce heat or moisture but do not produce grease or smoke, where the heat and moisture loads from such appliances are incorporated into the design of the HVAC system or a separate removal system providing an exhaust rate of at least 70 cfm (0.033 m^3/s) for each individual appliance not installed under a hood.

(remainder of this page intentionally blank)

SECTION 19. Section 18-28-509.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-509.1 Where required.
Commercial food heat-processing appliances required by Section 18-28-507.2.1 to have a Type I hood shall be provided with an approved automatic fire suppression system complying with ~~building code~~ the Chicago Building Code.

SECTION 20. Section 18-28-510.2 of the Municipal Code of Chicago and its subsections are hereby amended by inserting the language underscored, as follows:

18-28-510.2 Where required.

(omitted text is not affected by this ordinance)

18-28-510.2.1 Lumber yards and woodworking facilities.
Equipment or machinery located inside buildings at lumber yards and woodworking facilities which generates or emits combustible dust shall be provided with an approved dust-collection and exhaust system installed in conformance with this section and the Chicago Fire Prevention Code. Equipment and systems that are used to collect, process or convey combustible dusts shall be provided with an approved explosion-control system.

18-28-510.2.2 Combustible fibers.
Equipment or machinery within a building which generates or emits combustible fibers shall be provided with an approved dust collecting and exhaust system. Such systems shall comply with the building code and the Chicago Fire Prevention Code.

SECTION 21. Section 18-28-510.4 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

18-28-510.4 Independent system.
Hazardous exhaust systems shall be independent of other types of exhaust systems. Incompatible materials, as defined in the Chicago Fire Prevention Code, shall not be exhausted through the same hazardous exhaust system. Hazardous exhaust systems shall not share common shafts with other duct systems, except where such systems are hazardous exhaust systems originating in the same fire area. Contaminated air shall not be recirculated.

SECTION 22. Section 18-28-510.6 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-510.6 Penetrations.
Penetrations of structure elements by a hazardous exhaust system shall conform to the ~~building code~~ Chicago Building Code.

SECTION 23. Section 18-28-510.7 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-510.7 Suppression required.
Ducts shall be protected with an approved automatic fire suppression system installed in accordance with the ~~building code~~ Chicago Building Code.

(omitted text is not affected by this ordinance)

SECTION 24. Section 18-28-511.1.2 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-511.1.2 Discharge pipe.
Discharge piping shall conform to the requirements for ducts, including clearances required for high-heat appliances, as contained in the ~~building code~~ Chicago Building Code. A delivery pipe from a cyclone collector shall not convey refuse directly into the firebox of a boiler, furnace, dutch oven, refuse burner, incinerator or other appliance.

SECTION 25. Section 18-28-512.2 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-512.2 Materials.
Subslab soil exhaust system duct material shall be air duct material listed and labeled to the requirements of UL 181 for Class 0 air ducts, or any of the following piping materials that comply with the Chicago Plumbing Code as building sanitary drainage and vent pipe: cast iron; galvanized steel; ~~brass or~~ copper or copper-alloy pipe~~; copper~~ or tube ~~of a weight not less than that of copper drainage tube, Type DWV~~; and plastic piping.

SECTION 26. Section 18-28-513.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-513.1 ~~High-rise buildings~~ Atriums.
~~See Chapter 13-76 or Section 14B-4-403 of this Code, as applicable.~~ Atrium smoke control systems shall comply with Sections 404 and 909 of the Chicago Building Code.

SECTION 27. Chapter 18-28 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-28-514, as follows:

18-28-514 Energy Recovery Ventilation Systems.

18-28-514.1 General.
Energy recovery ventilation systems shall be installed in accordance with this section. Where required for purposes of energy conservation, energy recovery ventilation systems shall also comply with the Chicago Energy Conservation Code. Ducted heat recovery ventilators shall be

listed and labeled in accordance with UL 1812. Nonducted heat recovery ventilators shall be listed and labeled in accordance with UL 1815.

18-28-514.2 Prohibited applications.
Energy recovery ventilation systems shall not be used in the following systems:

1. Hazardous exhaust systems covered in Section 18-28-510.
2. Dust, stock and refuse systems that convey explosive or flammable vapors, fumes or dust.
3. Smoke control systems covered in Section 18-28-513.
4. Commercial kitchen exhaust systems serving Type I hoods.
5. Clothes dryer exhaust systems covered in Section 18-28-504.

Exception: The application of ERV equipment that recovers sensible heat only utilizing coil-type heat exchangers shall not be limited by this section.

18-28-514.3 Access.
A means of access shall be provided to the heat exchanger and other components of the system as required for service, maintenance, repair or replacement.

18-28-514.4 Recirculated air.
Air conveyed within energy recovery ventilation systems shall not be considered as recirculated air where the energy recovery ventilation system is constructed to limit cross-leakage between air streams to less than 10 percent of the total airflow design capacity.

ARTICLE VI.
AMENDMENTS TO CHAPTER 18-28, ARTICLE VI

SECTION 1. Section 18-28-602.1.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-602.1.1 ~~Technology centers and t~~ Telecommunication equipment areas.
Ceiling and floor plenums may be used for supply air in ~~Technology Centers (as defined in Chapter 13-56) and~~ telecommunication equipment areas (as defined in Chapter 14B-2) if they are accessible for cleaning. Such supply plenums shall be limited to one fire area not to exceed 2,500 square feet (232 m^2). Separations between different plenums shall be made of sheet metal and sealed tight.

SECTION 2. Section 18-28-602.2.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-602.2.1 Materials exposed within plenums.
Materials exposed within plenums shall be noncombustible or shall ~~have~~ be listed and labeled as having a flame spread index of not more than 25 and a smoke-developed index of not more than 50 when tested in accordance with ASTM E 84 or UL 723. No floor drains or sanitary waste

and vent piping, storm drain piping or condensate drain piping may be exposed within a supply plenum. No material which has the potential of contaminating the air stream may be located in a supply plenum.

(omitted text is not affected by this ordinance)

3. This section shall not apply to materials exposed within plenums in ~~one- and two-family dwellings~~ Group R-5 occupancies.

(omitted text is not affected by this ordinance)

SECTION 3. Section 18-28-602.3 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-602.3 Stud cavity and joist space plenums.

(omitted text is not affected by this ordinance)

4. Stud wall cavities joist space plenums shall comply with the floor penetration protection requirements of the ~~building code~~ Chicago Building Code.

5. Stud wall cavities and joist space plenums shall be isolated from adjacent concealed spaces by approved fireblocking as required by the ~~building code~~ Chicago Building Code.

SECTION 4. Section 18-28-603.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-603.1 General.
An air distribution system shall be designed and installed to supply the required distribution of air. The installation of an air distribution system shall not affect the fire protection requirements specified in the ~~building code~~ Chicago Building Code. Ducts shall be constructed, braced, reinforced and installed to provide structural strength and durability.

SECTION 5. Section 18-28-603.8 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-603.8 Joints and connections.
All joints, longitudinal and transverse seams and connections shall be constructed as specified in SMACNA HVAC Duct Construction Standards—Metal and Flexible and securely fastened and sealed with welds, gaskets, mastics (adhesives), ~~mastic-lus-embedded-fabric~~ mastic-plus-embedded-fabric systems, liquid sealants or tapes. Tapes and mastics used ~~with~~ to seal metallic and flexible air ducts and flexible air connectors shall be listed and labeled in accordance with UL 181B and shall be marked "181 B-FX" for pressure-sensitive tape or "181 B-M" for mastic. Duct connections to sheet metal fittings or flanges of air distribution system equipment and appliances shall be sealed and mechanically fastened. Metallic fasteners for use with flexible nonmetallic air ducts shall comply with UL 181B and shall be marked "181 B-C."

Closure systems used to seal all ductwork shall be installed in accordance with the manufacturer's instructions.

Exception: For ducts having a static pressure classification of less than 2 inches of water column (500 Pa), additional closure systems shall not be required for continuously welded joints and seams and locking-type joints and seams. This exception shall not apply to snap-lock and button-lock type joints and seams located outside of conditioned spaces.

SECTION 6. Section 18-28-603.9 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-603.9 Supports.
Ducts shall be supported with approved hangers at intervals not exceeding 10 feet (3048 mm) or as specified in the SMACNA HVAC Duct Construction Standards – Metal and Flexible or by other approved duct support systems designed in accordance with the ~~building code~~ Chicago Building Code. Flexible and other factory-made ducts shall be supported at least every 5 feet (1524 mm).

SECTION 7. Section 18-28-604.1 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

18-28-604.1 General.
Duct insulation shall conform to the requirements of Sections 18-28-604.2 through 18-28-604.9 and the Chicago Energy Conservation Code.

SECTION 8. Section 18-28-606 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-606 Smoke Detection Systems Control.

(omitted text is not affected by this ordinance)

18-28-606.2.1 Return air systems.

(omitted text is not affected by this ordinance)

Exception: Smoke detectors are not required in the return air system where the space served by the air distribution system is protected by a system of area smoke detectors in accordance with ~~Chapter 15-16 or Section 14B-9-907 of this Code, as applicable~~ Section 907 of the Chicago Building Code. The area smoke detector system shall comply with Section 18-28-606.4.

(omitted text is not affected by this ordinance)

18-28-606.3 Installation.
Smoke detectors required by this section shall be installed in accordance with ~~Chapter 15-16 or~~

~~14B-9 of this Code, as applicable~~ Chapter 9 of the Chicago Building Code. The required smoke detectors shall be installed to monitor the entire airflow conveyed by the system including return air and exhaust or relief air. Access shall be provided to smoke detectors for inspection and maintenance.

18-28-606.4 Controls operation.
Upon activation, the smoke detectors shall shut down the air distribution system through a hard-wired interlock between the fans and the smoke detector, not through programming. Air distribution systems that are part of a smoke control system shall be controlled in accordance with ~~Chapter 13-76 or 14B-9 of this Code, as applicable~~ Section 909 and Appendix S of the Chicago Building Code.

18-28-606.4.1 Connection to fire alarm system.
In buildings with ~~Fire Alarm~~ a fire alarm system, duct smoke detectors shall be connected to the fire alarm system in accordance with ~~Chapter 15-16 or Section 14B-9-907, as applicable~~ Section 907 of the Chicago Building Code.

(omitted text is not affected by this ordinance)

SECTION 9. Section 18-28-607 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-607 Ducts and Air Transfer Openings.
~~See Chapter 15-8 or 14B-7 of this Code, as applicable.~~

18-28-607.1 General.
Ducts and air transfer openings in assemblies required to be protected shall be protected as provided in Chapter 7 of the Chicago Building Code.

ARTICLE VII.
AMENDMENTS TO CHAPTER 18-28, ARTICLE VII

SECTION 1. Section 18-28-701 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-701 General.

(omitted text is not affected by this ordinance)

18-28-701.2 Combustion and dilution air required.
Every room or space containing fuel-burning appliances shall be provided with combustion and dilution air as required by this ~~code~~ chapter. Combustion and dilution air shall be provided in accordance with Sections 18-28-702, 18-28-703, 18-28-704, 18-28-706 or 18-28-707 or shall be provided by an approved engineered system. Direct vent appliances or equipment that do not draw combustion air from inside of the building are not required to be considered in the determination of the combustion and dilution air requirements. Combustion air requirements

shall be determined based on the simultaneous operation of all fuel-burning appliances drawing combustion and dilution air from the room or space.

(omitted text is not affected by this ordinance)

18-28-701.4.1 Crawl space.
Where lower-combustion air openings connect with crawl spaces, such spaces shall have unobstructed openings to the outdoors at least twice that required for the combustion air openings. The height of the crawl space shall comply with the requirements of the ~~building code~~ Chicago Building Code and shall be without obstruction to the free flow of air.

18-28-701.4.2 Attic space.
Where combustion air is obtained from an attic area, the attic ventilating openings shall not be subject to ice or snow blockage, and the attic shall have not less than 30 inches (762 mm) vertical clear height at its maximum point. Attic ventilation openings shall be sufficient to provide the required volume of combustion air and the attic ventilation required by the ~~building code~~ Chicago Building Code. The combustion air openings shall be provided with a sleeve of not less than 0.019 inch (0.5 mm) (No. 26 Gauge) galvanized steel or other approved material extending from the appliance enclosure to at least 6 inches (152 mm) above the top of the ceiling joists and insulation.

18-28-701.5 Prohibited sources.
Openings and ducts shall not connect appliance enclosures with a space in which the operation of a fan will adversely affect the flow of combustion air. Combustion air shall not be obtained from a hazardous location, except where the fuel-fired appliances are located within the hazardous location and are installed in accordance with the ~~building code~~ Chicago Building Code. Combustion air shall not be taken from a refrigeration machinery room.

(omitted text is not affected by this ordinance)

SECTION 2. Section 18-28-711 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-711 Carbon Monoxide ~~Detectors~~ Detection.

18-28-711.1 ~~Carbon monoxide alarms~~ General.
Carbon monoxide ~~detectors~~ detection shall be provided as required in ~~Sections 13-64-190 through 13-64-280 or~~ Section ~~14B-9-915, as applicable~~ 915 of the Chicago Building Code.

(remainder of this page intentionally blank)

ARTICLE VIII.
AMENDMENTS TO CHAPTER 18-28, ARTICLE VIII

SECTION 1. Section 18-28-801 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-801 General.

(omitted text is not affected by this ordinance)

18-28-801.2.1 Oil-fired appliances.
Oil-fired appliances shall be vented in accordance with ~~the building code~~ this chapter and NFPA 31.

18-28-801.3 Masonry chimneys
Masonry chimneys shall be constructed in accordance with the ~~building code~~ Chicago Building Code.

(omitted text is not affected by this ordinance)

18-28-801.16.1 Residential and low-heat appliances (general).
Flue lining systems for use with residential-type and low-heat appliances shall be limited to the following:

1. Clay flue lining complying with the requirements of ASTM C 315 or the equivalent. Clay flue lining shall be installed in accordance with the ~~building code~~ Chicago Building Code.

(omitted text is not affected by this ordinance)

18-28-801.17 Space around lining.
The space surrounding a flue lining system or other vent installed within a masonry chimney shall not be used to vent any other appliance. This shall not prevent the installation of a separate flue lining in accordance with the manufacturer's installation instructions and the ~~building code~~ Chicago Building Code.

(omitted text is not affected by this ordinance)

18-28-801.18.4 Clearances.
Chimneys and vents shall have airspace clearance to combustibles in accordance with the ~~building code~~ Chicago Building Code and the chimney or vent manufacturer's installation instructions.

Exception: Masonry chimneys equipped with a chimney lining system tested and listed for installation in chimneys in contact with combustibles in accordance with UL 1777, and installed in accordance with the manufacturer's instructions, shall not be required to have clearance between combustible materials and exterior surfaces of the masonry chimney. Noncombustible fireblocking shall be provided in accordance with the ~~building code~~ Chicago Building Code.

(omitted text is not affected by this ordinance)

SECTION 2. Table 18-28-803.10.6 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

Table 18-28-803.10.6
Connector Clearances to Combustibles

(omitted text is not affected by this ordinance)

High-heat appliances	
Masonry or metal connectors	
All gas, oil and solid fuel appliances	(As determined by the ~~code official~~ Building Commissioner)

(omitted text is not affected by this ordinance)

ARTICLE IX.
AMENDMENTS TO CHAPTER 18-28, ARTICLE IX

SECTION 1. Section 18-28-901.2 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-901.2 General.
The requirements of this ~~chapter~~ article shall apply to the mechanical equipment and appliances regulated by this ~~chapter~~ article, in addition to the other requirements of ~~the building code~~ this chapter.

SECTION 2. Section 18-28-901.5 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-901.5 Installation in ~~private~~ garages.
Gas appliances are not allowed in ~~private~~ garages unless ~~all of the following conditions exist~~ either:

1. The gas appliance is a direct vent heater intended to heat only the garage space and does not communicate its heated air to the rest of the building. The heater shall be installed so that all burner and ignition devices are greater than 18" (457 mm) above the garage floor. The heater shall be located or protected so that it is not subject to vehicular damage. ~~; or~~
2. A separate utility room is constructed in the garage with at least one means of access, and:

   ~~a)~~ 2.1. The appliance is installed on a noncombustible surface and all burner and burner ignition devices are located 18" (457 mm) above the garage floor. ~~; and~~

~~b)~~ 2.2. ~~The utility room is constructed with one-hour fire-resistant walls and a one-hour fire-resistant ceiling; and~~ The walls and ceiling of the utility room have a fire-resistance rating of not less than one hour.

~~c)~~ 2.3. ~~The entry~~ All doors to the utility room ~~is a~~ have a fire protection rating of not less than 45-minutes~~, Class C,~~ and are self-closing. ~~, weather-stripped door; and~~

~~d)~~ 2.4. All air for combustion and dilution air is taken from an area other than the garage in accordance with Article 7. ~~, Combustion Air; and~~

~~e)~~ 2.5. ~~The entry~~ All doors to the utility room ~~is~~ are clearly marked: DANGER-KEEP DOOR CLOSED. ~~; and~~

~~f)~~ 2.6. All openings in the utility room for pipes, conduit, or ducts are sealed airtight. ~~; and~~

~~3.~~ 2.7. The garage is not heated by the same forced air system that heats the habitable space.

SECTION 3. Section 18-28-901.6 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-901.6 ~~Borrowed light~~ Remote room natural ventilation concept.
Gas appliances may be installed in the ~~bedroom~~ sleeping area of a ~~residential loft unit~~ dwelling unit constructed in accordance with the ~~borrowed light~~ remote room natural ventilation concept described in the Chicago Building Code as long as the following conditions are met:

1. The walls surrounding the ~~bedroom~~ sleeping area do not extend to the ceiling and are not equipped with operable closures.
2. The habitable space communicating directly with the ~~bedroom~~ sleeping area meets the requirements of an unconfined space.

SECTION 4. Section 18-28-902.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-902.1 General.
Masonry fireplaces shall be constructed in accordance with ~~Chapter 13-140 or 14B-21 of this Code, as applicable~~ Chapter 21 of the Chicago Building Code.

SECTION 5. Section 18-28-908 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-908 Cooling Towers, Evaporative Condensers and Fluid Coolers.

(omitted text is not affected by this ordinance)

18-28-908.3 Location.
Cooling towers, evaporative condensers and fluid coolers shall be located to prevent the discharge vapor plumes from entering occupied spaces. Plume discharges shall be not less than 5 feet (1524 mm) above or 20 feet (6096 mm) away from any ventilation inlet to a building. Location on the property shall be as required for buildings in accordance with the ~~building code~~ Chicago Building Code.

18-28-908.4 Support and anchorage.
Supports for cooling towers, evaporative condensers and fluid coolers shall be designed in accordance with the ~~building code's structural requirements~~ Chicago Building Code. Seismic restraints shall be as required by the Chicago Building Code.

18-28-908.5 Water supply.
~~Water supplies and protection shall be as required by the Chapter 18-29 of the building code and the Chicago Department of Water Management.~~ Cooling towers, evaporative coolers and fluid coolers shall be provided with a water supply sized for peak demand. The quality of water shall be provided in accordance with the manufacturer's recommendations. The piping system and protection of the potable water supply shall be as required by the Chicago Plumbing Code.

18-28-908.7 Refrigerants and hazardous fluids.
Heat exchange equipment that contains a refrigerant and that is part of a closed refrigeration system shall comply with ~~Chapter~~ Article 11. Heat exchange equipment containing heat transfer fluids which are flammable, combustible or hazardous shall comply with the ~~building code~~ Chicago Fire Prevention Code.

SECTION 6. Section 18-28-910.3 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-910.3 Bracing.
The floor around the furnace shall be braced and headed with a support framework design in accordance with the ~~structural requirements of the building code~~ Chicago Building Code.

SECTION 7. Section 18-28-913 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-913 Clothes Dryers.

18-28-913.1 General.
Clothes dryers shall be installed in accordance with the manufacturer's installation instructions. Electric residential clothes dryers shall be tested in accordance with ~~an approved test standard~~ UL 2158. Electric commercial clothes dryers shall be tested in accordance with UL 1240. Electric coin-operated clothes dryers shall be tested in accordance with UL 2158.

(omitted text is not affected by this ordinance)

18-28-913.3 Clearances.
Clothes dryers shall be installed with clearance to ~~combustible tin~~ combustibles in accordance with the manufacturer's instructions.

SECTION 8. Section 18-28-923.1.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-923.1.1 Installation.
Kilns shall be installed in accordance with the manufacturer's installation instructions and the provisions of ~~the building code~~ this chapter.

SECTION 9. Section 18-28-924 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety and replaced, as follows:

18-28-924 Stationary Fuel Cell Power Systems.

18-28-924.1 General.
Stationary fuel cell power systems having a power output not exceeding 10 MW shall be tested in accordance with ANSI/CSA America FC 1 and shall be installed in accordance with the manufacturer's instructions, NFPA 853, the Chicago Building Code and the Chicago Fire Prevention Code.

SECTION 10. Section 18-28-929 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety.

SECTION 11. Chapter 18-28 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-28-930, as follows:

18-28-930 Radiant Heating Systems.

18-28-930.1 General.
Electric radiant heating systems shall be installed in accordance with the manufacturer's instructions and shall be listed for the application.

18-28-930.2 Clearances.
Clearances for radiant heating panels or elements to any wiring, outlet boxes or junction boxes used for installing electrical devices or mounting luminaires shall be in accordance with the Chicago Building Code and Chicago Electrical Code.

18-28-930.3 Installation on wood or steel framing.
Radiant panels installed on wood or steel framing shall conform to the following requirements:

1. Heating panels shall be installed parallel to framing members and secured to the surface of framing members or shall be mounted between framing members.
2. Mechanical fasteners shall penetrate only the unheated portions provided for this purpose. Panels shall not be fastened at any point closer than 1/4 inch (6.4 mm) to an element. Other methods of attachment of the panels shall be in accordance with the panel manufacturer's installation instructions.

3. Unless listed and labeled for field cutting, heating panels shall be installed as complete units.

18-28-930.4 Installation in concrete or masonry.
Radiant heating systems installed in concrete or masonry shall conform to the following requirements:

1. Radiant heating systems shall be identified as being suitable for the installation and shall be secured in place as specified in the manufacturer's instructions.
2. Radiant heating panels and radiant heating panel sets shall not be installed where they bridge expansion joints unless they are protected from expansion and contraction.

18-28-930.5 Finish surfaces.
Finish materials installed over radiant heating panels and systems shall be installed in accordance with the manufacturer's instructions. Surfaces shall be secured so that fasteners do not pierce the radiant heating elements.

SECTION 12. Chapter 18-28 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-28-931, as follows:

18-28-931 Unvented Alcohol Fuel-Burning Decorative Appliances.

18-28-931.1 General.
Unvented alcohol fuel-burning decorative appliances shall be listed and labeled in accordance with UL 1370 and shall be installed in accordance with the conditions of the listing, manufacturer's installation instructions and Article 3.

SECTION 13. Chapter 18-28 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-28-932, as follows:

18-28-932 Large-diameter Ceiling Fans.

932.1 General.
Where provided, large-diameter ceiling fans shall be tested and labeled in accordance with AMCA 230, listed and labeled in accordance with UL 507, and installed in accordance with the manufacturer's instructions.

(remainder of this page intentionally blank)

ARTICLE X.
AMENDMENTS TO CHAPTER 18-28, ARTICLE X

SECTION 1. Section 18-28-1001.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1001.1 Scope.
This article shall govern the installation, alteration and repair of ~~fired~~ boilers, water heaters and ~~unfired~~ pressure vessels ~~that fall under the jurisdiction of the ASME Code~~.

Exceptions:

1. Pressure vessels used for unheated water supply.
2. Portable unfired pressure vessels and Interstate Commerce Commission containers.
3. Containers for bulk oxygen and medical gas.
4. Unfired pressure vessels having a volume of 5 cubic feet (0.14 m^3) or less operating at pressures not exceeding 250 pounds per square inch (1724 kPa) and located within occupancies of Group B, F, H, M, R, S or U.
5. Pressure vessels used in refrigeration systems that are regulated by Article 11 of this chapter.
6. Pressure tanks used in conjunction with coaxial cables, telephone cables, power cables and other similar humidity control systems.
7. Any boiler or pressure vessel subject to inspection by federal or state inspectors.

SECTION 2. Section 18-28-1002.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1002.1 General.
Potable water heaters and hot water storage tanks shall be listed, labeled and installed in accordance with the manufacturer's installation instructions, ~~the plumbing code and the building code~~ the Chicago Plumbing Code and this chapter. Potable hot water storage tanks heated by indirect means shall be designed, constructed, and installed in accordance with Section VIII of the ASME Boiler and Pressure Vessel Code unless all of the following requirements are met:

(omitted text is not affected by this ordinance)

Potable hot water storage tanks heated by indirect means that meet all three of the above requirements shall be governed by the ~~plumbing code~~ Chicago Plumbing Code.

All water heaters shall be capable of being removed without first having to remove a permanent portion of the building structure. The potable water connections and relief valves for all water heaters shall conform to the requirements of the ~~plumbing code~~ Chicago Plumbing Code. Water heaters with open flames that use combustion air from a machinery room shall not be installed in a machinery room except as allowed in ~~Article 11, Refrigeration,~~ Section 18-28-1105.

SECTION 3. Section 18-28-1003 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1003 ~~Unfired~~ Pressure Vessels.

18-28-1003.1 General.
All pressure vessels, unless otherwise approved, shall be constructed and certified in accordance with ~~the Section VIII of~~ the ASME Boiler and Pressure Vessel Code and shall be installed in accordance with the manufacturer's installation instructions and nationally recognized standards. Directly fired pressure vessels shall meet the requirements of Section 1004.

18-28-1003.2 Piping.
All piping materials, fittings, joints, connections and devices associated with systems used in conjunction with pressure vessels shall be designed for the specific application. ~~Piping components such as pipe, flanges, bolting, gaskets, valves, expansion joints and fittings shall be designed, constructed, and installed per ASME and ANSI B 31.1 and B 31.9.~~

18-28-1003.3 Welding.
Welding on pressure vessels shall be performed by ~~approved welders in compliance with nationally recognized standards and in accordance with ASME, Section IX~~ an R-Stamp holder in accordance with the National Board Inspection Code, Part 3, or in accordance with an approved standard.

SECTION 4. Section 18-28-1004 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1004 Boilers.

18-28-1004.1 Standards.
Boilers shall be designed, constructed and certified in accordance with the ASME Boiler and Pressure Vessel Code, Section I or IV. Controls and safety devices for boilers with fuel input ratings of less than 12,500,000 Btu/hr (3,662,500 W) shall meet the requirements of ASME CSD-1. Controls and safety devices for boilers with inputs greater than or equal to 12,500,000 Btu/hr (3,662,500 W) shall meet the requirements of NFPA 85. ~~Oil-fired~~ Packaged oil-fired boilers and their control systems shall be listed and labeled in accordance with UL 726. ~~Electric~~ Packaged electric boilers and their control systems shall be listed and labeled in accordance with UL 834. ~~Boilers shall be designed, constructed and installed in accordance with the requirements of the ASME Code Sections I, II, IV, V and IX of the ASME Code.~~ Solid-fuel-fired boilers shall be listed and labeled in accordance with UL 2523.

(omitted text is not affected by this ordinance)

18-28-1004.2 Installation.
In addition to the requirements of ~~the building code~~ this chapter, the installation of boilers shall conform to ~~the ASME Code, the National Board Inspection Code, and~~ the manufacturer's instructions. Operating instructions of a permanent type shall be attached to the boiler. Boilers

shall have all controls set, adjusted and tested by the installer. The manufacturer's rating data and the nameplate shall be attached to the boiler.

(omitted text is not affected by this ordinance)

18-28-1004.6 Boiler rooms and enclosures.
Boiler rooms and enclosures and access thereto shall comply with the ~~building code~~ Chicago Building Code and Article 3. Boiler rooms shall be equipped with a floor drain or other approved means for disposing of liquid waste. Boilers with open flames that use combustion air from a room shall not be installed in any machinery room except as allowed in Article 11~~, Refrigeration~~.

(omitted text is not affected by this ordinance)

18-28-1004.8 Stationary ~~Engineers and Boiler Tenders~~ engineers.
The following ~~steam engine, steam boiler and high temperature hot water boilers~~ regulated devices subject to the provisions of ~~the building code~~ this chapter shall only be used, managed or ~~operated, by an~~ operated by a stationary engineer ~~or boiler or water tender~~ who is ~~duly~~ licensed in accordance with Chapter 4-344: ~~and who has and can exhibit a certificate thereof.~~

1. Steam engines and steam boilers with an output capacity in excess of 50 boiler horsepower or ~~operating~~ intended for operation at a pressure in excess of 15 psig.
2. Hot water boilers intended for operation at a pressure in excess of 160 psi ~~and/or~~ or temperatures in excess of 250°F (121°C).

SECTION 5. Section 18-28-1005.2 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1005.2 Potable water supply.
The water supply to all boilers shall be connected in accordance with the Chicago Plumbing Code ~~and the department of water management~~.

SECTION 6. Section 18-28-1006.6 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

18-28-1006.6 Safety and relief valve discharge.
Safety and relief valve discharge pipes shall be constructed of rigid pipe that is approved for the temperature of the system. The discharge pipe shall be the same diameter as the safety or relief valve outlet. Safety and relief valves shall not discharge in a manner that creates a hazard or a potential cause of damage or otherwise constitutes a nuisance. High-pressure-steam safety valves shall be vented to the outside of the structure. If a low-pressure safety valve or a relief valve discharges to the drainage system, the installation shall conform to the ASME Code and the Chicago Plumbing Code.

SECTION 7. Section 18-28-1009.3 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

18-28-1009.3 Open-type expansion tanks.
Open-type expansion tanks shall be located a minimum of 4 feet (1219 mm) above the highest heating element. The tank shall be adequately sized for the hot water system. An overflow with a minimum diameter of 1 inch (25.4 mm) shall be installed at the top of the tank. The overflow shall discharge to the drainage system in accordance with the Chicago Plumbing Code.

SECTION 8. Section 18-28-1012 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety.

SECTION 9. Section 18-28-1013 of the Municipal Code of Chicago and its subsections are hereby repealed in their entirety.

ARTICLE XI.
AMENDMENTS TO CHAPTER 18-28, ARTICLE XI

SECTION 1. Section 18-28-1101.2 of the Municipal Code of Chicago is hereby repealed in its entirety and replaced, as follows:

18-28-1101.2 Factory-built equipment and appliances.
Listed and labeled self-contained, factory-built equipment and appliances shall be tested in accordance with the applicable standards specified in Table 18-28-1101.2. Such equipment and appliances shall be deemed to meet the design, manufacture and factory test requirements of this chapter if installed in accordance with their listing and the manufacturer's instructions.

Table 18-28-1101.2
Factory-built Equipment and Appliances

Equipment	Standards
Refrigeration fittings, including press-connect, flared and threaded	UL 109 and UL 207
Air-conditioning equipment	UL 1995 or UL/CSA 60335-2-40
Packaged terminal air conditioners and heat pumps	UL 484 or UL/CSA 60335-2-40
Dehumidifiers	UL 1995 or UL/CSA 60335-2-40
Unit coolers	UL 474 or UL/CSA 60335-2-40
Commercial refrigerators, freezers, beverage coolers and walk-in coolers	UL 412 or UL/CSA 60335-2-40
Refrigerating units and walk-in coolers	UL 427 or UL/CSA 60335-2-40
Refrigerant-containing components and accessories	UL 207

SECTION 2. Section 18-28-1101.7 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1101.7 General.
~~Reference~~ Refrigerant piping design and installation for systems containing a refrigerant other than ammonia shall comply with requirements of ~~the building code and except as modified by the building code, ANSI/~~ this article and ASHRAE 15. Ammonia refrigeration systems shall comply with ~~the building code and except as modified by ANSI/ASHRAE 15 and ANSI/IIAR-2~~ this chapter and IIAR 2, IIAR 3, IIAR 4 and IIAR 5.

SECTION 3. Section 18-28-1101.10 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1101.10 Location of condensing unit.
The condensing unit of every refrigeration system shall be placed in a readily accessible location and such location shall be provided with adequate means of ventilation and light. Refrigerating equipment containing over 10 pounds (4.536 kg) of refrigerant shall not be located in retail areas or other areas routinely accessed by the general public. ~~No refrigeration system shall be placed under or on stairways, stairway lands, under or on fire escape passageways, entrance or exits of buildings, unless it is a self-contained system servicing that stairway.~~

SECTION 4. Section 18-28-1101.11 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1101.11 ~~Stairways and exitways~~ Prohibited locations.
Piping associated with refrigeration systems shall not be installed in ~~an enclosed public stairway, stair landing, or means of egress~~ locations prohibited by Section 18-28-1107.2.1.

SECTION 5. Chapter 18-28 of the Municipal Code of Chicago is hereby amended by inserting a new Section 18-28-1101.16, as follows:

18-28-1101.16 Change in refrigerant type.
The type of refrigerant in refrigeration systems having a refrigerant circuit containing more than 220 pounds (99.8 kg) of Group A1 or 30 pounds (13.6 kg) of any other group refrigerant shall not be changed without obtaining a permit from the Building Commissioner and compliance with the applicable provisions of this article for the new refrigerant type.

SECTION 6. Section 18-28-1102.2 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1102.2 Refrigerants.
The refrigerant shall be of a type for which the equipment or appliance was designed to utilize or converted to utilize. Refrigerants not identified in Table 18-28-1103.1 must be approved before use, except for lithium bromide absorption systems using water as the refrigerant. Approval shall be obtained ~~from the Committee on Building Standards and Tests~~ in accordance with Section 14A-10-1003 or 14A-10-1004 of the Municipal Code.

SECTION 7. Table 18-28-1103.1 of the Municipal Code of Chicago is hereby repealed in its entirety and replaced, as follows:

Table 18-28-1103.1
Refrigerant Classification and Amounts

Chemical Refrigerant	Formula	Chemical Name of Blend	Amount of Refrigerant per Occupied Space			
			Refrigerant Classification	Pounds per 1,000 cubic feet	ppm	g/m^3
R-11 [c]	CCl_3F	trichlorofluoromethane	A1	0.39	1,100	6.2
R-12 [d]	CCl_2F_2	dichlorodifluoromethane	A1	5.6	18,000	90
R-13 [d]	$CClF_3$	chlorotrifluoromethane	A1	—	—	—
R-13B1 [d]	$CBrF_3$	bromotrifluoromethane	A1	—	—	—
R-14	CF_4	tetrafluoromethane (carbon tetrafluoride)	A1	25	110,000	400
R-22	$CHClF_2$	chlorodifluoromethane	A1	13	59,000	210
R-23	CHF_3	trifluoromethane (fluoroform)	A1	7.3	41,000	120
R-30	CH_2Cl_2	dichloromethane (methylene chloride)	B1	—	—	—
R-32	CH_2F_2	difluoromethane (methylene fluoride)	A2 [f]	4.8	36,000	77
R-40	CH_3Cl	chloromethane (methyl chloride)	B2	—	—	—
R-50	CH_4	methane	A3	—	—	—
R-113 [d]	CCl_2FCClF_2	1,1,2-trichloro-1,2,2-trifluoroethane	A1	1.2	2,600	20
R-114 [d]	$CClF_2CClF_2$	1,2-dichloro-1,1,2,2-tetrafluoroethane	A1	8.7	20,000	140
R-115	$CClF_2CF_3$	chloropentafluoroethane	A1	47	120,000	760
R-116	CF_3CF_3	hexafluoroethane	A1	34	97,000	550
R-123	$CHCl_2CF_3$	2,2-dichloro-1,1,1-trifluoroethane	B1	3.5	9,100	57

(*table continues on following page*)

R-124	$CHClFCF_3$	2-chloro-1,1,1,2-tetrafluoroethane	A1	3.5	10,000	56
R-125	CHF_2CF_3	pentafluoroethane	A1	23	75,000	370
R-134a	CH_2FCF_3	1,1,1,2-tetrafluoroethane	A1	13	50,000	210
R-141b	CH_3CCl_2F	1,1-dichloro-1-fluoroethane	—	0.78	2,600	12
R-142b	CH_3CClF_2	1-chloro-1,1-difluoroethane	A2	5.1	20,000	83
R-143a	CH_3CF_3	1,1,1-trifluoroethane	A2 [f]	4.5	21,000	70
R-152a	CH_3CHF_2	1,1-difluoroethane	A2	2.0	12,000	32
R-170	CH_3CH_3	ethane	A3	0.54	7,000	8.7
R-E170	CH_3OCH_3	Methoxymethane (dimethyl ether)	A3	1.0	8,500	16
R-218	$CF_3CF_2CF_3$	octafluoropropane	A1	43	90,000	690
R-227ea	CF_3CHFCF_3	1,1,1,2,3,3,3-heptafluoropropane	A1	36	84,000	580
R-236fa	$CF_3CH_2CF_3$	1,1,1,3,3,3-hexafluoropropane	A1	21	55,000	340
R-245fa	$CHF_2CH_2CF_3$	1,1,1,3,3-pentafluoropropane	B1	12	34,000	190
R-290	$CH_3CH_2CH_3$	propane	A3	0.56	5,300	9.5
R-C318	$-(CF_2)_4-$	octafluorocyclobutane	A1	41	80,000	660
R-400 [g]	zeotrope	R-12/114 (50.0/50.0)	A1	10	28,000	160
R-418A	zeotrope	R-290/22/152a (1.5/96.0/2.5)	A2	4.8	22,000	77
R-419A	zeotrope	R-125/134a/E170 (77.0/19.0/4.0)	A2	4.2	15,000	67
R-419B	zeotrope	R-125/134a/E170 (48.5/48.0/3.5)	A2	4.6	17,000	74
R-420A	zeotrope	R-134a/142b (88.0/12.0)	A1	12	45,000	190
R-421A	zeotrope	R-125/134a (58.0/42.0)	A1	17	61,000	280
R-421B	zeotrope	R-125/134a (85.0/15.0)	A1	21	69,000	330

(*table continues on following page*)

R-422A	zeotrope	R-125/134a/600a (85.1/11.5/3.4)	A1	18	63,000	290
R-422B	zeotrope	R-125/134a/600a (55.0/42.0/3.0)	A1	16	56,000	250
R-422C	zeotrope	R-125/134a/600a (82.0/15.0/3.0)	A1	18	62,000	290
R-422D	zeotrope	R-125/134a/600a (65.1/31.5/3.4)	A1	16	58,000	260
R-422E	zeotrope	R-125/134a/600a (58.0/39.3/2.7)	A1	16	57,000	260
R-423A	zeotrope	R-134a/227ea (52.5/47.5)	A1	19	59,000	310
R-424A	zeotrope	R-125/134a/600a/600/601a (50.5/47.0/0.9/1.0/0.6)	A1	6.2	23,000	100
R-425A	zoetrope	R-32/134a/227ea (18.5/69.5/12.0)	A1	16	72,000	260
R-426A	zeotrope	R-125/134a/600a/601a (5.1/93.0/1.3/0.6)	A1	5.2	20,000	83
R-427A	zeotrope	R-32/125/143a/134a (15.0/25.0/10.0/50.0)	A1	18	79,000	290
R-428A	zeotrope	R-125/143a/290/600a (77.5/20.0/0.6/1.9)	A1	23	83,000	370
R-429A	zeotrope	R-E170/152a/600a (60.0/10.0/30.0)	A3	0.81	6,300	13
R-430A	zeotrope	R-152a/600a (76.0/24.0)	A3	1.3	8,000	21
R-431A	zeotrope	R-290/152a (71.0/29.0)	A3	0.69	5,500	11
R-432A	zeotrope	R-1270/E170 (80.0/20.0)	A3	0.13	1,200	2.1
R-433A	zeotrope	R-1270/290 (30.0/70.0)	A3	0.34	3,100	5.5
R-433B	zeotrope	R-1270/290 (5.0-95.0)	A3	0.51	4,500	8.1
R-433C	zeotrope	R-1270/290 (25.0-75.0)	A3	0.41	3,600	6.6
R-434A	zeotrope	R-125/143a/600a (63.2/18.0/16.0/2.8)	A1	20	73,000	320
R-435A	zeotrope	R-E170/152a (80.0/20.0)	A3	1.1	8,500	17

(*table continues on following page*)

R-436A	zeotrope	R-290/600a (56.0/44.0)	A3	0.50	4,000	8.1
R-436B	zeotrope	R-290/600a (52.0/48.0)	A3	0.51	4,000	8.1
R-437A	zeotrope	R-125/134a/600/601 (19.5/78.5/1.4/0.6)	A1	5.0	19,000	82
R-438A	zeotrope	R-32/125/134a/600/601a (8.5/45.0/44.2/1.7/0.6)	A1	4.9	20,000	79
R-439A	zeotrope	R-32/125/600a (50.0/47.0/3.0)	A2	4.7	26,000	76
R-440A	zeotrope	R-290/134a/152a (0.6/1.6/97.8)	A2	1.9	12,000	31
R-441A	zeotrope	R-170/290/600a/600 (3.1/54.8/6.0/36.1)	A3	0.39	3,200	6.3
R-442A	zeotrope	R-32/125/134a/152a/227ea (31.0/31.0/30.0/3.0/5.0)	A1	21	100,000	330
R-400 [d]	zeotrope	R-12/114 (60.0/40.0)	A1	11	30,000	170
R-401A	zeotrope	R-22/152a/124 (53.0/13.0/34.0)	A1	6.6	27,000	110
R-401B	zeotrope	R-22/152a/124 (61.0/11.0/28.0)	A1	7.2	30,000	120
R-401C	zeotrope	R-22/152a/124 (33.0/15.0/52.0)	A1	5.2	20,000	84
R-402A	zeotrope	R-125/290/22 (60.0/2.0/38.0)	A1	17	66,000	270
R-402B	zeotrope	R-125/290/22 (38.0/2.0/60.0)	A1	15	63,000	240
R-403A	zeotrope	R-290/22/218 (5.0/75.0/20.0)	A2	7.6	33,000	120
R-403B	zeotrope	R-290/22/218 (5.0/56.0/39.0)	A1	18	70,000	290
R-404A	zeotrope	R-125/143a/134a (44.0/52.0/4.0)	A1	31	130,000	500
R-405A	zeotrope	R-22/152a/142b/C318 (45.0/7.0/5.5/2.5)	—	16	57,000	260
R-406A	zeotrope	R-22/600a/142b (55.0/4.0/41.0)	A2	4.7	21,000	25
R-407A	zeotrope	R-32/125/134a (20.0/40.0/40.0)	A1	19	83,000	300
R-407B	zeotrope	R-32/125/134a (10.0/70.0/20.0)	A1	21	79,000	330

(*table continues on following page*)

R-407C	zeotrope	R-32/125/134a (23.0/25.0/52.0)	A1	18	81,000	290
R-407D	zeotrope	R-32/125/134a (15.0/15.0/70.0)	A1	16	68,000	250
R-407E	zeotrope	R-32/125/134a (25.0/15.0/60.0)	A1	17	80,000	280
R-407F	zeotrope	R-32/125/134a (30.0/30.0/40.0)	A1	20	95,000	320
R-408A	zeotrope	R-125/143a/22 (7.0/46.0/47.0)	A1	21	95,000	340
R-409A	zeotrope	R-22/124/142b (60.0/25.0/15.0)	A1	7.1	29,000	110
R-409B	zeotrope	R-22/124/142b (65.0/25.0/10.0)	A1	7.3	30,000	120
R-410A	zeotrope	R-32/125 (50.0/50.0)	A1	26	140,000	420
R-410B	zeotrope	R-32/125 (45.0/55.0)	A1	27	140,000	430
R-411A	zeotrope	R-127/22/152a (1.5/87.5/11.0)	A2	2.9	14,000	46
R-411B	zeotrope	R-1270/22/152a (3.0/94.0/3.0)	A2	2.8	13,000	45
R-412A	zeotrope	R-22/218/142b (70.0/5.0/25.0)	A2	5.1	22,000	82
R-413A	zeotrope	R-218/134a/600a (9.0/88.0/3.0)	A2	5.8	22,000	94
R-414A	zeotrope	R-22/124/600a/142b (51.0/28.5/4.0/16.5)	A1	6.4	26,000	100
R-414B	zeotrope	R-22/124/600a/142b (50.0/39.0/1.5/9.5)	A1	6.0	23,000	95
R-415A	zeotrope	R-22/152a (82.0/18.0)	A2	2.9	14,000	47
R-415B	zeotrope	R-22/152a (25.0/75.0)	A2	2.1	12,000	34
R-416A	zeotrope	R-134a/124/600 (59.0/39.5/1.5)	A1	3.9	14,000	62
R-417A	zeotrope	R-125/134a/600 (46.6/50.0/3.4)	A1	3.5	13,000	56
R-417B	zeotrope	R-125/134a/600 (79.0/18.3/2.7)	A1	4.3	15,000	70
R-417C	zeotrope	R-125/134a/600 (19.5/78.8/1.7)	A1	5.4	21,000	87
R-443A	zeotrope	R-1270/290/600a (55.0/40.0/5.0)	A3	0.19	1,700	3.1

(*table continues on following page*)

R-444A	zeotrope	R-32/152a/1234ze(E) (12.0/5.0/83.0)	A2 [f]	5.1	21,000	81
R-444B	zeotrope	R-32/152a/1234ze(E) (41.5/10.0/48.5)	A2 [f]	4.3	23,000	69
R-445A	zeotrope	R-744/134a/1234ze(E) (6.0/9.0/85.0)	A2 [f]	4.2	16,000	67
R-446A	zeotrope	R-32/1234ze(E)/600 (68.0/29.0/3.0)	A2 [f]	2.5	16,000	39
R-447A	zoetrope	R-32/125/1234ze(E) (68.0/3.5/28.5)	A2 [f]	2.6	16,000	42
R-448A	zeotrope	R-32/125/1234yf/134a/1234ze(E) (26.0/26.0/20.0/21.0/7.0)	A1	24	110,000	390
R-449A	zeotrope	R-32/125/1234yf/134a (24.3/24.7/25.3/25.7)	A1	23	100,000	370
R-450A	zeotrope	R-134a/1234ze(E) (42.0/58.0)	A1	20	72,000	320
R-451A	zeotrope	R-1234yf/134a (89.8/10.2)	A2 [f]	5.3	18,000	81
R-451B	zeotrope	R-1234yf/134a (88.8/11.2)	A2 [f]	5.3	18,000	81
R-452A	zeotrope	R-32/125/1234yf (11.0/59.0/30.0)	A1	27	100,000	440
R-500 [e]	azeotrope	R-12/152a (73.8/26.2)	A1	7.6	30,000	120
R-501 [d]	azeotrope	R-22/12 (75.0/25.0)	A1	13	54,000	210
R-502 [e]	azeotrope	R-22/115 (48.8/51.2)	A1	21	73,000	330
R-503 [e]	azeotrope	R-23/13 (40.1/59.9)	—	—	—	—
R-504 [d]	azeotrope	R-32/115 (48.2/51.8)	—	28	140,000	450
R-507A	azeotrope	R-125/143a (50.0/50.0)	A1	32	130,000	520
R-508A	azeotrope	R-23/116 (39.0/61.0)	A1	14	55,000	220
R-508B	azeotrope	R-23/116 (46.0/54.0)	A1	13	52,000	200
R-509A	azeotrope	R-22/218 (44.0/56.0)	A1	24	75,000	390
R-510A	azeotrope	R-E170/600a (88.0/12.0)	A3	0.87	7,300	14

(*table continues on following page*)

R-511A	azeotrope	R-290/E170 (95.0/5.0)	A3	0.59	5,300	9.5
R-512A	azeotrope	R-134a/152a (5.0/95.0)	A2	1.9	11,000	31
R-513A	azeotrope	R-1234yf/134a (56.0/44.0)	A1	20	72,000	320
R-600	$CH_3CH_2CH_2CH_3$	butane	A3	0.15	1,000	2.4
R-600a	$CH(CH_3)_2CH_3$	2-methylpropane (isobutane)	A3	0.59	4,000	9.6
R-601	$CH_3CH_2CH_2$ CH_2CH_3	pentane	A3	0.18	1,000	2.9
R-601a	$(CH_3)_2CHCH_2CH_3$	2-methylbutane (isopentane)	A3	0.18	1,000	2.9
R-610	$CH_3CH_2OCH_2CH_3$	ethoxyethane (ethyl ether)	—	—	—	—
R-611	$HCOOCH_3$	methyl formate	B2	—	—	—
R-717	NH_3	ammonia	B2 [f]	0.014	320	0.22
R-718	H_2O	water	A1	—	—	—
R-744	CO_2	carbon dioxide	A1	4.5	40,000	72
R-1150	$CH_2=CH_2$	ethene (ethylene)	A3	—	—	—
R-1233zd(E)	$CF_3CH=CHCl$	trans-1-chloro-3,3,3-trifluoro-1-propene	A1	5.3	16,000	85
R-1234yf	$CF_3CF=CH_2$	2,3,3,3-tetrafluoro-1 propene	A2 [f]	4.7	16,000	75
R-1234ze(E)	$CF_3CH=CHF$	trans-1,3,3,3-tetrafluoro-1-propene	A2 [f]	4.7	16,000	75
R-1270	$CH_3CH=CH_2$	Propene (propylene)	A3	0.1	1,000	1.7

For SI: 1 pound = 0.454 kg, 1 cubic foot = 0.0283m^3

a. [Reserved]

b [Reserved]

c [Reserved]

d. Class I ozone depleting substance; prohibited for new installations.

e. [Reserved]

f. The ASHRAE Standard 34 flammability classification for this refrigerant is 2L, which is a subclass of Class 2.

SECTION 8. Section 18-28-1104.2.3 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1104.2.3 Multiple dwelling location provisions.
Compressors, condensers, and shell-type apparatus serving multiple dwelling units or sleeping units, which are not located within the ~~family unit~~ dwelling unit or sleeping unit, shall be located in either a Class S or Class R Machinery Room, or other locked suitable enclosure, or outdoors. This apparatus shall not be located under stairways, or within elevator machinery rooms.

SECTION 9. Section 18-28-1105.3 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1105.3 Doors.
Each machinery room shall have self-closing, tight fitting doors opening in the direction of egress travel. ~~Doors and door openings~~ Means of egress shall comply with the requirements of the ~~building code~~ Chicago Building Code.

SECTION 10. Section 18-28-1105.5 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

18-28-1105.5 Refrigerant detector.

(omitted text is not affected by this ordinance)

PELIGRO
NO ENTRAR CUANDO LA LUZ ESTE PARPADEANDO

SECTION 11. Section 18-28-1106.5 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1106.5 Pipe penetrations.
All pipe penetrations of the interior walls, ceiling or floor of machinery rooms shall be sealed vapor tight and protected in accordance with the ~~building code~~ Chicago Building Code.

SECTION 12. Section 18-28-1106.7 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 13. Section 18-28-1107.2.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1107.2.1 Location prohibition.
Refrigerant piping shall not be ~~located under stairways, fire escapes, enclosed hallways,~~ installed in any of the following locations:

1. Exposed within a fire-resistance-rated exit access corridor.
2. Within an interior exit stairway.
3. Within an interior exit ramp.
4. Within an exit passageway.
5. Within an elevators, dumbwaiters, ~~and~~ or other shafts containing a moving objects.

SECTION 14. Section 18-28-1107.4.4 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

18-28-1107.4.4 Copper tube joints.
Copper tubing used in refrigerating systems containing Group A2, A3, B1, B2 or B3 refrigerants shall be brazed. Soldered joints and mechanical joints shall not be used in such refrigerating systems.

ARTICLE XII.
AMENDMENTS TO CHAPTER 18-28, ARTICLE XII

SECTION 1. Section 18-28-1201.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1201.1 Scope.
The provisions of this article shall govern the construction, installation, alteration and repair of hydronic piping systems. This chapter shall apply to hydronic piping systems that are parts of heating, ventilation and air-conditioning systems. Such piping systems shall include steam, hot water, chilled water, steam condensate and ground source heat pump loop systems. Potable cold and hot water distribution systems shall be installed in accordance with the ~~plumbing code~~ Chicago Plumbing Code.

SECTION 2. Section 18-28-1202.2 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1202.2 Used materials.
Reused pipe, fittings, valves or other materials shall be clean and free of foreign materials and shall be approved by the ~~code official~~ Building Commissioner for reuse.

SECTION 3. Section 18-28-1204 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1204 Pipe Insulation.

18-28-1204.1 Insulation characteristics.
Pipe insulation installed in buildings shall conform to the requirements of the ~~energy code~~ Chicago Energy Conservation Code, shall be tested in accordance with ASTM E 84 and shall have a maximum flame spread index of 25 and a smoke-developed index not exceeding 450. Insulation installed in an air plenum shall comply with Section 18-28-602.2.1.

~~**Exception:** The maximum flame spread index and smoke-developed index shall not apply to one- and two-family dwellings.~~

18-28-1204.2 Required thickness.
Hydronic piping shall be insulated to the thickness required by the ~~energy code~~ Chicago Energy Conservation Code.

SECTION 4. Section 18-28-1206 of the Municipal Code of Chicago and its subsections are hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1206 Piping Installation.

(omitted text is not affected by this ordinance)

18-28-1206.2 System drain down.
Hydronic piping systems shall be designed and installed to permit the system to be drained. Where the system drains to the plumbing drainage system, the installation shall conform to the requirements of the ~~plumbing code~~ Chicago Plumbing Code.

18-28-1206.3 Protection of potable water.
The potable water system shall be protected from backflow in accordance with the ~~plumbing code~~ Chicago Plumbing Code.

18-28-1206.4 Pipe penetrations.
Openings for pipe penetrations in walls, floors or ceilings shall be larger than the penetrating pipe. Openings through concrete or masonry building elements shall be sleeved. The annular space surrounding pipe penetrations shall be protected in accordance with the ~~building code~~ Chicago Building Code.

(omitted text is not affected by this ordinance)

SECTION 5. Section 18-28-1209.4 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows.

18-28-1209.4 Not embedded related piping.
Joints of other piping located in cavities or running exposed shall be joined by approved methods in accordance with the manufacturer's installation instructions and related sections of ~~the building code~~ this chapter.

ARTICLE XIII.
AMENDMENTS TO CHAPTER 18-28, ARTICLE XIII

SECTION 1. Section 18-28-1301.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1301.1 Scope.
This chapter shall govern the design, installation, construction and repair of fuel oil storage and piping systems. Quantities of fuel oil that exceed the quantity limitations of this chapter and flammable and combustible liquids shall be stored in accordance with the ~~fire prevention code~~ Chicago Fire Prevention Code.

SECTION 2. Section 18-28-1301.2 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-28-1301.2 Storage systems.
Fuel oil storage and piping systems shall be installed in accordance with the requirements of the ~~building code~~ Chicago Building Code, the ~~fire prevention code~~ Chicago Fire Prevention Code and NFPA 31.

ARTICLE XIV.
AMENDMENTS TO CHAPTER 18-28, ARTICLE XV

SECTION 1. The heading preceding Section 18-28-1501 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

Article XV. Solar Thermal Systems (18-28-1501 et seq.)

SECTION 2. Section 18-28-1501.5 of the Municipal Code of Chicago is hereby amended by deleting the language struck through, as follows:

18-28-1501.5 Ducts.
Ducts utilized in solar heating and cooling systems shall be constructed and installed in accordance with Article 6~~, Duct Systems of the building code~~ of this chapter.

(remainder of this page intentionally blank)

ARTICLE XV.
COORDINATING AMENDMENTS

SECTION 1. Article III of Chapter 2-116 (Sections 2-116-130 to 2-116-180, inclusive) of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 2. Article IV of Chapter 2-116 (Sections 2-116-190 to 2-116-210, inclusive) of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 3. Chapter 4-344 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

Chapter 4-344 STATIONARY ENGINEERS ~~AND BOILER TENDERS~~.

4-344-010 ~~Boiler or water tender defined~~ Definitions.

As used in this chapter:

~~"Boiler or water tender" means any individual who has charge of a steam boiler whose duty it is to keep up the water in such boiler; provided, however, that the provisions of this chapter applicable to boiler or water tenders shall apply only to boiler or water tenders who are in charge of a steam boiler which is detached from the engine room, or so far removed therefrom or otherwise circumstanced or located, as to render it difficult for the engineer in charge of the plant to give such boiler his personal attention and supervision.~~

"Regulated device" means a:

1. Steam engine or steam boiler with an output capacity in excess of 50 boiler horsepower or intended for operation at a pressure in excess of 15 psig.

2. Hot water boiler intended for operation at a pressure in excess of 160 psi or temperature in excess of 250°F (121°C).

The term "regulated device" does not include locomotive engines or boilers carrying not more than 10 ten pounds pressure of steam per square inch.

4-344-020 License – Required.

No ~~steam engine or boiler subject to the provisions of this chapter~~ regulated device shall be used, managed or operated except by ~~an engineer or boiler or water tender~~ a stationary engineer who ~~shall have been duly~~ is licensed under this chapter and who shall have and exhibit a certificate thereof.

No individual shall take charge of, manage or operate any ~~steam engine or boiler~~ regulated equipment, or any portion of a steam plant, in the city without a license, as provided by this chapter.

~~Engineers in charge of locomotives and engineers or boiler or water tenders in charge of boilers carrying not more than ten pounds pressure of steam per square inch shall be exempt from the provisions of this chapter.~~

Every person who violates this section shall be fined in accordance with Section 14A-3-302 for each offense. Each day that a violation continues shall constitute a separate and distinct offense.

Any person owning or controlling any ~~steam engine, boiler~~ regulated device or ~~other~~ steam plant who shall authorize or permit any individual without a license, as required herein, to take charge of, manage or operate ~~any steam engine or boiler or any portion of a~~ the regulated device or steam plant, shall ~~for each offense~~ be fined in accordance with Section 14A-3-302 for each offense. Each day that a violation continues shall constitute a separate and distinct offense.

4-344-030 License – Application.

An application for a license to engage in the business of ~~an engineer or boiler or water tender~~ stationary engineer shall be made on forms furnished by the ~~buildings commissioner~~ Commissioner of Buildings, and shall set forth the name and age of the applicant, and the extent of the applicant's experience.

4-344-040 License – Applicants' qualifications.

An applicant for ~~an~~ a stationary engineer's license shall ~~be a machinist or engineer having at least two years' practice in the management, operation or construction of steam engines and boilers. An applicant for a boiler or a water tender's license shall be a person who has~~ have a thorough knowledge of the construction, management and operation of steam boilers.

~~Each~~ An applicant for a stationary engineer's license ~~and boiler or water tender so to be licensed~~ shall be at least 18 years of age and shall be of good character, all of which shall be verified in writing by the applicant.

4-344-050 License – Examination.

(a) The ~~buildings commissioner~~ Commissioner of Buildings shall have power to examine into the qualifications of applicants for licenses as stationary engineers ~~and boiler or water tenders~~ and grant licenses.

(b) If a person seeking to renew registration as a stationary engineer under this chapter has not been registered as a stationary engineer for a continuous period of three years, such person shall be reexamined in accordance with subsection (a) before such person shall again be registered as a stationary engineer.

4-344-060 License – Fee.

(1) The fee for the examination for ~~an~~ a stationary engineer's license shall be $70.00.

(2) The fee for ~~an~~ a stationary engineer's license shall be $15.00 for each year the license is valid. The fee for renewal of such license or a replacement certificate shall be $15.00

for each year the license is valid. In addition to the renewal fee, the fee for reinstatement of a lapsed engineer's license shall be ~~$3.00~~ $5.00 for each lapsed year in addition to the renewal fee for such year.

~~(3) The fee for the examination for a boiler or water tender's license shall be $5.00. The fee for reexamination for a boiler or water tender's license shall be $5.00.~~

~~(4) The fee for a boiler or water tender's license shall be $15.00 for each year such license is valid. The fee for renewal of such license shall be $15.00 for each year the license is valid. In addition to the renewal fee, the fee for reinstatement of a lapsed boiler or water tender's license shall be $5.00 for each lapsed year.~~

4-344-070 License – Term.

The license for ~~an engineer or boiler or water tender~~ a stationary engineer shall be valid for a period of ~~not less than one and not more than four~~ two years from the date of issuance.

4-344-080 ~~License – Issuance~~ Reserved.

~~Every certificate of license issued to an engineer or boiler or water tender shall be signed by the buildings commissioner and sealed with an imprint of the commissioner's seal.~~

(omitted text is not affected by this ordinance)

~~4-344-100 Enforcement~~ Reserved.

~~It shall be the duty of the buildings commissioner to see that each boiler plant in the city shall have a licensed engineer, or boiler or water tender, or both, as provided herein, in charge at all times when working under pressure, whose certificate of qualification shall be displayed in a conspicuous place in the engine or boiler room, and each engineer or boiler or water tender shall devote his entire time, while boilers are working under pressure, to the duties of the plant under his charge.~~

(omitted text is not affected by this ordinance)

SECTION 4. Chapter 4-376 of the Municipal Code of Chicago is hereby repealed in its entirety and replaced, as follows:

Chapter 4-376 MASON CONTRACTORS

Part I. General

4-376-010 Definitions.

As used in this chapter:

"Commissioner" means the Commissioner of Buildings.

"Employee" means a natural person classified as an employee in accordance with the Illinois Employee Classification Act, 820 ILCS 185.

"Mason work" means all work in brick, stone, concrete, terra cotta, and structural tile, or any combination of these materials, as used in or about the construction of buildings or structures above or below the surface of the ground, with the exception of laying brick or concrete sidewalks and brick or concrete paving.

"Sister agency" has the meaning specified in Section 1-23-010.

4-376-020 Violations – Discipline.

Violations of this chapter shall be subject to the enforcement procedures and remedies specified in Chapter 14A-3. Persons licensed under this chapter may have their permit privileges suspended in accordance with Section 14A-3-304, or their license suspended or revoked in accordance with Section 14A-3-305.

Part II. Mason Contractor License

4-376-100 License required.

A person engaged in or desiring to engage in mason work, either directly or as a contractor or subcontractor, shall obtain a mason contractor license in the manner specified in this chapter.

A person who is neither licensed as a mason contractor nor the employee of a licensed mason contractor shall perform mason work, provided, however, that this requirement shall not apply to:

1. Mason work done by employees of the City of Chicago or a sister agency in the course of their employment and mason work done for the City of Chicago or a sister agency by day labor.

2. Mason work done by a natural person who is authorized to do general contracting work without a general contractor's license with respect to that person's primary residence in accordance with Section 4-36-020(B)(5).

3. Mason work consisting of minor nonstructural repairs done by the owner of the property where work is performed, or by an employee of the owner of the property where work is performed.

4-376-110 Application.

A person seeking to engage in the business of mason contractor shall apply to the Commissioner for a mason contractor license. Such application shall be in the form prescribed by the Commissioner and accompanied by payment of the initial license fee as provided in Section 4-376-140.

4-376-120 Certificate.

When the Commissioner determines that an applicant has met the requirements for licensure under this chapter, and has paid the applicable license fee, the Commissioner shall issue a license certificate which shall authorize the licensee to engage in the business of mason contractor during the term of the license. The license certificate shall contain the name or names of the supervising mason or supervising masons appointed by the licensee. A license certificate issued under this section shall not be transferrable.

4-376-130 Term.

A mason contractor license shall be valid for one year from the date of issuance. Licenses may be renewed beginning three months prior to expiration. A license shall not be renewed if it has been expired for more than one year, however the applicant may apply for a new license.

4-376-140 Fees.

The fee for a mason contractor license shall be $500.00 for the initial year of licensure and $100.00 for each year the license is renewed. Each fee shall be paid before a license certificate is issued for that term.

In addition to the license fee, the fee for reinstatement of an expired license shall be $50.00.

Any change in the licensee's information, including company name, ownership information, business address, or change of supervising mason, shall require an amended license.

The fee for each amended license or replacement license certificate issued by the Commissioner shall be $50.00; provided, however, no fee shall be assessed for a licensee to reprint an existing license certificate from a self-service electronic system.

Fees shall be paid to the Department of Finance.

4-376-150 Appointment of supervising mason.

Before a license certificate shall be issued to a mason contractor, the contractor shall be or employ a natural person who has been examined and found qualified by the Commissioner to act as a supervising mason with respect to one or more of the recognized branches of mason work in accordance with Section 4-376-210.

If a mason contractor terminates its relationship with a supervising mason named on the mason contractor's license certificate, the contractor's license shall be suspended or limited until such time as an additional supervising mason is appointed and an amended license is issued.

An individual shall not be appointed as supervising mason by more than one mason contractor at the same time.

4-376-160 Specialization.

The Commissioner may limit the scope of work which a mason contractor may perform based on the branches of mason work for which the supervising mason or masons appointed by the contractor have been examined and qualified in accordance with Section 4-376-210.

4-376-170 Duties.

The supervising mason shall perform all mason work or supervise and direct all mason work performed by the mason contractor.

4-376-180 Notice of discharge or resignation.

Whenever a supervising mason shall leave or be discharged from the employ of a mason contractor, both the supervising mason and the mason contractor shall notify the Commissioner in writing within five days of the event.

4-376-190 [Reserved].

Part III. Supervising Mason

4-376-200 Minimum qualifications.

A supervising mason shall be at least 21 years of age and shall demonstrate competency in one or more of the recognized branches of mason work to the satisfaction of the Commissioner in accordance with Section 4-376-210.

The Commissioner shall designate the recognized branches of mason work by rule.

4-376-210 Examination and qualification.

In order to determine the competence of an individual with respect to one or more of the recognized branches of mason work, the Commissioner shall administer a written examination, which shall be sufficiently strict to test the examinee's knowledge of elementary and practical topics related to the designated branch of mason work.

4-376-220 License.

Beginning August 1, 2021, the Commissioner may license individuals examined in accordance with Section 4-376-210, so that they may transfer their qualification to act as a supervising mason from one mason contractor to another without reexamination. No person examined before this date shall be required to be so licensed, however supervising masons who are not licensed must be reexamined before they may be appointed by a different mason contractor.

The term of a supervising mason license shall be one year.

Licenses may be renewed by payment of the renewal fee specified in Section 4-376-230, and attestation by the licensee that he or she has completed at least five hours of practical study or training with respect to each recognized branch of mason work for which the license is valid, or with respect to general construction safety practices, during the preceding year. Licenses may be renewed beginning three months before the expiration date and within one year after expiration.

4-376-230 Fees.

The fee for each examination under Section 4-376-210 shall be $95.00.

The initial fee for licensure in accordance with Section 4-376-220 shall be $150.00. The annual renewal fee for licensure shall be $150.00. Only one such fee shall be charged per individual per license term.

In addition to the license fee, the fee for reinstatement of an expired license shall be $50.00.

The fee for each replacement license certificate issued by the Commissioner shall be $50.00; provided, however, no fee shall be assessed for a licensee to reprint an existing license certificate from a self-service electronic system.

Fees shall be paid to the Department of Finance in advance.

SECTION 5. Article III of Chapter 11-4 (Section 11-4-860 through 11-4-880, inclusive) of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 6. Section 11-20-061 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

11-20-061 Termination of service – Notice required – Violation – Penalty.

(omitted text is not affected by this ordinance)

(f) The ~~building commissioner~~ Building Commissioner shall have the authority to issue rules ~~and regulations~~ necessary or proper to accomplish the purposes of this section~~. The commissioner shall give public notice of any proposed rule or regulation, prior to its effective date, in one or more newspapers of general circulation, and in no case shall the publication be less than ten days prior to the effective date of the proposed rule or regulation, or an amendment to a rule or regulation. Such public notice shall include information concerning where the rule or regulation can be reviewed and where comments may be directed.~~ in accordance with Section 14A-1-104.4.

SECTION 7. Article XVIII of Chapter 13-96 (Section 13-96-820) of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 8. Section 14M-1-001.1.1 of the Municipal Code is hereby repealed in its entirety.

SECTION 9. Section 18-36-010 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

18-36-010 Reference standards.

This chapter lists the edition date and full title of standards that are referenced in ~~other sections of the building code~~ Chapter 18-28. If a standard is referenced in Chapter 18-28 but not listed in this chapter, the applicable edition shall be determined by reference to Chapter 15 of the International Mechanical Code, 2021 edition. If a more recent edition of a standard listed in this section is listed in Chapter 15 of the International Mechanical Code, 2021 edition, an applicant may elect to use the more recent edition listed in that document instead of the edition listed in this chapter.

(omitted text is not affected by this ordinance)

ARTICLE XVI.
IMPLEMENTATION AND EFFECTIVE DATE

SECTION 1. Section 14A-1-105.8 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14A-1-105.8 ~~[Reserved]~~ Mechanical.

Except as the *building official* may otherwise provide by rule, the amendments made to Chapter 18-28 of the *Municipal Code* by the amendatory ordinance of 2021 are only applicable to projects permitted under Title 14B in accordance with Section 14A-1-105.2 or Title 14R in accordance with Section 14A-1-105.11. These amendments, as a whole, are optional for *permit* applications submitted before January 1, 2022 and mandatory for *permit* applications submitted after that date.

SECTION 2. Portions of this ordinance were prepared based on copyrighted source material owned by the International Code Council, Inc. (ICC). ICC reserves all rights in the source material owned by ICC and used in the preparation of this ordinance.

SECTION 3. To the extent any policy or rule promulgated by a city agency or official before the effective date of this ordinance conflicts with any amendment made by this ordinance, such policy or rule is superseded by this ordinance to the full extent of the conflict and the agency or official that promulgated such policy or rule is directed to promptly rescind the superseded policy or rule or promulgate an amended policy or rule consistent with this ordinance.

SECTION 4. This ordinance shall take full force and effect upon its passage and publication.