

ORDINANCE

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

This ordinance is organized into six articles, as follows:

Article I:	Mechanical and Fuel Gas Codes
Article II:	Energy Transformation Code
Article III:	Interim Fire Prevention Code
Article IV:	Technical Corrections and Adjustments
Article V:	Residential Construction
Article VI:	Effective Dates

ARTICLE I. MECHANICAL AND FUEL GAS CODES

SECTION 1. The Municipal Code of Chicago is hereby amended by repealing Title 14M (2019 Interim Mechanical Code) in its entirety and replacing it as follows:

TITLE 14M 2026 MECHANICAL CODE

CHAPTER 14M-1 SCOPE AND PURPOSE

14M-1-001 ADOPTION OF THE INTERNATIONAL MECHANICAL CODE BY REFERENCE.

The *International Mechanical Code*, 2024 edition, third printing, and all erratum thereto identified by the publisher together with Interim Critical Amendment TSG-000001, but excluding the appendices (hereinafter referred to as "IMC"), is adopted by reference and shall be considered part of the requirements of this title except as modified by the specific provisions of this title.

If a conflict exists between a provision modified by this title and a provision adopted without modification, the modified provision shall control.

14M-1-002 CITATIONS.

Provisions of IMC which are incorporated into this title by reference may be cited as follows:

14M-[IMC chapter number]-[IMC section number].

14M-1-002 GLOBAL MODIFICATIONS.

The following modifications shall apply to each provision of IMC incorporated into this title:

1. Replace each occurrence of "*International Building Code*" with "*Chicago Building Code*."

2. Replace each occurrence of "NFPA 70" with "the *Chicago Electrical Code*."
3. Replace each occurrence of "*International Fire Code*" with "*Chicago Fire Prevention Code*."
4. Replace each occurrence of "*International Fuel Gas Code*" with "*Chicago Fuel Gas Code*."
5. Replace each occurrence of "*International Energy Conservation Code*" with "*Chicago Energy Transformation Code*."
6. Replace each occurrence of "*International Plumbing Code*" with "*Chicago Plumbing Code*."
7. Replace each occurrence of "*International Existing Building Code*" with "*Chicago Building Rehabilitation Code*."
8. Replace each occurrence of "code official" or "code official" with "*building official*."
9. Replace each occurrence of "permitted" with "allowed."
10. Delete each bracketed designation of ICC code development committee responsibility preceding a section number.

14M-1-100 CHAPTER 1.

The provisions of IMC Chapter 1 are not adopted. The following is adopted as Chapter 1 entitled "Scope and Purpose":

"SECTION 101 GENERAL

101.1 Title.

This Title 14M of the Municipal Code of Chicago shall be known as the *Chicago Mechanical Code*, hereinafter referred to as "this code."

101.2 Scope.

This code shall regulate the design, installation, maintenance, *repair, alteration* and inspection of mechanical systems that are permanently installed and utilized to provide control of environmental conditions and related processes within buildings. This code shall also regulate those mechanical systems, system components, *equipment* and *appliances* specifically addressed herein. The installation of *fuel gas* distribution piping and *equipment, fuel gas-fired appliances* and *fuel gas-fired appliance venting systems* shall be regulated by this code and the *Chicago Fuel Gas Code*.

101.3 Purpose.

The purpose of this code is to establish minimum requirements to provide a reasonable level of safety, health, property protection and general welfare by regulating and controlling the design, construction, installation, quality of materials, location and use of mechanical *equipment* and systems."

CHAPTER 14M-2 DEFINITIONS

14M-2-201 GENERAL.

The provisions of IMC Section 201 are not adopted. The following is adopted as Section 201:

"SECTION 201 GENERAL

201.1 Definitions.

The definitions in Section 202 shall apply to italicized words throughout this code, except where specifically limited to a particular chapter or section. Unless the context requires otherwise, the definitions in Section 202 shall also apply to non-italicized words throughout this code.

201.2 Interchangeability.

Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural includes the singular.

201.3 Words defined in other codes.

Where non-italicized words are not defined in this code and are defined in the Chicago Construction Codes Administrative Provisions, Chicago Building Code, Chicago Conveyance Device Code, Chicago Electrical Code, Chicago Fire Prevention Code, Chicago Fuel Gas Code, Chicago Energy Transformation Code, Chicago Plumbing Code, Chicago Building Rehabilitation Code, or Chicago Minimum Requirements for Existing Buildings, such words shall have the meanings ascribed to them in those codes unless the context requires otherwise.

201.4 Words not defined.

Where italicized words are not defined in Section 202 or non-italicized words are not defined in Section 202 or any of the codes referenced in Section 201.3, such words shall have the meaning given in the latest edition of Merriam Webster's Collegiate Dictionary as the context implies."

14M-2-202 DEFINITIONS.

The provisions of IMC Section 202 are adopted by reference with the following modifications:

1. Revise the title of Section 202 to read: "Definitions."
2. Delete the definition of "absorption system."
3. Delete the definition of "air."

4. Insert the following definitions:

"AIR, COMBUSTION. Air necessary for complete *combustion* of a fuel, including *theoretical air* and *excess air*.

AIR, ENVIRONMENTAL. Air designated with an expected air-quality classification of Class 1, 2 or 3 in accordance with Section 403.2.1.4, excluding any air that requires a dedicated *exhaust system* in accordance with Section 502, 504, 509, or 510.

AIR, EXCESS. The amount of air provided in addition to *theoretical air* to achieve complete *combustion* of a fuel, thereby preventing the formation of dangerous *combustion products*."

5. Revise the definition of "air, exhaust" to read:

"AIR, EXHAUST. Air being removed from any space, *appliance* or piece of *equipment* and conveyed directly to the outdoors by means of openings or *ducts*."

6. Revise the definition of "air, makeup" to read:

"AIR, MAKEUP. Any combination of *outdoor air* and *transfer air* intended to replace *exhaust air* and *exfiltration*."

7. Revise the definition of "air, outdoor" to read:

"AIR, OUTDOOR. Air taken from the outdoors, and therefore not previously circulated through the system."

8. Insert the following definitions:

"AIR, RECIRCULATED. Air removed from a *conditioned space* and intended for reuse as *supply air*.

AIR, RETURN. Air removed from a *conditioned space* or location and recirculated or exhausted.

AIR, SUPPLY. That air delivered to each or any space supplied by the *air distribution system* or the total air delivered to all spaces supplied by the *air distribution system*, which is provided for ventilating, heating, cooling, humidification, dehumidification and other similar purposes.

AIR, THEORETICAL. The exact amount of air required to supply oxygen for complete *combustion* of a given quantity of a specific fuel."

9. Insert the following definition:

"AIR, VENTILATION. That portion of *supply air* that comes from the outside (outdoors), plus any *recirculated air* that has been treated to maintain the desired quality of air within a designated space."

10. Revise the definition of "air conditioning" by resetting "conditioned space" in italic type.

11. Revise the definition of "air dispersion system" by deleting the second sentence.

12. Revise the definition of "air distribution system" by resetting "ducts" and "air-handling units" in italic type.
13. Revise the definition of "air-conditioning system" to read:

"AIR-CONDITIONING SYSTEM. A system for the purpose of providing *air conditioning* that consists of *heat exchangers*, blowers, filters, supply, exhaust and return *ducts*, and shall include any apparatus installed in connection therewith."
14. Revise the definition of "air handling unit" by resetting "supply air" in italic type.
15. Revise the definition of "alteration" to read:

"ALTERATION. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code.*"
16. Revise the definition of "ambulatory care facility" to read:

"AMBULATORY CARE FACILITY. As defined in Chapter 2 of the *Chicago Building Code.*"
17. Revise the definition of "appliance" to read:

"APPLIANCE. A device or apparatus that utilizes energy and for which this code provides specific requirements."
18. Delete the definition of "appliance, existing."
19. Revise the definition of "appliance type" and its subsections to read:

"APPLIANCE, HIGH-HEAT. An *appliance* in which the *combustion products* at the point of entrance to the *flue* under normal operating conditions have a temperature greater than 2,000°F (1093°C).

APPLIANCE, LOW-HEAT. An *appliance* in which the *combustion products* at the point of entrance to the *flue* under normal operating conditions have a temperature of 1,000°F (538°C) or less.

APPLIANCE, MEDIUM-HEAT. An *appliance* in which the *combustion products* at the point of entrance to the *flue* under normal operating conditions have a temperature of more than 1,000°F (538°C), but not greater than 2,000°F (1093°C)."
20. Insert the following definition:

"APPLIANCE, VENTED. An *appliance* designed and installed in such a manner that all of the *combustion products* are conveyed directly from the *appliance* to the outdoor atmosphere through a *chimney* or *vent* system."
21. Revise the definition of "approved" to read:

"APPROVED. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*"

22. Revise the definition of "approved agency" to read:
"APPROVED AGENCY. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*"
23. Revise the definition of "automatic boiler" by resetting "boiler" and "controls" in italic type.
24. Revise the definition of "balanced ventilation system" to read:
"BALANCED VENTILATION SYSTEM. A ventilation system that simultaneously supplies *outdoor air* to and removes *return air* from a space, where the mechanical supply airflow rate and the mechanical return airflow rate are each within 10 percent of the average of the two airflow rates."
25. Revise the definition of "boiler" by deleting everything after the first sentence.
26. Insert the following definitions:
"BOILER, AUTOMATIC. See "Automatic boiler."
BOILER, HIGH-PRESSURE. A *boiler* that operates at pressures exceeding 15 pounds per square inch (psi) (103 kPa) for steam and 160 psi (1103 kPa) for water.
BOILER, LOW-PRESSURE. A *boiler* that operates at pressures less than or equal to 15 pounds per square inch (psi) (103 kPa) for steam and 160 psi (1103 kPa) for water.
BOILER, MODULAR. See "Modular boiler."
27. Revise the definition of "boiler room" by resetting "boiler" in italic type.
28. Delete the definition of "brazed joint."
29. Revise the definition of "brazing" to read:
"BRAZING. A metal joining process wherein coalescence is produced by the use of a nonferrous metallic mixture or alloy that melts at a liquidus temperature above 840°F (450°C), but lower than the melting solidus temperatures of the parts to be joined. The filler material is distributed between the closely fitted surfaces of the joint by capillary attraction."
30. Revise the definition of "breathing zone" by replacing "air-conditioning" with "*air conditioning.*"
31. Delete the definition of "BTU."
32. Delete the definition of "building."
33. Insert the following definition:
"BUILDING OFFICIAL. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*"

34. Insert the following definition:
"CARPORT. As defined in Chapter 2 of the *Chicago Building Code*."
35. Revise the definition of "ceiling radiation damper" to read:
"CEILING RADIATION DAMPER. As defined in Chapter 2 of the *Chicago Building Code*."
36. Insert the following definitions:
"CHICAGO BUILDING CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.
CHICAGO BUILDING REHABILITATION CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.
CHICAGO CONSTRUCTION CODES ADMINISTRATIVE PROVISIONS. Title 14A of the *Municipal Code of Chicago*.
CHICAGO CONVEYANCE DEVICE CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.
CHICAGO ELECTRICAL CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.
CHICAGO ENERGY TRANSFORMATION CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.
CHICAGO FIRE PREVENTION CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.
CHICAGO FUEL GAS CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.
CHICAGO MINIMUM REQUIREMENTS FOR EXISTING BUILDINGS. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.
CHICAGO PLUMBING CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
37. Revise the definition of "chimney" and its subsections to read:
"CHIMNEY. As defined in Chapter 2 of the *Chicago Building Code*.
CHIMNEY, FACTORY-BUILT. As defined in Chapter 2 of the *Chicago Building Code*.
CHIMNEY, MASONRY. As defined in Chapter 2 of the *Chicago Building Code*.
CHIMNEY, METAL. As defined in Chapter 2 of the *Chicago Building Code*."

38. Revise the definition of "clearance" to read:
- "CLEARANCE.** The minimum distance through air measured between the heat-producing surface of the mechanical *appliance*, device or *equipment* and the surface of the *combustible material* or *combustible assembly*."
39. Revise the definition of "closed combustion solid-fuel-burning appliance" by replacing "combustion chamber" with "combustion chamber" in both places.
40. Delete the definition of "code."
41. Delete the definition of "code official."
42. Revise the definition of "combination fire/smoke damper" to read:
- "COMBINATION FIRE/SMOKE DAMPER.** As defined in Chapter 2 of the *Chicago Building Code*."
43. Revise the definition of "combustible assembly" to read:
- "COMBUSTIBLE ASSEMBLY.** Wall, floor, ceiling or other assembly constructed of one or more component materials that are not *noncombustible materials*."
44. Revise the definition of "combustible liquid" and its subsections to read:
- "COMBUSTIBLE LIQUID.** As defined in Chapter 2 of the *Chicago Fire Prevention Code*."
45. Revise the definition of "combustible material" to read:
- "COMBUSTIBLE MATERIAL.** Any material that is not a *noncombustible material*, including *gypsum board*."
46. Revise the definition of "combustion air" to read:
- "COMBUSTION AIR.** See "Air, combustion.""
47. Revise the definition of "commercial cooking appliances" to read:
- "COMMERCIAL COOKING APPLIANCE.** An *appliance* used for heating or cooking food in an establishment where food is routinely prepared for sale or is routinely prepared on a scale that is by volume and frequency significantly greater than household cooking."
48. Revise the definition of "commercial cooking recirculating system" to read:
- "COMMERCIAL COOKING RECIRCULATING SYSTEM.** A self-contained system consisting of the exhaust hood, the *commercial cooking appliance*, the filter and the fire suppression system. The system is designed to capture cooking vapors and residues generated from a *commercial cooking appliance*. The system removes contaminants from the *exhaust air* and recirculates the air to the space from which it was withdrawn."
49. Delete the definition of "commercial kitchen hoods" and its subsections.

50. Revise the definition of “compensating hood” to read:
- “COMPENSATING HOOD.** A *hood* having integral (built-in) *makeup air* supply. The *makeup air* supply for such *hoods* is generally supplied from: short-circuit flow from inside the *hood*, air curtain flow from the bottom of the front face, and front face discharge from the outside front wall of the *hood*. The compensating makeup airflow can also be supplied from the rear or side of the *hood*, or the rear, front or sides of the cooking *equipment*. The makeup airflow can be one or a combination of methods.”
51. Revise the definition of “compressor, positive displacement” by resetting “compressor” in italic type.
52. Revise the definition of “compressor unit” by resetting “compressor” in italic type.
53. Revise the definition of “condenser” by resetting “refrigerant” in italic type.
54. Revise the definition of “condensing unit” by resetting “refrigerant,” “compressors,” “condensers” and “liquid receivers” in italic type.
55. Revise the definition of “conditioned space” to read:
- “CONDITIONED SPACE.** As defined in Chapter C2 of the *Chicago Energy Transformation Code*.”
56. Revise the definition of “construction documents” to read:
- “CONSTRUCTION DOCUMENTS.** As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.”
57. Revise the definition of “control” by resetting “mechanical system” in italic type.
58. Insert the following definition:
- “CONTROL AREA.** As defined in Chapter 2 of the *Chicago Building Code*.”
59. Delete the definition of “cooking appliance.”
60. Insert the following definitions:
- “CORRIDOR.** As defined in Chapter 2 of the *Chicago Building Code*.
- CORRIDOR DAMPER.** As defined in Chapter 2 of the *Chicago Building Code*.”
61. Revise the definition of “damper” by resetting “draft” in italic type, and deleting the subsection.
62. Insert the following definitions:
- “DAMPER, CEILING RADIATION.** See “Ceiling radiation damper.”
- DAMPER, COMBINATION SMOKE/FIRE.** See “Combination smoke/fire damper.”
- DAMPER, CORRIDOR.** See “Corridor damper.”

DAMPER, FIRE. See "Fire damper."

DAMPER, SMOKE. See "Smoke damper."

DAMPER, VOLUME. A *damper* that, where installed, will restrict, retard or direct the flow of air in a *duct*, or *combustion products* in a heat-producing *appliance*, its *vent connector*, *vent* or *chimney* therefrom."

63. Delete the definition of "design flood elevation."

64. Revise the definition of "direct refrigeration system" to read:

"DIRECT REFRIGERATION SYSTEM. A *refrigeration system* in which the *evaporator* or *condenser* is in direct contact with the air or other substances to be cooled or heated."

65. Revise the definition of "direct solar system" to read:

"DIRECT SOLAR THERMAL SYSTEM. A *solar thermal system* in which the gas or liquid in the solar collector loop is not separated from the load."

66. Revise the definition of "direct-vent appliances" to read:

"DIRECT-VENT APPLIANCE. An *appliance* that is constructed and installed so that all air for *combustion* is derived from the outdoor atmosphere and all *flue gases* are discharged to the outdoor atmosphere."

67. Delete the definition of "discrete product."

68. Revise the definition of "draft" and its subsections to read:

"DRAFT. The pressure difference between the *appliance* or any component part and the atmosphere, that causes a continuous flow of air and *combustion products* through the gas passages of the *appliance* to the atmosphere.

DRAFT, INDUCED. A *draft* created by the action of a fan, blower or ejector, that is located between the *appliance* and the *chimney* or *vent* termination.

DRAFT, NATURAL. A *draft* created by a *vent* or *chimney* because of its height, and the temperature difference between the *flue gases* and the atmosphere."

69. Revise the definition of "draftstop" by resetting "building" in roman type.

70. Revise the definition of "drain-back system" by resetting "solar thermal system" in italic type.

71. Revise the definition of "drip" by resetting "condensate" in italic type both places.

72. Revise the definition of "dry cleaning systems" and its subsections to read:

"DRY CLEANING SYSTEM. As defined in Chapter 2 of the *Chicago Fire Prevention Code*."

73. Revise the definition of "duct" to read:
"DUCT. A tube or conduit utilized for conveying air, excluding air passages within self-contained factory-built equipment."
74. Insert the following definition:
"DUCT, GREASE. See "Grease duct.""
75. Revise the definition of "duct furnace" by resetting each "furnace" and "duct" in italic type.
76. Revise the definition of "duct system" by resetting "ducts" and "dampers" in italic type.
77. Revise the definition of "ductless mini-split system" to read:
"DUCTLESS MINI-SPLIT SYSTEM. A system that is comprised of one or multiple indoor *evaporator and air-handling units* and an outdoor *condensing unit* that is connected by *refrigerant piping* and electrical wiring and capable of cooling or heating one or more rooms without the use of a *duct system*."
78. Delete the definition of "dwelling."
79. Revise the definition of "dwelling unit" to read:
"DWELLING UNIT. As defined in Chapter 2 of the *Chicago Building Code*."
80. Revise the definition of "electric heating appliance" by resetting "refrigerant compressors" in italic type.
81. Revise the definition of "energy recovery ventilation system" to read:
"ENERGY RECOVERY VENTILATION SYSTEM. A system that employs an air-to-air *heat exchanger* 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 a heating system or *air-conditioning system*."
82. Revise the definition of "environmental air" to read:
"ENVIRONMENTAL AIR. See "Air, environmental.""
83. Revise the definition of "equipment" to read:
"EQUIPMENT. Permanently installed *piping, ducts, vents, controls* and other components of systems specifically regulated in this code, other than *appliances*."
84. Delete the definition of "equipment, existing."
85. Revise the definition of "evaporative cooling system" by resetting "evaporative cooler" and "ducts" in italic type.
86. Revise the definition of "evaporator" by resetting "refrigerant" in italic type.

87. Revise the definition of "excess air" to read:
"EXCESS AIR. See "Air, excess.""
88. Insert the following definition:
"EXHAUST AIR. See "Air, exhaust.""
89. Revise the definition of "exhaust system" by resetting "ducts" and "hoods" in italic type.
90. Revise the definition of "extra-heavy-duty cooking appliance" to read:
"EXTRA-HEAVY-DUTY COOKING APPLIANCE. A *commercial cooking appliance* that utilizes open flame *combustion* of solid fuel at any time."
91. Insert the following definitions:
"FACTORY-BUILT CHIMNEY. See "Chimney, factory-built."
FACTORY-BUILT FIREPLACE. See "Fireplace, factory-built."
FIELD TEST. A test performed in the field to verify system performance.
FIRE AREA. As defined in Chapter 2 of the *Chicago Building Code*.
FIRE CODE OFFICIAL. As defined in Chapter 2 of the Chicago Construction Codes Administrative Provisions."
92. Revise the definition of "fire damper" to read:
"FIRE DAMPER. As defined in Chapter 2 of the *Chicago Building Code*."
93. Revise the definition of "fireplace" and its subsections to read:
"FIREPLACE. As defined in Chapter 2 of the *Chicago Building Code*.
FIREPLACE, FACTORY-BUILT. As defined in Chapter 2 of the *Chicago Building Code*.
FIREPLACE, MASONRY. As defined in Chapter 2 of the *Chicago Building Code*."
94. Revise the definition of "flame spread index" to read:
"FLAME SPREAD INDEX. As defined in Chapter 2 of the *Chicago Building Code*."
95. Revise the definition of "flammable liquids" and its subsections to read:
"FLAMMABLE LIQUID. As defined in Chapter 2 of the *Chicago Fire Prevention Code*."
96. Revise the definition of "flammable vapor or fumes" to read:
"FLAMMABLE VAPOR OR FUMES. As defined in Chapter 2 of the *Chicago Fire Prevention Code*."

97. Revise the definition of "flash point" to read:
"FLASH POINT. As defined in Chapter 2 of the *Chicago Fire Prevention Code*."
98. Revise the definition of "flexible air connector" by resetting each "duct" in italic type and deleting the last sentence.
99. Delete the definition of "floor area, net."
100. Revise the definition of "floor furnace" by resetting "furnace" in italic type.
101. Revise the definition of "flue connection (breeching)" to read:
"FLUE CONNECTION. A passage for conducting the *combustion products* from a fuel-fired *appliance* to the *vent* or *chimney* (see also "Chimney connector" and "Vent connector")."
102. Revise the definition of "flue gases" to read:
"FLUE GASES. *Combustion products* and *excess air*."
103. Revise the definition of "flue liner (lining)" by deleting "(lining)" and resetting "flue" and "vent" in italic type.
104. Revise the definition of "fuel gas" to read:
"FUEL GAS. As defined in Chapter 2 of the *Chicago Fuel Gas Code*."
105. Revise the definition of "fuel-oil piping system" to read:
"FUEL OIL PIPING SYSTEM. A closed piping system that connects a source of *fuel oil* supply to a *fuel oil*-burning appliance."
106. Revise the definition of "furnace room" by resetting "boilers" in italic type.
107. Delete the definition of "fusible plug."
108. Revise the definition of "grease duct" to read:
"GREASE DUCT. A *duct* serving a Type I hood, or *commercial cooking appliances* equipped with integral down-draft exhaust systems that produce grease, to convey grease-laden air from the hood or cooking *appliance* directly to the outdoors."
109. Revise the definition of "gypsum board" to read:
"GYPSUM BOARD. As defined in Chapter 2 of the *Chicago Building Code*."
110. Revise the definition of "hazardous location" to read:
"HAZARDOUS LOCATION. Any location considered to be a fire hazard for *flammable vapors or fumes*, dust, combustible fibers or other highly combustible substances. The location is not necessarily categorized in the *Chicago Building Code* as a high-hazard (Group H) occupancy classification."

111. Revise the definition of "heavy-duty cooking appliance" to read:
- "HEAVY-DUTY COOKING APPLIANCE.** *A commercial cooking appliance functioning as an electric or gas over-fired (upright) broiler, electric or gas under-fired broiler, electric or gas chain (conveyor) broiler, gas open-burner range (with or without oven), electric or gas wok range, smoker, smoker oven or salamander that is not classified as an extra-heavy duty cooking appliance."*
112. Insert the following definitions:
- "HIGH-HEAT APPLIANCE.** See "Appliance, high-heat."
- HIGH-PRESSURE BOILER.** See "Boiler, high-pressure."
113. Revise the definition of "high-probability systems" to read:
- "HIGH-PROBABILITY SYSTEM.** *A refrigeration system in which the basic design or the location of components is such that a leakage of refrigerant from a failed connection, seal or component will enter an occupiable space, other than the refrigeration machinery room."*
114. Insert the following definition:
- "HIGH-RISE BUILDING.** As defined in Chapter 2 of the *Chicago Building Code.*"
115. Revise the definition of "hood" and its subsections to read:
- "HOOD.** An air intake device used to capture by entrapment, impingement, adhesion or similar means, grease, moisture, heat and similar contaminants before they enter a *duct system.*
- HOOD, TYPE I.** A kitchen *hood* for collecting and removing grease vapors and smoke. Such hoods are equipped with a fire suppression system.
- HOOD, TYPE II.** A general kitchen *hood* for collecting and removing steam, vapor, heat, odors and *combustion products.*"
116. Revise the definition of "hydrogen generating appliance" by resetting "Hydrogen generating" in italic type.
117. Revise the definition of "ignition source" by resetting "flammable vapors or fumes" in italic type.
118. Delete the definition of "immediately dangerous to life or health (IDLH)."
119. Revise the definition of "indirect refrigeration system" and its subsections by deleting everything after the first sentence.
120. Revise the definition of "indirect solar system" to read:
- "INDIRECT SOLAR THERMAL SYSTEM.** *A solar thermal system in which the gas or liquid in the solar collector loop circulates between the solar collector and a heat*

exchanger and such gas or liquid is not drained from the system or supplied to the load during normal operation.”

121. Insert the following definition:

“**INDUCED DRAFT.** See “Draft, induced.””

122. Insert the following definition:

“**JOINT, BRAZED.** A gas-tight joint obtained by the joining of metal parts with metallic mixtures or alloys that melt at a liquidus temperature above 840°F (450°C), but lower than the melting solidus temperatures of the parts to be joined.”

123. Insert the following definition:

“**JOINT, MECHANICAL.**

1. A connection between pipes, fittings, or pipes and fittings that is not welded, brazed, caulked, soldered, solvent cemented or heat fused.
2. A general form of gas- or liquid-tight connection obtained by the joining of parts through a positive holding mechanical construction such as a *press-connect joint*, *flanged joint*, threaded joint, *flared joint* or compression joint.”

124. Revise the definition of “joint, plastic adhesive” by replacing “thermoset plastic” with “*thermosetting plastic*.”

125. Revise the definition of “joint, plastic heat fusion” by resetting “thermoplastic” in italic type and replacing “permit” with “allow.”

126. Revise the definition of “joint, plastic solvent cement” by resetting “thermoplastic” in italic type.

127. Insert the following definition:

“**JOINT, PRESS-CONNECT.** See “Press-connect joint.””

128. Revise the definition of “joint, soldered” to read:

“**JOINT, SOLDERED.** A gas-tight joint obtained by the joining of metal parts with metallic mixtures of alloys that melt at liquidus temperatures between 400°F (205°C) and 840°F (450°C).”

129. Revise the definition of “labeled” to read:

“**LABELED.** As defined in Chapter 2 of the *Chicago Building Code*.”

130. Revise the definition of “light-duty cooking appliance” to read:

“**LIGHT-DUTY COOKING APPLIANCE.** A *commercial cooking appliance* functioning as a gas or electric oven (including standard, bake, roasting, revolving, retherm, convection, combination convection/steamer, countertop conveyORIZED baking/finishing, deck and pastry), electric or gas steam-jacketed kettle, electric or gas pasta cooker, electric or gas

compartment steamer (either pressure or atmospheric) or electric or gas cheese melter that is not classified as an *extra-heavy-duty cooking appliance*, *heavy-duty cooking appliance* or *medium-duty cooking appliance*.”

131. Delete the definition of “limit control.”

132. Delete the definition of “limited charge system.”

133. Insert the following definition:

“**LIQUID RECEIVER.** See “Receiver, liquid.””

134. Revise the definition of “listed” to read:

“**LISTED.** As defined in Chapter 2 of the *Chicago Building Code*.”

135. Delete the definition of “living space.”

136. Revise the definition of “lower explosive limit (LEL)” to read:

“**LOWER EXPLOSIVE LIMIT (LEL).** As defined in Chapter 2 of the *Chicago Fire Prevention Code*.”

137. Revise the definition of “lower flammable limit (LFL)” to read:

“**LOWER FLAMMABLE LIMIT (LFL).** As defined in Chapter 2 of the *Chicago Fire Prevention Code*.”

138. Insert the following definitions:

“**LOW-HEAT APPLIANCE.** See “Appliance, low-heat.”

“**LOW-PRESSURE BOILER.** See “Boiler, low-pressure.””

139. Delete the definition of “low-pressure hot-water-heating boiler.”

140. Delete the definition of “low-pressure steam-heating boiler.”

141. Revise the definition of “low-probability pump” by resetting “shaft” in italic type.

142. Revise the definition of “low-probability systems” to read:

“**LOW-PROBABILITY SYSTEM.** A *refrigeration system* in which the basic design or the location of components is such that a leakage of *refrigerant* from a failed connection, seal or component will not enter an *occupiable space*, other than the *refrigeration machinery room*.”

143. Delete the definition of “machinery room.”

144. Insert the following definitions:

“**MAKEUP AIR.** See “Air, makeup.”

“**MASONRY CHIMNEY.** See “Chimney, masonry.”

MASONRY FIREPLACE. See "Fireplace, masonry."

145. Revise the definition of "mechanical draft system" and its subsections by resetting each "venting system" in italic type.

146. Revise the definition of "mechanical joint" to read:

"MECHANICAL JOINT. See "Joint, mechanical."

147. Revise the definition of "mechanical system" by resetting "equipment" in italic type.

148. Revise the definition of "medium-duty cooking appliance" to read:

"MEDIUM-DUTY COOKING APPLIANCE. A *commercial cooking appliance* functioning as an electric discrete element range (with or without oven), electric or gas hot-top range, electric or gas griddle, electric or gas double-sided griddle, electric or gas fryer (including open deep fat fryers, donut fryers, kettle fryers and pressure fryers), electric or gas conveyor pizza oven, electric or gas tilting skillet (braising pan) or electric or gas rotisserie that is not classified as an *extra-heavy-duty cooking appliance* or *heavy-duty cooking appliance*."

149. Insert the following definitions:

"MEDIUM-HEAT APPLIANCE. See "Appliance, medium-heat."

METAL CHIMNEY. See "Chimney, metal."

150. Insert the following definition:

"MOTOR-VEHICLE-RELATED OCCUPANCY. A room or space subject to the requirements in Section 406 of the *Chicago Building Code*."

151. Insert the following definition:

"NATURAL DRAFT. See "Draft, natural."

152. Revise the definition of "natural draft system" by resetting "venting system and "natural draft" in italic type.

153. Revise the definition of "natural ventilation" to read:

"NATURAL VENTILATION. As defined in Chapter 2 of the *Chicago Building Code*."

154. Revise the definition of "net occupiable floor area" to read:

"NET OCCUPIABLE FLOOR AREA. The floor area of an *occupiable space* defined by the inside surfaces of its walls but excluding *shafts*, column enclosures and other areas that are permanently enclosed, unoccupiable and not provided with *access*. Furnishings, display or storage racks and similar obstructions, whether temporary or permanent, shall not be excluded."

155. Delete the definition of "no-flow condition (solar)."

156. Delete the definition of "occupancy."
157. Revise the definition of "occupiable space" to read:
 "**OCCUPIABLE SPACE.** As defined in Chapter 2 of the *Chicago Building Code.*"
158. Revise the definition of "offset (vent)" by deleting "*approved.*"
159. Revise the definition of "outdoor air" to read:
 "**OUTDOOR AIR.** See "Air, outdoor.""
160. Delete the definition of "outlet."
161. Insert the following definition:
 "**OWNER.** As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*"
162. Delete the definition of "peer review."
163. Insert the following definition:
 "**PLASTIC TO STEEL TRANSITION FITTINGS.** See "Transition fittings, plastic to steel.""
164. Delete the definition of "plastic, thermoplastic."
165. Delete the definition of "plastic, thermosetting."
166. Revise the definition of "plenum" to read:
 "**PLENUM.** An enclosed portion of the building structure, other than an *occupiable space* being conditioned, that is designed to allow air movement and thereby serves as part of an *air distribution system.*"
167. Revise the definition of "pollution-control unit (PCU)" to read:
 "**POLLUTION-CONTROL UNIT (PCU).** Manufactured *equipment* that is installed in a *grease duct* for the purpose of extracting smoke, grease particles and odors from the exhaust flow by means of a series of filters."
168. Delete the definition of "portable fuel cell appliance."
169. Insert the following definition:
 "**POSITIVE DISPLACEMENT COMPRESSOR.** See "Compressor, positive displacement.""
170. Delete the definition of "power boiler."
171. Delete the definition of "premises."

172. Revise the definition of "press-connect joint" by replacing "approved by" with "acceptable to."
173. Delete the definition of "pressure, field test."
174. Revise the definition of "pressure vessels" to read:
"PRESSURE VESSEL. A closed container, tank or vessel that is designed to contain liquids or gases, or both, under pressure."
175. Revise the definition of "pressure vessels—refrigerant" to read:
"PRESSURE VESSEL (for Chapter 11 only). Any *refrigerant*-containing receptacle in a *refrigeration system*. This does not include *evaporators* where each separate section does not exceed 0.5 cubic foot (0.014 m³) of *refrigerant*-containing volume, regardless of the maximum inside dimensions, evaporator coils, controls, headers, pumps and *pipng*."
176. Insert the following definition:
"PRIVATE GARAGE. As defined in Chapter 2 of the *Chicago Building Code*."
177. Delete the definition of "protective assembly (reduced clearance)."
178. Insert the following definition:
"PROFESSIONAL ENGINEER. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
179. Insert the following definition:
"PUBLIC GARAGE. As defined in Chapter 2 of the *Chicago Building Code*."
180. Revise the definition of "recirculated air" to read:
"RECIRCULATED AIR. See "Air, recirculated."
181. Revise the definition of "reclaimed refrigerants" to read:
"RECLAIMED REFRIGERANT. A *refrigerant* reprocessed to the same specifications as for a new *refrigerant* by means including distillation. Such *refrigerant* has been chemically analyzed to verify that the specifications have been met. Reclaiming usually implies the use of processes or procedures that are available only at a reprocessing or manufacturing facility."
182. Revise the definition of "recovered refrigerants" to read:
"RECOVERED REFRIGERANT. A *refrigerant* removed from a system in any condition without necessarily testing or processing it."
183. Delete the definition of "recycled refrigerants."

184. Insert the following definition:

"REDUCED CLEARANCE PROTECTIVE ASSEMBLY . An assembly of *noncombustible materials* that is *labeled* in accordance with Section 308.4.1 or constructed in accordance with Table 308.4.2 and is placed between *combustible materials* or *combustible assemblies* and mechanical *appliances, devices or equipment,* for the purpose of reducing required airspace *clearances. Reduced clearance protective assemblies* that are attached directly to a *combustible assembly* shall not be considered as part of the *combustible assembly.*"

185. Revise the definition of "refrigerant designation" by resetting "refrigerant" in italic type.

186. Revise the definition of "refrigerant safety group classification" and its subsections by resetting each "refrigerants" in italic type.

187. Delete the definition of "refrigeration capacity rating."

188. Revise the definition of "refrigeration machinery room" to read:

"REFRIGERATION MACHINERY ROOM. An enclosed space that is contains refrigeration *equipment* and is required by Section 1104.2 or 1112.2."

189. Revise the definition of "refrigeration system" by resetting "refrigerant" in italic type.

190. Delete the definition of "refrigeration system, absorption" and its subsections.

191. Revise the definition of "refrigeration system, self-contained" by resetting "refrigeration system" and "refrigerant" in italic type.

192. Revise the definition of "refrigeration system classification" to read:

"REFRIGERATION SYSTEM CLASSIFICATION. *Refrigeration systems* are classified according to the degree of probability that leaked *refrigerant* from a failed connection, seal or component will enter an occupied area. The distinction is based on the basic design or location of the components. See "high-probability system" and "low-probability system."

193. Revise the definition of "registered design professional" to read:

"REGISTERED DESIGN PROFESSIONAL. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*"

194. Insert the following definitions:

"RELIEF OPENING. A *duct* or opening that connects a room directly to the outdoors to facilitate *natural ventilation.*

REPAIR. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code.*

REPAIR GARAGE. As defined in Chapter 2 of the *Chicago Building Code.*"

195. Revise the definition of "return air" to read:
"RETURN AIR. See "Air, return.""
196. Revise the definition of "return air system" by resetting "ducts" in italic type.
197. Delete the definition of "self-contained equipment."
198. Insert the following definition:
"SELF-CONTAINED REFRIGERATION SYSTEM. See "Refrigeration system, self-contained.""
199. Revise the definition of "shaft" to read:
"SHAFT. As defined in Chapter 2 of the *Chicago Building Code*."
200. Revise the definition of "shaft enclosure" to read:
"SHAFT ENCLOSURE. As defined in Chapter 2 of the *Chicago Building Code*."
201. Revise the definition of "sleeping unit" to read:
"SLEEPING UNIT. As defined in Chapter 2 of the *Chicago Building Code*."
202. Revise the definition of "smoke damper" to read:
"SMOKE DAMPER. As defined in Chapter 2 of the *Chicago Building Code*."
203. Revise the definition of "smoke-developed index" to read:
"SMOKE-DEVELOPED INDEX. As defined in Chapter 2 of the *Chicago Building Code*."
204. Revise the definition of "solid fuel (cooking applications)" to read:
"SOLID FUEL (As applied to commercial cooking applications only). Applicable to commercial food service operations, solid fuel is any bulk material such as hardwood, mesquite, charcoal or briquettes that is combusted to produce heat for cooking operations."
205. Revise the definition of "source capture system" by resetting "mechanical exhaust system" in italic type.
206. Insert the following definition:
"SPECIAL FLOOD HAZARD AREA. As defined in Chapter 16-6 of the Municipal Code of Chicago."
207. Delete the definition of "story."
208. Delete the definition of "strength, ultimate."

209. Revise the definition of "supply air" to read:
"SUPPLY AIR. See "Air, supply.""
210. Revise the definition of "supply air system" by resetting "ducts" in italic type.
211. Revise the definition of "theoretical air" to read:
"THEORETICAL AIR. See "Air, theoretical.""
212. Insert the following definitions:
"THERMOPLASTIC. A plastic that is capable of being repeatedly softened by increase of temperature and hardened by decrease of temperature.
THERMOSETTING PLASTIC. A plastic that is capable of being changed into a substantially infusible or insoluble product when cured under application of heat or chemical means."
213. Revise the definition of "third-party certification agency" by resetting "approved agency" in italic type.
214. Revise the definition of "third-party certified" by replacing "an *approved*" with "a."
215. Revise the definition of "third-party tested" to read:
"THIRD-PARTY TESTED. Procedure by which an *approved agency*, acting as a testing laboratory, provides documentation that a product, material or system conforms to specified requirements."
216. Insert the following definition:
"TRANSFER AIR. See "Air, transfer.""
217. Insert the following definitions:
"TYPE I HOOD. See "Hood, Type I."
TYPE II HOOD. See "Hood, Type II.""
218. Delete the definition of "vent damper device, automatic."
219. Insert the following definitions:
"VENTED ROOM HEATER. See "Room heater, vented."
VENTED WALL FURNACE. A self-contained *vented appliance* complete with grilles or equivalent, designed for incorporation in or permanent attachment to the structure of a building, mobile home or travel trailer, and furnishing heated air circulated by gravity or by a fan directly into the space to be heated through openings in the casing. This definition shall exclude *floor furnaces, unit heaters* and central-heating furnaces."

220. Revise the definition of "ventilation" to read:
"VENTILATION. As defined in Chapter 2 of the *Chicago Building Code.*"
221. Revise the definition of "ventilation air" to read:
"VENTILATION AIR. See "Air, ventilation.""
222. Revise the definition of "venting system" to read:
"VENTING SYSTEM. A continuous open passageway from the flue collar of an *appliance* to the outdoor atmosphere for the purpose of removing *flue gases*. A venting system is usually composed of a *vent* or a *chimney* and *vent connector*, if used, assembled to form the open passageway."
223. Insert the following definition:
"VOLUME DAMPER. See "Damper, volume.""
224. Revise the definition of "water heater" to read:
"WATER HEATER. As defined in Chapter 2 (Article 2) of the *Chicago Plumbing Code.*"
225. Revise the definition of "zone" to read:
226. **"ZONE (for this code only).** One *occupiable space* or several adjoining *occupiable spaces* with similar use classification (see Table 403.3.1.1), occupant density, zone air distribution effectiveness and zone primary airflow rate per unit area."

CHAPTER 14M-3 GENERAL REQUIREMENTS

14M-3-301 GENERAL.

The provisions of IMC Section 301 are adopted by reference with the following modifications:

1. Revise Section 301.1 to read:
"301.1 Scope.
Installation of *equipment* and *appliances* that comprise part of a *mechanical system* shall comply with this chapter."
2. Revise Section 301.2 to read:
"301.2 Energy utilization.
Mechanical systems, equipment and *appliances* regulated by this code shall also comply with the *Chicago Energy Transformation Code.*"
3. Revise the last sentence of Section 301.5 to read:
"Piping, tubing and fittings shall either be *third-party tested* or *third-party certified.*"

4. Revise Section 301.6 to read:

"301.6 Fuel gas appliances and equipment.

Installation of *fuel gas* distribution piping and *equipment*, *fuel gas*-fired *appliances* and *fuel gas*-fired *appliance venting systems* shall comply with this chapter and the *Chicago Fuel Gas Code*."

5. Revise Section 301.7 to read:

"301.7 Listed and labeled.

Appliances regulated by this code shall be *listed* and *labeled* for the application in which they are installed and used, unless otherwise *approved*.

301.7.1 Refrigeration equipment.

Listing and labeling of *equipment* and *appliances* used for refrigeration shall be in accordance with Section 1101.2."

6. Revise Section 301.8.1 to read:

"301.8.1 Testing.

An *approved agency* shall test a representative sample of the *equipment* or *appliances* being labeled to the relevant standard or standards. The *approved agency* shall maintain a record of all of the tests performed. The record shall provide sufficient detail to verify compliance with the test standard."

7. Revise Section 301.8.2 and its subsections to read:

"301.8.2 Inspection and identification.

The *approved agency* shall periodically perform an inspection, which shall be in-plant if necessary, of the *equipment* and *appliances* to be labeled. The inspection shall verify that the labeled *equipment* and *appliances* are representative of the *equipment* and *appliances* tested.

301.8.2.1 Independent.

An *approved agency* shall be objective and competent. To confirm its objectivity, the *approved agency* shall disclose all possible conflicts of interest.

301.8.2.2 Equipment.

An *approved agency* shall have adequate facilities and apparatus to perform all required tests. Testing apparatus shall be periodically calibrated.

301.8.2.3 Personnel.

An *approved agency* shall employ experienced personnel educated in conducting, supervising and evaluating tests."

8. Revise the first sentence of Section 301.9 to read:

"A permanent factory-applied nameplate shall be affixed to *appliances*. The nameplate shall include, in legible lettering, the manufacturer's name or trademark, the model number, serial number and, for *listed appliances*, the seal or mark of the testing agency."

9. Revise Items 3 and 4 in Section 301.9 to read:

"3. Fuel-burning units: Hourly rating in Btu/h (W); type(s) of fuel suitable for use with the *appliance*; and required clearances.

4. Electric comfort heating *appliances*: electric rating in volts, amperes and phase; Btu/h (W) output rating; individual marking for each electrical component in amperes or watts, volts and phase; and required *clearances* from *combustible materials*."

10. Revise Section 301.10 to read:

"301.10 Electrical.

Electrical connections between *equipment* and *appliances* regulated by this code and the building wiring, including grounding of *appliances*, shall be in accordance with *the Chicago Electrical Code*. Gas *pipng* and *pipng* that is part of a mechanical system shall not be used as a grounding electrode.

301.10.1 Electrical bonding.

Gas *pipng* shall be electrically bonded in accordance with Section 310 of the *Chicago Fuel Gas Code*."

11. Revise Section 301.11 by resetting "building" in roman type.

12. Revise Section 301.12 to read:

"301.12 Fuel types.

Fuel-fired *appliances* shall only be supplied with a type of fuel for which they were designed and suitable to the altitude at which they are installed. The fuel input rate shall not be increased or decreased beyond the limit rating for the altitude at which the *appliance* is installed.

301.12.1 Appliance fuel conversion.

Appliances shall not be converted to use a different type of fuel except pursuant to a permit and where complete instructions for such conversion are provided in the installation instructions, by the fuel supplier or by the *appliance* manufacturer."

13. Revise Section 301.13 by replacing "an *approved*" with "a suitable."

14. Delete Section 301.14.

15. Revise Section 301.16, including its subsections, to read:

"301.16 Flood hazard.

Development in *special flood hazard areas* shall comply with Chapter 16-6 of the Municipal Code."

16. Revise Section 301.17 to read:

"301.17 Rodentproofing.

Buildings containing rooms or spaces in which individuals 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*."

17. Add a new Section 301.19 to read:

"301.19 Corrosive environments.

Mechanical *appliances, equipment* and supports installed in a corrosive environment shall be of materials that are inherently resistant to the corrosive or shall be protected with corrosion-resistant materials."

14M-3-302 PROTECTION OF STRUCTURE.

The provisions of IMC Section 302 are adopted by reference with the following modifications:

1. Revise Section 302.1 to read:

"302.1 Structural safety.

The building or structure shall not be weakened by the installation of *appliances, equipment* or systems regulated by this code. Where any portion of the building or structure is required to be altered or replaced in the process of installing or repairing any *appliance, equipment* or system, the work shall comply with the *Chicago Building Code* or *Chicago Building Rehabilitation Code*, as applicable."

2. Revise Section 302.3 by replacing "Section 2308.3" with "Chapter 23."

3. Revise Section 302.4 to read:

"302.4 Alterations to trusses.

Truss members and components shall not be cut, drilled, notched, spliced or otherwise altered in any way without written approval of a *registered design professional*. *Alterations* or *repairs* resulting in the addition of loads to any truss member, such as HVAC *equipment* and water heaters, shall not be allowed without verification that the truss is capable of supporting such additional loading."

4. Delete Section 302.5.1.

5. Add a new Section 302.6 to read:

“302.6 Cutting, notching and boring holes in structural steel framing.

The cutting, notching and boring of holes in structural steel framing members, other than cold-formed steel framing, shall be as prescribed by the *registered design professional*.”

14M-3-303 EQUIPMENT AND APPLIANCE LOCATION.

The provisions of IMC Section 303 are adopted by reference with the following modifications:

1. Revise Section 303.1 to read:

“303.1 General.

Equipment and appliances shall be located as required by this section and specific requirements elsewhere in this code.”

2. Revise Section 303.2 by deleting “and *approved*.”
3. Revise Section 303.3, including the exception, to read:

“303.3 Prohibited locations.

Appliances regulated by the *Chicago Fuel Gas Code* shall not be located in any location prohibited by Section 303 of that code. Other fuel-fired *appliances* shall not be located in, or obtain *combustion air* from, any of the following rooms or spaces:

1. Sleeping rooms.
2. *Bathrooms*.
3. *Toilet rooms*.
4. Storage closets.
5. Surgical rooms.

Exception: This section shall not apply to the following *appliances*:

1. *Direct-vent appliances* that obtain all *combustion air* directly from the outdoors.
 2. Solid fuel-fired *appliances*, provided that *combustion air* is provided in accordance with the manufacturer’s instructions, and solid fuel-fired *fireplaces*.
 3. *Appliances* installed in a dedicated enclosure in which all *combustion air* is taken directly from the outdoors, in accordance with Chapter 7. Access to such enclosure shall be through a solid door, weather-stripped in accordance with the exterior door air leakage requirements of the *Chicago Energy Transformation Code* and equipped with a self-closing device.”
4. Revise Section 303.4 by replacing “*approved*” with “*suitable*.”

5. Revise Section 303.5 by resetting "furnaces" and "boilers" in italic type.
6. Revise Section 303.7 by resetting "control" in italic type and deleting "in an *approved* manner."
7. Revise Section 303.8 by resetting "mechanical systems" and "shaft" in italic type.
8. Delete Section 303.9.
9. Add a new Section 303.10 to read:

"303.10 Exit enclosures.

Mechanical systems shall not be located in interior exit stairway or exit ramp enclosures or exit passageways.

Exception: Equipment and ductwork necessary for independent heating, ventilation, or pressurization of the exit enclosure."

10. Add a new Section 303.11 to read:

"303.11 Means of egress and circulation paths.

Mechanical systems shall not obstruct the required width or height of the means of egress, including exterior components of the means of egress. *Mechanical systems* on circulation paths shall comply with requirements for protruding and projecting objects in the *Chicago Building Code*."

14M-3-304 INSTALLATION.

The provisions of IMC Section 304 are adopted by reference with the following modifications:

1. Revise Section 304.1 by deleting "as required by the terms of their approval."
2. Revise Section 304.3, excluding the exception, to read:

"304.3 Elevation of ignition source.

Equipment and appliances having an *ignition source* and located in a *hazardous location*, or *motor-vehicle-related occupancy* shall be elevated such that the *ignition source* is not less than 18 inches (457 mm) above the floor surface on which the *equipment* or *appliance* rests. For the purpose of this section, rooms or spaces that are not part of the *occupiable space* of a *dwelling unit* and that communicate directly with a *private garage* through openings shall be considered to be part of the *private garage*."

3. Revise Section 304.3.1, excluding the exception, to read:

"304.3.1 Spaces connected to a motor-vehicle-related occupancy.

Connection of a *motor-vehicle-related occupancy* with any room in which there is a fuel-fired *appliance* shall be by means of a vestibule providing a two-doorway separation, except that a single door is allowed where the sources of ignition in the *appliance* are elevated in accordance with Section 304.3."

4. Add a new Section 304.3.2 to read:

“304.3.2 Installation in space adjacent to private garage.

In *private garages* where *appliances* having an *ignition source* are installed in a separate, enclosed space having *access* only from the outdoors, such *appliances* shall be allowed to be installed at floor level, provided that the required *combustion air* is taken from the outdoors.”

5. Revise Section 304.4 to read:

“304.4 Control areas and Group H occupancies.

Equipment and *appliances* having an *ignition source* shall not be installed in Group H occupancies or *control areas* of any occupancy where open use, handling or dispensing of combustible, flammable or explosive materials occurs.”

6. Revise Section 304.5 to read:

“304.5 Hydrogen-generating and refueling operations.

Hydrogen generating appliances and hydrogen refueling *appliances* shall be installed and located in accordance with their listing and the manufacturer’s instructions. *Ventilation* shall be required in accordance with Section 304.5.1, 304.5.2 or 304.5.3 in *motor-vehicle-related occupancies* that contain *hydrogen generating appliances* or refueling systems. For the purpose of this section, rooms or spaces that are not part of the *occupiable space* of a *dwelling unit* and that communicate directly with a *private garage* through openings shall be considered to be part of the *private garage*.”

7. Revise Section 304.5.1 by replacing “hydrogen-generating *appliances*” with “*hydrogen generating appliances*,” “ducts” with “*ducts*,” and “source of ignition” with “*ignition source*.”

8. Revise Section 304.5.2 by replacing “source of ignition” with “*ignition source*.”

9. Revise Section 304.6, excluding the exception, to read:

“304.6 Clearance above motor vehicles.

Appliances located in areas that can be accessed by motor vehicles shall be installed not less than 8 feet (2438 mm) above the floor. Where motor vehicles are capable of passing under an *appliance*, the *appliance* shall be installed at the *clearances* required by the *appliance* manufacturer and not less than 1 foot (305 mm) higher than the tallest vehicle garage door opening.”

10. Revise Section 304.7, excluding the exception, to read:

“304.7 Private garages and carports.

Appliances located in *private garages* and *carports* shall be installed with a minimum clearance of 6 feet (1829 mm) above the floor.”

11. Revise Section 304.8 to read:

"304.8 Construction and protection.

Rooms containing mechanical *equipment* and *appliances* shall be protected as required by Section 509 of the *Chicago Building Code*."

12. Revise Section 304.9 to read:

"304.9 Clearances to combustible assemblies.

Heat-producing *equipment* and *appliances* shall be installed to maintain the required *clearances* to *combustible materials* as specified in the listing and manufacturer's instructions. Such *clearances* shall be reduced only in accordance with Section 308. *Clearances to combustible materials* shall include such considerations as door swing, drawer pull, overhead projections or shelving and window swing, shutters, coverings and drapes. Devices such as doorstops or limits, closers, drapery ties or guards shall not be used to provide the required *clearances*."

13. Revise Section 304.10 by replacing "*approved material*" with "*noncombustible material*."

14. Revise Section 304.12 to read:

"304.12 Area served.

Appliances serving areas of a building other than where the *appliances* are installed shall be permanently marked in a manner that uniquely identifies the *appliance* and the area it serves."

14M-3-305 PIPING SUPPORT.

The provisions of IMC Section 305 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "*concealed location*," "*mechanical system*," and "*piping*."
2. Revise Section 305.2 by deleting "*approved*."
3. Revise Section 305.3 by replacing "*building*" with "building" and "*approved*" with "suitable."
4. Add a new Section 305.6 to read:

"305.6 Strain on piping.

Appliances shall be supported and connected to *piping* so as not to exert undue strain on the *piping* or connections."

14M-3-306 ACCESS AND SERVICE SPACE.

The provisions of IMC Section 306 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in italic type: "access."

2. Revise Section 306.1 to read:

"306.1 Access.

Appliances, controls, devices, heat exchangers and other HVAC system components that utilize energy shall provide *access* for inspection, service, repair and replacement without disabling the function of a fire-resistance-rated assembly or removing permanent construction, other *appliances, venting systems* or any other *pipng or ducts* not connected to the *appliance* being inspected, serviced, repaired or replaced."

3. Revise Section 306.2 by adding a sentence at the end to read:

"A level working space not less than 30 inches deep and 30 inches wide (762 mm by 762 mm) shall be provided in front of the control side to service an *appliance*."

4. Revise the exception to Section 306.2 by replacing "*dwelling unit*" with "*dwelling unit or sleeping unit*."

5. Revise the first paragraph of Section 306.5 to read:

"Where *equipment* requiring *access* or *appliances* are located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet (4877 mm) above grade to access such *equipment* or *appliances*, an interior or exterior means of *access* shall be provided. In buildings with three or fewer *stories above grade plane*, the clear access opening dimensions for roof access shall be not less than 20 inches (508 mm) by 30 inches (762 mm). In buildings with four or more *stories above grade plane*, interior roof access openings and roof access hatches shall be sized and installed in accordance with the *Chicago Building Code*. Such *access* shall not require climbing over obstructions greater than 30 inches (762 mm) in height or walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). Such *access* shall not require the use of portable ladders. Where *access* involves climbing over parapet walls, the height shall be measured to the top of the parapet wall."

6. Revise Item 9 in Section 306.5 by deleting "by *approved* means."

7. Revise the exception to Section 306.5 to read:

"Exception: This section shall not apply to equipment serving individual *dwelling units* in Group R-2, R-3, R-4 or R-5 occupancies in buildings with no more than five stories above grade plane where reasonable alternative means of *access* are provided."

14M-3-307 CONDENSATE DISPOSAL.

The provisions of IMC Section 307 are adopted by reference with the following modifications:

1. Revise the first two sentences of Section 307.1 to read:

"Liquid *combustion products* of condensing *appliances* shall be collected and discharged to a plumbing fixture or disposal area in accordance with the manufacturer's installation

instructions. Condensate piping shall be of corrosion-resistant material and shall not be smaller than the drain connection on the *appliance*.”

2. Revise Section 307.2.1 by replacing “an *approved*” with “a suitable.”
3. Revise Section 307.2.1.1 to read:

“307.2.1.1 Condensate discharge.

Condensate drains shall be indirectly connected in accordance with the *Chicago Plumbing Code*. Except where discharging to grade outdoors, the point of discharge of condensate drains shall be located within the same occupancy, tenant space or *dwelling unit* as the source of the condensate.”

4. Revise Section 307.2.3 by resetting “building” in roman type.
5. Revise Section 307.2.3.2 by deleting “and *approved*.”
6. Revise Section 307.2.5 by replacing “permit” with “allow.”

14M-3-308 CLEARANCE REDUCTION.

The provisions of IMC Section 308 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: “combustible assembly,” “combustible material,” and “reduced clearance protective assembly.”

2. Revise Section 308.1 to read:

“308.1 Scope.

This section shall govern the reduction in required *clearances* to *combustible materials*, including *gypsum board*, and *combustible assemblies* for *chimneys*, vents, kitchen exhaust *equipment*, mechanical *appliances*, and mechanical devices and *equipment*.”

3. Revise Section 308.2 by replacing “combustibles” with “*combustible materials*.”
4. Revise Section 308.3 to read:

“308.3 Reduced clearance protective assembly construction and installation.

Reduced clearance protective assemblies, including structural and support elements, shall be constructed of *noncombustible materials*. Spacers utilized to maintain an airspace between the *reduced clearance protective assembly* and the protected material or assembly shall be *noncombustible material*. Where a space between the *reduced clearance protective assembly* and protected *combustible material* or *combustible assembly* is specified, the same space shall be provided around the edges of the *reduced clearance protective assembly* and the spacers shall be placed so as to allow air circulation by convection in such space. *Reduced clearance protective assemblies* shall not be placed less than 1 inch (25 mm) from the mechanical *appliances*, devices or *equipment*, regardless of the allowable reduced *clearance*.”

5. Revise Section 308.4.1 by replacing “an *approved*” with “a.”

6. Revise the header rows in Table 308.4.2 by replacing “protective assembly” with “reduced clearance protective assembly” and “combustibles” with “combustible materials.”

14M-3-309 TEMPERATURE CONTROL.

The provisions of IMC Section 309 are not adopted. The following is adopted as Section 309:

“SECTION 309 TEMPERATURE CONTROL

309.1 General.

Temperature control for indoor spaces shall be provided in accordance with Section 1203 of the *Chicago Building Code*.”

14M-3-310 EXPLOSION CONTROL.

The provisions of IMC Section 310 are adopted by reference without modification.

14M-3-311 SMOKE AND HEAT VENTS.

The provisions of IMC Section 311 are not adopted. The following is adopted as Section 311:

“SECTION 311 SMOKE AND HEAT VENTS

311.1 General.

Smoke and heat vents shall be installed where required by Section 910 of the *Chicago Building Code*.”

14M-3-312 HEATING AND COOLING LOAD CALCULATIONS.

The provisions of IMC Section 312 are not adopted. The following is adopted as Section 312:

“SECTION 312 HEATING AND COOLING LOAD CALCULATIONS

312.1 General.

Heating and cooling system design loads for the purpose of sizing systems, *appliances* and *equipment* shall be determined in accordance with the procedures described in the ASHRAE/ACCA Standard 183. Alternatively, design loads shall be determined by an *approved* equivalent computation procedure, using the design parameters specified in Chapter C3 of the *Chicago Energy Transformation Code*.

312.2 Performance.

Heating and cooling systems shall be designed to meet the performance requirements in Section 1203 of the *Chicago Building Code*.”

CHAPTER 14M-4 VENTILATION

14M-4-400 IMC CHAPTER 4.

The provisions of IMC Chapter 4 are not adopted. The following is adopted as Chapter 4 entitled "Ventilation":

"SECTION 401 GENERAL

401.1 Scope.

Ventilation of occupiable spaces shall comply with this chapter.

401.2 Ventilation required.

Every *occupiable space* shall be provided with *ventilation* in accordance with Sections 401.2.1 through 401.2.3.

401.2.1 Mechanical exhaust systems.

A mechanical exhaust system in accordance with Table 403.3.1.1 or 403.3.2.3 shall be provided in *toilet rooms* and *bathrooms*.

401.2.2 Mechanical ventilation.

Mechanical ventilation in accordance with Section 403 shall be provided in:

1. *Ambulatory care facilities.*
2. *Group I-2 occupancies.*
3. *Dwelling units and sleeping units* complying with or exceeding the new construction building thermal envelope air leakage requirements in the Chicago Energy Conservation Code or *Chicago Energy Transformation Code* in effect at the time of construction. *Dwelling units and sleeping units* in buildings and additions constructed in or after 2010 shall be presumed to meet this standard.
4. *Rooms or spaces where mechanical ventilation is specifically required by this code, Chapter 4 of the Chicago Building Code, the Chicago Energy Transformation Code, or the Chicago Fire Prevention Code.*
5. *Rooms or spaces required to be provided with cooling and dehumidification equipment in accordance with Section 1203 of the Chicago Building Code or Section 803 of the Chicago Minimum Requirements for Existing Buildings.*
6. *Rooms or spaces not provided with means of natural ventilation in accordance with Section 1202.5 of the Chicago Building Code.*

401.2.3 Natural ventilation.

Means of *natural ventilation* in accordance with Section 1202.5 of the *Chicago Building Code* shall be provided in:

1. Rooms intended for dining, living or sleeping and with a floor area of 70 square feet (6.5 m²) or more in a *dwelling unit* in a Group I-1, R-2, R-3, R-4 or R-5 occupancy.

Exception: Buildings containing 20 or more *dwelling units* where all *dwelling units* in the building are provided with mechanical *ventilation* in accordance with Section 403 and the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 of the *Chicago Building Code*.

2. Rooms or spaces not provided with mechanical *ventilation* in accordance with Section 403.

401.3 When required.

Ventilation shall be provided during times when the room or space is occupied.

401.4 Intake opening location.

Air intake openings shall comply with all of the following:

1. Intake openings shall be separated from lot lines or buildings on the same lot so as to reasonably prevent obstruction or contamination of the air supply.
2. Mechanical and gravity outdoor air intake openings shall be located not less than 15 feet (4572 mm) horizontally from any hazardous or noxious contaminant source, such as vents, streets, alleys, parking lots and loading docks. Outdoor air intake openings shall be allowed to be located less than 15 feet (4572 mm) horizontally from areas accessible to motor vehicles provided that the openings are located not less than 25 feet (7620 mm) vertically above the driving surface. Where openings front on an area accessible to motor vehicles, these distances shall be measured from the closest edge of the area accessible to motor vehicles.
3. Separation is not required between intake air openings and living space *exhaust air* openings of an individual *dwelling unit* or *sleeping unit* where a factory-built intake/exhaust combination termination fitting is used to separate the air streams in accordance with the fan manufacturer's instructions.
4. Intake openings on structures in *special flood hazard areas* shall comply with Chapter 16-6 of the Municipal Code of Chicago.
5. Horizontal intake openings shall not be located in a walking or driving surface, such as a driveway, plaza, sidewalk or street. Horizontal intake openings shall be at least 12 inches (305 mm) above adjacent grade.
6. Intake openings shall not draw air from the lower level of any multi-level street or similar condition.

401.5 Intake opening protection.

Air intake openings that terminate outdoors shall be protected with corrosion-resistant screens, louvers or grilles. Openings in louvers, grilles and screens shall be sized in accordance with Table 401.5. Outdoor air intake openings located in exterior walls shall meet the provisions for exterior wall opening protectives in accordance with Chapter 7 of the *Chicago Building Code and for rodent protection and insect screens in accordance with Sections 1210 and 1211 of the Chicago Building Code.*

TABLE 401.5—OPENING SIZES IN LOUVERS, GRILLES AND SCREENS PROTECTING AIR INTAKE OPENINGS	
OUTDOOR OPENING TYPE	MINIMUM AND MAXIMUM OPENING SIZES IN LOUVERS, GRILLES AND SCREENS ^a
Intake openings for systems serving individual dwelling units or sleeping units	Not less than 1/4 inch and not greater than 1/2 inch
Intake openings for all other systems	Not less than 1/4 inch and not greater than 1 inch
For SI: 1 inch = 25.4 mm.	
a. For rectangular openings, the dimensional requirements apply to the shortest side. For round openings, the dimensional requirements apply to the diameter. For square openings, the dimensional requirements apply to any side.	

401.6 Contaminant sources.

Stationary local sources producing airborne particulates, heat, odors, fumes, spray, vapors, smoke or gases in such quantities as to be irritating or injurious to health shall be provided with a *mechanical exhaust system* in accordance with Chapter 5 or a means of collection and removal of the contaminants.

401.7 Obstruction.

Air intake openings shall be located so as to remain unobstructed during expected operational and weather conditions.

**SECTION 402
RESERVED**

**SECTION 403
MECHANICAL VENTILATION**

403.1 Ventilation system.

Mechanical *ventilation* shall be provided by a method of *supply air* and *return air* or *exhaust air*. The amount of *supply air* shall be approximately equal to the amount of *return air* or *exhaust air*. The system shall not be prohibited from producing negative or positive pressure where allowed by Section 18-28-501.4. The system to convey *ventilation air* shall be designed and installed in accordance with Chapter 6.

403.2 Outdoor air required.

The minimum outdoor airflow rate shall be determined in accordance with Section 403.3.

403.2.1 Recirculation of air.

The *outdoor air* required by Section 403.3 shall not be *recirculated air*. Air in excess of that required by Section 403.3 may be *recirculated air* in compliance with Sections 403.2.1.1 through 403.2.1.5.

403.2.1.1 Dwelling units and sleeping units.

Air may be recirculated within a *dwelling unit* or *sleeping unit*. Air shall not be recirculated or transferred from one *dwelling unit* or *sleeping unit* to another.

403.2.1.2 Dissimilar uses.

Air shall not be recirculated between spaces with dissimilar uses.

403.2.1.3 Indoor swimming pools.

Supply air to a swimming pool and associated deck areas shall not be *recirculated air* unless such air is dehumidified to maintain the relative humidity of the area at 60 percent or less. Air from this area shall not be recirculated to other spaces where more than 10 percent of the resulting supply airstream consists of *recirculated air* from these spaces. The design and installation of dehumidification systems shall comply with ANSI/ACCA 10 Manual SPS.

403.2.1.4 Designation of expected air-quality classification.

Return air and *transfer air* leaving a space shall be designated with an expected air-quality classification not less than shown in Table 403.3.1.1, as provided in Section 403.2.1.4.3 or as *approved* by the *building official*. Air leaving spaces that are not listed in Table 403.3.1.1 shall be designated based on the most similar space listed in terms of occupant activities and building construction.

403.2.1.4.1 Mixed sources.

A mixture of air that has been transferred through or returned from spaces with different expected air-quality classifications shall be designated with the highest classification among the sources.

403.2.1.4.2 Ancillary spaces.

A Class 1 space that is ancillary to a Class 2 space shall be allowed to be classified as a Class 2 space.

403.2.1.4.3 Specific sources.

Air from a source listed in Table 403.2.1.4.3 shall be designated with an expected air-quality classification not less than shown in the table.

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TABLE 403.2.1.4.3—CLASSIFICATION OF AIR FROM SPECIFIC SOURCES	
SOURCE	CLASSIFICATION
Type I hood	4
Domestic cooking range hood or downdraft exhaust	4 ^a
Type II hood	3
Diazo printing equipment discharge	4
Hydraulic elevator machine room	2
Laboratory hood	4
Paint spray booth	4
Refrigeration machinery room	3
<p>a. Air that passes through a listed and labeled ductless (recirculating) domestic range hood installed in accordance with Section 18-28-505.3 and the manufacturer's instructions shall be classified as Class 2 air.</p>	

403.2.1.4.4 Designation for unlisted uses.

Construction documents shall indicate the justification for classification of air from any use classification or source not listed in Table 403.2.1.4.3 or 403.3.1.1.

403.2.1.5 Recirculation limitations.

Use of *recirculated air* shall be limited in accordance with Table 403.2.1.5 based on the classification of the space of origin and space in which the air will be recirculated.

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TABLE 403.2.1.5—LIMITATIONS ON RECIRCULATED AIR					
CLASSIFICATION OF AIR, SPACE OF ORIGIN	RECIRCULATION WITHIN SPACE OF ORIGIN	RECIRCULATION OR TRANSFER TO OTHER SPACES			
		CLASS 1	CLASS 2	CLASS 3	CLASS 4
Class 1	Allowed	Allowed			
Class 2	Allowed	Not allowed ^b	Allowed ^a	Allowed	
Class 3	Allowed	Not allowed ^c			
Class 4	Not allowed				
<p>a. Provided that the other space is used for the same or similar purpose or task and involves the same or similar contaminant sources. Transfer of Class 2 air to a toilet room is allowed.</p> <p>b. Where there is a wheel-type energy recovery ventilation (ERV) unit in the exhaust system, recirculation from leakage, carry-over or transfer from the exhaust side of the ERV is allowed but shall not be counted as outdoor air. The exhaust air transfer ratio of Class 2 air shall not exceed 10% of the outdoor air intake flow at the design static pressure differential per AHRI 1060.</p> <p>c. Where there is a wheel-type energy recovery ventilation (ERV) unit in the exhaust system, recirculation from leakage, carry-over or transfer from the exhaust side of the ERV is allowed but shall not be counted as outdoor air. The exhaust air transfer ratio of Class 3 air shall not exceed 5% of the outdoor air intake flow at the design static pressure differential per AHRI 1060.</p>					

403.2.2 Transfer air.

Except where recirculation from such spaces is prohibited by Section 403.2.1, air transferred from *occupiable spaces* is not prohibited from serving as *makeup air* for required *exhaust systems* in such spaces as kitchens, *bathrooms*, *toilet rooms*, elevators and smoking lounges. The amount of *transfer air* and *exhaust air* shall be sufficient to provide the flow rates as specified in Section 403.3.1.1. The required outdoor airflow rates specified in Table 403.3.1.1 shall be introduced directly into such spaces or into the *occupiable spaces* from which air is transferred or a combination of both.

403.3 Outdoor air and local exhaust airflow rates.

Group R-2, R-3, R-4 and R-5 occupancies shall be provided with *outdoor air* and local exhaust in accordance with Section 403.3.2. Other enclosed spaces within buildings shall be provided with *outdoor air* and local exhaust in accordance with Section 403.3.1.

403.3.1 General.

The design of local *exhaust systems* and ventilation systems for *outdoor air* shall comply with Sections 403.3.1.1 through 403.3.1.4.

Exception: *Dwelling units*, *sleeping units*, and *corridors* in Group R-2, R-3, R-4 and R-5 occupancies subject to Section 403.3.2.

403.3.1.1 Outdoor airflow rate.

Ventilation systems shall be designed to have the capacity to supply the minimum outdoor airflow rate, determined in accordance with this section. In each *occupiable space*, the ventilation system shall be designed to deliver the required rate of outdoor airflow to the *breathing zone*. The

occupant load utilized for design of the ventilation system shall be the largest (peak) number of people expected to occupy the zone during typical use and not less than the number determined from the minimum design occupant density indicated in Table 403.3.1.1. *Ventilation* rates for uses not represented in Table 403.3.1.1 shall be those for a listed *use* classification that is most similar in terms of occupant density, activities and space configuration. The ventilation system shall be designed to supply the required rate of *ventilation air* continuously during the period the room or space served is occupied, except as otherwise stated in this code.

With the exception of smoking lounges, the ventilation rates in Table 403.3.1.1 are based on the absence of smoking in *occupiable spaces*. Where smoking is anticipated in an enclosed space other than a smoking lounge, the ventilation system serving the space shall be designed to provide ventilation over and above that required by Table 403.3.1.1 in accordance with accepted engineering practice to protect human health.

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TABLE 403.3.1.1—MINIMUM VENTILATION RATES

USE	MINIMUM DESIGN OCCUPANT DENSITY #/1000 FT ² ^a	PEOPLE OUTDOOR AIRFLOW RATE IN BREATHING ZONE, R _p CFM/PERSON	AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE, R _a CFM/FT ² ^a	EXHAUST AIRFLOW RATE CFM/FT ² ^a	AIR CLASS
Animal facilities					
Animal exam room (veterinary office)	20	10	0.12	—	2
Animal imaging (MRI/CT/PET)	20	10	0.18	0.90	3
Animal operating room	20	10	0.18	3.00	3
Animal postoperative recovery room	20	10	0.18	1.50	3
Animal preparation room	20	10	0.18	1.50	3
Animal procedure room	20	10	0.18	2.25	3
Animal surgery scrub	20	10	0.18	1.50	3
Large animal holding room	20	10	0.18	2.25	3
Necropsy	20	10	0.18	2.25	3
Pet shop (animal areas)	10	7.5	0.18	0.90	3
Small animal cage room (static cages)	20	10	0.18	2.25	3
Small animal cage room (ventilated cages)	20	10	0.18	1.50	3
Correctional facilities					
Booking/waiting	50	7.5	0.06	—	2
Cell (with plumbing fixtures) ^g	25	5	0.12	1.00	2
Cell (without plumbing fixtures)	25	5	0.12	—	2
Day room	30	5	0.06	—	1
Dining hall	See "food and beverage service facilities."				
Guard station	15	5	0.06	—	1

(Table continues on next page.)

Dry cleaning and laundry facilities					
Commercial dry cleaning plant	30	30	—	—	3
Commercial laundry	10	5	0.12	—	2
Public self-service laundry	20	7.5	0.12	—	2
Self-service laundry room, central	10	5	0.12	—	2
Educational facilities					
Art classroom	20	10	0.18	0.70	2
Auditorium	See "public assembly facilities" and "theater facilities."				
Classroom (ages 5 to 8)	25	10	0.12	—	1
Classroom (age 9 plus)	35	10	0.12	—	1
Computer lab	25	10	0.12	—	1
Day care (through age 4)	25	10	0.18	—	1
Day care sick room	25	10	0.18	—	3
Lecture classroom	65	7.5	0.06	—	1
Lecture hall (fixed seats)	150	7.5	0.06	—	1
Locker/dressing room	See "general facilities."				
Library	See "public assembly facilities."				
Multiuse assembly	See "public assembly facilities."				
Music/theater/dance	35	10	0.06	—	1
Science laboratory	25	10	0.18	1.00	2
Sports locker room	See "general facilities."				

(Table continues on next page.)

University/college laboratory	25	10	0.18	1.00	2
Wood/metal shop	20	10	0.18	0.50	2
Food and beverage service facilities					
Bar, cocktail lounge	100	7.5	0.18	—	2
Cafeteria, fast food dining room	100	7.5	0.18	—	2
Commercial kitchen	See "workplace facilities, specialized."				
Restaurant dining room	70	7.5	0.18	—	2
General facilities					
Break room (with kitchenette)	50	5	0.12	0.30	2
Break room (without kitchenette)	50	5	0.06	—	1
Conference/meeting	50	2.5	0.06	—	1
Corridor	—	—	0.06	—	1
Elevator car	—	—	—	1.00	1
Locker room for athletic, industrial or health care facilities	—	—	—	0.50	2
Locker room, other	—	—	—	0.25	2
Room with adult changing station	—	—	—	50/70 ^e	2
Shower room (per shower head)	—	—	—	20/50 ^f	2
Smoking lounge	70	60	—	Note m	3
Toilet room—public	—	—	—	50/70 ^e	2

(Table continues on next page.)

Office-type facilities					
Call center/data entry	60	5	0.06	—	1
Conference room	50	5	0.06	—	1
Copy/printing room	5	5	0.06	0.50	2
General office	5	5	0.06	—	1
Main entry lobby	10	5	0.06	—	1
Reception area	30	5	0.06	—	1
Outpatient health care facilities^{l,j}					
Birthing room	15	10	0.18	—	2
Class 1 imaging room	5	5	0.12	—	1
Dental operatory ^k	20	10	0.18	—	1
General examination room	20	7.5	0.12	—	1
Other dental treatment area	5	5	0.06	—	1
Physical therapy exercise area	7	20	0.18	—	2
Physical therapy individual room	20	10	0.06	—	1
Physical therapy pool area	—	—	0.48	—	2
Prosthetics and orthotics room	20	10	0.18	—	1
Psychiatric consultation room	20	5	0.06	—	1
Psychiatric examination room	20	5	0.06	—	1
Psychiatric group room	50	5	0.06	—	1
Psychiatric seclusion room	5	10	0.06	—	1
Speech therapy room	20	5	0.06	—	1

(Table continues on next page.)

Urgent care examination room	20	7.5	0.12	—	1
Urgent care observation room	20	5	0.06	—	1
Urgent care treatment room	20	7.5	0.18	—	1
Urgent care triage room	20	10	0.18	—	1
Parking garages and parking facilities					
Parking, enclosed (6 or more motor vehicles) ^d	—	—	—	0.75	3
<i>Private garage</i> (5 or fewer motor vehicles)	—	—	—	Note n	3
Private (nontransient) dwelling units and sleeping units	See Section 403.3.2				2
Public assembly facilities					
Auditorium, spectator area	150	5	0.06	—	1
Courtroom	70	5	0.06	—	1
Legislative chamber	50	5	0.06	—	1
Library	10	5	0.12	—	1
Lobby / prefunction	30	7.5	0.06	—	1
Multipurpose assembly	120	7.5	0.06	—	1
Museum (children's)	40	7.5	0.12	—	1
Museum/gallery	40	7.5	0.06	—	1
Place of religious worship	120	5	0.06	—	1
Sports and entertainment	See "sports and entertainment facilities."				

(Table continues on next page.)

Retail and personal service facilities					
Dressing room	—	—	—	0.25	1
Sales (except as below)	15	7.5	0.12	—	1
Automotive motor-fuel dispensing station	—	—	—	1.50	3
Bank, customer lobby	15	7.5	0.06	—	1
Bank, vault or safe deposit	5	5	0.06	—	2
Barber	25	7.5	0.06	0.50	2
Beauty salon	25	20	0.12	0.60	3
Gallery/showroom	40	7.5	0.06	—	1
Mall common area	40	7.5	0.06	—	1
Nail salon ^{b, h}	25	20	0.12	0.60	3
Pet shop (animal areas)	See "animal facilities."				
Supermarket	8	7.5	0.06	—	1
Shipping and receiving	2	10	0.12	—	2
Warehouse	See "storage facilities."				
Sports and entertainment facilities					
Bowling alley (seating)	40	10	0.12	—	1
Dance floor	100	20	0.06	—	2
Gambling casino	120	7.5	0.18	—	1
Game arcade	20	7.5	0.18	—	1
Gym, sports arena (play area)	7	20	0.18	—	2
Health club, aerobics room	40	20	0.06	—	2
Health club, weight/equipment room	10	20	0.06	—	2

(Table continues on next page.)

Ice arena without combustion engines	—	—	0.30	0.50	1
Spectator area	See "public assembly facilities."				
Stages, studios	See "theater facilities."				
Swimming pool (pool and deck area)	—	—	0.48	—	2
Storage facilities					
Chemical storage room	—	—	—	1.50	4
Janitor closet	—	—	—	1.00	3
Occupiable storage room for dry material	2	5	0.06	—	1
Occupiable storage room for liquids or gels	2	5	0.12	—	2
Refrigerated storage/freezer (< 50°F)	—	10	—	—	2
Soiled laundry storage room	—	—	—	1.00	3
Trash/recycling room	—	—	—	1.00	3
Warehouse ¹	0	10	0.06	—	2
Theater facilities					
Lobby	150	5	0.06	—	1
Performance area (stage, studio)	70	10	0.06	—	1
Spectator area (auditorium)	See "public assembly facilities."				
Ticket booth	60	5	0.06	—	1
Transient residential facilities (hotels, motels, dormitories, etc.)					
Bathroom / toilet room—private	—	—	—	25/50 ^f	2
Bedroom / living room	10	5	0.06	—	1
Dormitory (barracks) sleeping area	20	5	0.06	—	1

(Table continues on next page.)

Transportation facilities					
Platform	100	7.5	0.06	—	3
Waiting room	100	7.5	0.06	—	1
Workplace facilities, specialized					
Commercial kitchen b	20	7.5	0.12	0.70	2
Computer room (without printing)	4	5	0.06	—	1
Copy and printing room	4	5	0.06	0.50	2
Darkroom	—	—	—	1.00	2
Embalming	—	—	—	2.00	3
Manufacturing (no hazardous materials)	7	10	0.18	—	2
Manufacturing (some hazardous materials)	7	10	0.18	—	3
Meat processing c	10	15	—	—	2
Motor vehicle repair d	—	—	—	1.50	3
Pharmacy (preparation area)	10	5	0.18	—	2
Photography studio	10	5	0.12	—	1
Shipping / receiving	2	10	0.12	—	2
Sorting, packing or light assembly	7	7.5	0.12	—	2
Woodwork	7	10	0.18	0.5	2
<p>For SI: 1 cubic foot per minute = 0.0004719 m³/s, 1 ton = 908 kg, 1 cubic foot per minute per square foot = 0.00508 m³/(s × m²), °C = [(°F) – 32]/1.8, 1 square foot = 0.0929 m².</p> <p>a. Based on net occupiable floor area.</p> <p>b. Reserved.</p>					

(Table continues on next page.)

- c. Spaces unheated or maintained below 50°F are not covered by these requirements unless the occupancy is continuous.
- d. Ventilation systems in enclosed motor-vehicle-related occupancies shall comply with Section 404.
- e. Rates are per water closet, urinal or adult changing station. The higher rate shall be provided where the exhaust system is designed to operate intermittently. The lower rate shall be allowed only where the exhaust system is designed to operate continuously while occupied.
- f. Rates are per room unless otherwise indicated. The higher rate shall be provided where the exhaust system is designed to operate intermittently. The lower rate shall be allowed only where the exhaust system is designed to operate continuously while occupied.
- g. Reserved.
- h. For nail salons, each manicure and pedicure station shall be provided with a source capture system capable of exhausting not less than 50 cfm per station. Manicure tables and pedicure stations not provided with factory-installed exhaust inlets shall be provided with exhaust inlets located not more than 12 inches horizontally and vertically from the point of chemical application. Where one or more required source capture systems operate continuously during occupancy, the exhaust rate from such systems shall be allowed to be applied to the exhaust flow rate required by Table 403.3.1.1 for the nail salon.
- i. Outpatient facilities to which the rates apply are freestanding birth centers, urgent care centers, neighborhood clinics and physicians' offices, Class 1 imaging facilities, outpatient psychiatric facilities, outpatient rehabilitation facilities and outpatient dental facilities.
- j. The requirements of this table provide for acceptable IAQ. The requirements of this table do not address the airborne transmission of airborne viruses, bacteria and other infectious contagions.
- k. These rates are intended only for outpatient dental clinics where the amount of nitrous oxide is limited. They are not intended for dental operatories in institutional buildings where nitrous oxide is piped.
- l. The net occupiable floor area in warehouses shall not include the floor area of self-storage units, floor areas under rack storage or designated palletized storage floor areas.
- m. Exhaust system must be designed in accordance with accepted engineering practice to protect human health.
- n. Provide relief openings per Section 404.3.

(Remainder of this page intentionally blank.)

403.3.1.1.1 Zone outdoor airflow.

The minimum outdoor airflow required to be supplied to each zone shall be determined as a function of *use* classification and space air distribution effectiveness in accordance with Sections 403.3.1.1.1.1 through 403.3.1.1.1.3.

403.3.1.1.1.1 Breathing zone outdoor airflow.

The outdoor airflow rate required in the *breathing zone* (V_{bz}) of the *occupiable space* or spaces in a zone shall be determined in accordance with Equation 4-1.

$$V_{bz} = R_p P_z + R_a A_z \quad \text{(Equation 4-1)}$$

where:

- A_z = Zone floor area: the *net occupiable floor area* of the space or spaces in the zone.
- P_z = Zone population: the number of people in the space or spaces in the zone.
- R_p = People outdoor air rate: the outdoor airflow rate required per person from Table 403.3.1.1.
- R_a = Area outdoor air rate: the outdoor airflow rate required per unit area from Table 403.3.1.1.

403.3.1.1.1.2 Zone air distribution effectiveness.

The zone air distribution effectiveness (E_z) shall be determined using Table 403.3.1.1.1.2.

(Remainder of this page intentionally blank.)

TABLE 403.3.1.1.1.2—ZONE AIR DISTRIBUTION EFFECTIVENESS ^{a, b, c, d}	
AIR DISTRIBUTION CONFIGURATION	E_z
Ceiling or floor supply of cool air	1.0 ^e
Ceiling or floor supply of warm air and floor return	1.0
Ceiling supply of warm air and ceiling return	0.8 ^f
Floor supply of warm air and ceiling return	0.7
Makeup air drawn in on the opposite side of the room from the exhaust or return	0.8
Makeup air drawn in near to the exhaust or return location	0.5
For SI: 1 foot = 304.8 mm, 1 foot per minute = 0.00506 m/s, °C = [(°F) – 32]/1.8. a. “Cool air” is air cooler than space temperature. b. “Warm air” is air warmer than space temperature. c. “Ceiling” includes any point above the breathing zone. d. “Floor” includes any point below the breathing zone. e. Zone air distribution effectiveness of 1.2 shall be allowed for systems with a floor supply of cool air and ceiling return, provided that low-velocity displacement ventilation achieves unidirectional flow and thermal stratification. f. Zone air distribution effectiveness of 1.0 shall be allowed for systems with a ceiling supply of warm air, provided that supply air temperature is less than 15°F above space temperature and provided that the 150-foot-per-minute supply air jet reaches to within 4½ feet of floor level.	

403.3.1.1.1.3 Zone outdoor airflow.

The zone outdoor airflow rate (V_{oz}), shall be determined in accordance with Equation 4-2.

$$V_{oz} = \frac{V_{bz}}{E_z} \quad \text{(Equation 4-2)}$$

403.3.1.1.2 System outdoor airflow.

The *outdoor air* required to be supplied by each ventilation system shall be determined in accordance with Sections 403.3.1.1.2.1 through 403.3.1.1.2.3.4 as a function of system type and zone outdoor airflow rates.

403.3.1.1.2.1 Single zone systems.

Where one air handler supplies a mixture of *outdoor air* and *recirculated air* to only one zone, the system *outdoor air* intake flow rate (V_{ot}) shall be determined in accordance with Equation 4-3.

$$V_{ot} = V_{oz} \quad \text{(Equation 4-3)}$$

403.3.1.1.2.2 100-percent outdoor air systems.

Where one air handler supplies only *outdoor air* to one or more zones, the system *outdoor air* intake flow rate (V_{ot}) shall be determined using Equation 4-4.

$$V_{ot} = \sum_{\text{all zones}} (V_{oz}) \quad \text{(Equation 4-4)}$$

403.3.1.1.2.3 Multiple zone recirculating systems.

Where one air handler supplies a mixture of *outdoor air* and *recirculated air* to more than one zone, the system outdoor air intake flow rate (V_{ot}) shall be determined in accordance with Sections 403.3.1.1.2.3.1 through 403.3.1.1.2.3.4.

403.3.1.1.2.3.1 Primary outdoor air fraction.

The primary *outdoor air* fraction (Z_p) shall be determined for each zone in accordance with Equation 4-5.

$$Z_p = \frac{V_{oz}}{V_{pz}} \quad \text{(Equation 4-5)}$$

where:

V_{pz} = Primary airflow: The airflow rate supplied to the zone from the air-handling unit at which the *outdoor air* intake is located. It includes outdoor intake air and *recirculated air* from that air-handling unit but does not include air transferred or air recirculated to the zone by other means. For design purposes, V_{pz} shall be the zone design primary airflow rate, except for zones with variable air volume supply and V_{pz} shall be the lowest expected primary airflow rate to the zone when it is fully occupied.

403.3.1.1.2.3.2 System ventilation efficiency.

The system ventilation efficiency (E_v) shall be determined using Table 403.3.1.1.2.3.2 or Appendix A of ASHRAE 62.1.

(Remainder of this page intentionally blank.)

TABLE 403.3.1.1.2.3.2—SYSTEM VENTILATION EFFICIENCY ^{a, b}	
Max (Z_p)	E_v
Less than or equal to 0.15	1
Less than or equal to 0.25	0.9
Less than or equal to 0.35	0.8
Less than or equal to 0.45	0.7
Less than or equal to 0.55	0.6
Less than or equal to 0.65	0.5
Less than or equal to 0.75	0.4
Greater than 0.75	0.3

a. Max (Z_p) is the largest value of Z_p calculated using Equation 4-5 among all the zones served by the system.

b. Interpolating between table values shall be allowed.

403.3.1.1.2.3.3 Uncorrected outdoor air intake.

The uncorrected outdoor air intake flow rate (V_{ou}) shall be determined in accordance with Equation 4-6.

$$V_{ou} = D[\sum_{all\ zones} (R_p P_z)] + \sum_{all\ zones} (R_a A_z) \quad \text{(Equation 4-6)}$$

where:

D = Occupant diversity: the ratio of the system population to the sum of the zone populations, determined in accordance with Equation 4-7.

$$D = \frac{P_s}{\sum_{all\ zones} (P_z)} \quad \text{(Equation 4-7)}$$

where:

P_s = System population: The total number of occupants in the area served by the system. For design purposes, P_s shall be the maximum number of occupants expected to be concurrently in all zones served by the system.

403.3.1.1.2.3.4 Outdoor air intake flow rate.

The outdoor air intake flow rate (V_{ot}) shall be determined in accordance with Equation 4-8.

$$V_{ot} = \frac{V_{ou}}{E_z} \quad \text{(Equation 4-8)}$$

403.3.1.2 Exhaust ventilation.

Ventilation systems shall be designed to have the capacity to produce the minimum exhaust airflow rate in accordance with Table 403.3.1.1. *Outdoor air* introduced into a space by an *exhaust system* to meet this requirement shall also be considered as contributing to the outdoor airflow required by Table 403.3.1.1.

403.3.1.3 System operation.

The minimum flow rate of *outdoor air* that the ventilation system must be capable of supplying during its operation shall be allowed to be based on the rate per person indicated in Table 403.3.1.1 and the actual number of occupants present. Where demand-controlled ventilation is employed to adjust the outdoor airflow rate based on the actual number of occupants present, the minimum quantity of *outdoor air* shall not fall below that determined from the area outdoor airflow rate column of Table 403.3.1.1 during periods when the building is expected to be occupied.

403.3.1.4 Variable air volume system control.

Variable air volume air distribution systems, other than those designed to supply only 100-percent *outdoor air*, shall be provided with *controls* to regulate the flow of *outdoor air*. Such *controls* shall be designed to maintain the flow rate of *outdoor air* at a rate of not less than that required by Section 403.3 over the entire range of *supply air* operating rates.

403.3.2 Group R-2, R-3, R-4 and R-5 occupancies.

The design of local *exhaust systems* and ventilation systems for *outdoor air* in Group R-2, R-3, R-4 and R-5 occupancies shall comply with Sections 403.3.2.1 through 403.3.2.5.

403.3.2.1 Outdoor air ventilation systems for dwelling units and sleeping units.

An *outdoor air* ventilation system consisting of a *mechanical exhaust system*, mechanical supply system or combination thereof shall be installed for each *dwelling unit* and for each *sleeping unit* that is not part of a *dwelling unit*. Local exhaust or supply systems, including outdoor air ducts connected to the return side of an air handler, are allowed to serve as such a system.

Exception: Exhaust-only mechanical *ventilation* shall not be allowed for newly established attached *dwelling units* that open directly to an enclosed *corridor* or interior exit stairway.

The *outdoor air* ventilation system shall be designed to provide the required rate of *outdoor air* continuously during the period that the *dwelling unit* or *sleeping unit* is occupied. The minimum continuous outdoor airflow rate shall be determined in accordance with Table 403.3.2.2(1) or 403.3.2.2(2) or Equation 4-9.

Exceptions:

1. The *outdoor air* ventilation system is not required to operate continuously where the system has controls that enable operation for not less than 1 hour of each 4-hour period. The average outdoor airflow rate over the 4-hour period shall be not less than that prescribed by Table 403.3.2.2(1) or 403.3.2.2(2) or Equation 4-9.
2. The minimum mechanical ventilation rate determined in accordance with Equation 4-9 shall be reduced by 30 percent provided that all of the following conditions are met:
 - 2.1. A ducted system supplies *ventilation air* directly to each bedroom and to one or more of the following rooms:
 - 2.1.1. Living room.
 - 2.1.2. Dining room.
 - 2.1.3. Kitchen.
 - 2.2. The ventilation system is a *balanced ventilation system*.
 - 2.3. Doors between *dwelling units* and common *corridors* are gasketed or made substantially airtight.

$$Q_{OA} = 0.03 A_{floor} + 7.5(N_{br} + 1) \quad \text{(Equation 4-9)}$$

where:

- Q_{OA} = continuous outdoor airflow rate, cfm
 A_{floor} = net occupiable floor area, ft²
 N_{br} = number of bedrooms; not to be less than one

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TABLE 403.3.2.2(1)—MINIMUM CONTINUOUS OUTDOOR AIRFLOW RATE (CFM) FOR DWELLING UNIT WITH ONE OPEN KITCHEN, ^a ONE BATHROOM AND NO TOILET ROOMS ^{b, c}

NET OCCUPIABLE FLOOR AREA (square feet)	BEDROOMS				
	0 or 1	2	3	4	5 ^d
250	70	--	--	--	--
500	70	70	70	70	70
750	70	70	70	70	70
1,000	70	70	70	70	75
1,250	70	70	70	75	82.5
1,500	70	70	75	82.5	90
1,750	70	75	82.5	90	97.5
2,000	75	82.5	90	97.5	105
2,250	82.5	90	97.5	105	112.5
2,500	90	97.5	105	112.5	120
2,750	97.5	105	112.5	120	127.5
3,000	105	112.5	120	127.5	135
3,500	120	127.5	135	142.5	150
4,000	135	142.5	150	157.5	165

For SI: 1 cubic foot per minute = 0.0004719 m³/s, 1 square foot = 0.0929 m².

- a. For enclosed kitchens, use Equation 4-9 and Section 403.3.2.3. For each additional open kitchen, add 50 cfm.
- b. If one or more toilet rooms, use Table 403.3.2.2(2) or Equation 4-9 and Section 403.3.2.3.
- c. This table assumes continuous exhaust for kitchens, toilet rooms and bathrooms. For demand-controlled exhaust, use Equation 4-9 and Section 403.3.2.3.
- d. For more than 5 bedrooms, use Equation 4-9 and Section 403.3.2.3.

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TABLE 403.3.2.2(2)—MINIMUM CONTINUOUS OUTDOOR AIRFLOW RATE (CFM) FOR DWELLING UNIT WITH ONE OPEN KITCHEN, ^a AND TWO BATHROOMS OR TOILET ROOMS ^{b, c}					
NET OCCUPIABLE FLOOR AREA (FT²)	BEDROOMS				
	0 or 1	2	3	4	5 ^d
250	90	--	--	--	--
500	90	90	90	90	90
750	90	90	90	90	90
1,000	90	90	90	90	90
1,250	90	90	90	90	90
1,500	90	90	90	90	90
1,750	90	90	90	90	97.5
2,000	90	90	90	97.5	105
2,250	90	90	97.5	105	112.5
2,500	90	97.5	105	112.5	120
2,750	97.5	105	112.5	120	127.5
3,000	105	112.5	120	127.5	135
3,500	120	127.5	135	142.5	150
4,000	135	142.5	150	157.5	165

For SI: 1 cubic foot per minute = 0.0004719 m³/s, 1 square foot = 0.0929 m².

a. For enclosed kitchens, use Equation 4-9 and Section 403.3.2.3. For each additional open kitchen, add 50 cfm.

b. For each additional toilet room or bathroom, add 20 cfm.

c. This table assumes continuous exhaust for kitchens, toilet rooms and bathrooms. For demand-controlled exhaust, use Equation 4-9 and Section 403.3.2.3.

d. For more than 5 bedrooms, use Equation 4-9 and Section 403.3.2.

403.3.2.2 Reserved.

403.3.2.3 Local exhaust.

Local *exhaust systems* shall be provided in kitchens, *bathrooms* and *toilet rooms* and shall have the capacity to exhaust the minimum airflow rate determined in accordance with Table 403.3.2.3.

(Remainder of this page intentionally blank.)

TABLE 403.3.2.3—MINIMUM REQUIRED LOCAL EXHAUST RATES FOR GROUP R-2, R-3 R-4 AND R-5 OCCUPANCIES		
AREA TO BE EXHAUSTED	EXHAUST RATE CAPACITY	
	DEMAND-CONTROLLED ^a	CONTINUOUS ^c
Kitchen	Vented range hood (including appliance-range hood combinations): 100 cfm Other kitchen exhaust fans, including downdraft: 300 cfm	Open kitchen: 50 cfm, with inlet located in the area with heaviest concentration of contaminants and at least 48 inches horizontally from cooktops and ranges Enclosed kitchen: 5 ACH based on volume of kitchen ^b
Bathroom or toilet room	50 cfm	20 cfm

For SI: 1 cubic foot per minute = 0.0004719 m³/s, 1 square foot = 0.0929 m², 1 inch = 25.4 mm.

a. Demand-controlled local mechanical exhaust equipment shall be provided with either a manual on-off control or an automatic control that does not impede manual on control.

b. The total area of openings between an enclosed kitchen and adjacent interior spaces shall not exceed 60 square feet.

c. Continuous exhaust shall be designed to operate at all times when the building is occupied.

403.3.2.4 System controls.

Where provided within a *dwelling unit* or *sleeping unit*, controls for *outdoor air* ventilation systems shall include text or a symbol indicating the system's function.

403.3.2.5 Fans.

Fans providing exhaust or *outdoor air* shall be *listed* and *labeled* to provide the minimum required air flow in accordance with ANSI/AMCA 210-ANSI/ASHRAE 51.

403.3.2.6 Outdoor air for corridors and similar spaces.

Indoor *corridors* and similar common areas that serve *dwelling units* or *sleeping units* shall be provided with *outdoor air* at a rate of not less than 0.06 cfm per square foot [0.0003 m³/(s • m²)] of *net occupiable floor area*. The minimum required *outdoor air* for a *corridor* shall not also be counted as providing required *outdoor air* for spaces opening onto the *corridor*.

403.3.2.7 Outdoor air for amenity and accessory use spaces.

Lounges, gathering areas, laundry rooms, building offices, and similar amenity or accessory use spaces in Group R-2, R-3 and R-4 occupancies, and *bathrooms*, *kitchens* and *toilet rooms* associated with such spaces shall be provided with *outdoor air* in accordance with Section 403.3.1.

403.3.2.8 Adjacent spaces and transfer air.

Measures shall be taken to minimize air movement across the boundary between a *dwelling unit* or *sleeping unit* and adjacent spaces, such as *motor-vehicle-related occupancies*, unconditioned crawl spaces, unconditioned attics, and other *dwelling units* or *sleeping units*.

403.2.8.1 Adjacent motor-vehicle-related occupancy.

Where a *motor-vehicle-related occupancy*, including a *private garage*, is adjacent to a *dwelling unit* or *sleeping unit*, boundary walls, ceilings, and floors shall be air sealed to prevent the migration of contaminants into the unit. To be considered air sealed, all joints, seams, penetrations, openings between door assemblies and their respective jambs and framing, and other sources of air leakage through wall and ceiling assemblies shall be caulked, gasketed, weather stripped, wrapped, or otherwise sealed to limit air movement. Doors between a *motor-vehicle-related occupancy* and a *dwelling unit* or *sleeping unit* shall be gasketed or made substantially airtight with weather stripping.

SECTION 404 MOTOR-VEHICLE-RELATED OCCUPANCIES

404.1 General.

Mechanical ventilation systems for enclosed *motor-vehicle-related occupancies* shall operate continuously or shall be automatically operated by means of carbon monoxide detectors applied in conjunction with nitrogen dioxide detectors. Such detectors shall be listed in accordance with UL 2075 and installed in accordance with their listing and the manufacturer's instructions. Automatic operation shall cycle the ventilation system between the following two modes of operation:

1. Full-on at an airflow rate of not less than 0.75 cfm per square foot [0.0038 m³/(s • m²)] of the *net occupiable floor area* served.
2. Standby at an airflow rate of not less than 0.05 cfm per square foot [0.00025 m³/(s • m²)] of the *net occupiable floor area* served.

Exception: *Private garages* complying with Section 404.3.

404.2 Occupied spaces accessory to parking garages.

Offices, waiting rooms, ticket booths and similar spaces that are connected and accessory to an open or enclosed *motor-vehicle-related occupancy* shall be maintained at a positive pressure and shall be provided with mechanical *ventilation* in accordance with Section 403.3.

Exception: Spaces connected to a *carport*.

404.3 Private garages.

Private garages shall be provided with either *mechanical ventilation* or *relief openings* in accordance with Sections 404.3.1 through 404.3.3.

404.3.1 Area.

The aggregate area of *relief openings* shall be not less than 1 square foot (0.09 m²) per 200 square feet (18.58 m²) of floor area.

404.3.2 Duct length.

The horizontal length of a *duct* leading to a *relief opening* shall not exceed 5 feet (1524 mm).

404.3.3 Termination.

The termination of *relief openings* shall be equipped with a weather-resistant louver or cowl having a free area not smaller than that of any connected *duct*.

SECTION 405 SYSTEMS CONTROL

405.1 General.

Mechanical ventilation systems shall be provided with manual or automatic *controls* that will operate the system whenever the space served by the system is occupied. *Air-conditioning systems* that supply required *ventilation air* shall be provided with *controls* designed to automatically maintain the required *outdoor air* supply rate when the space served by the system is occupied.

SECTION 406 VENTILATION OF UNINHABITED SPACES

406.1 General.

Uninhabited spaces, such as crawl spaces and attics, shall be provided with *natural ventilation* openings as required by the *Chicago Building Code* or shall be provided with a *mechanical exhaust system* and *supply air system*. The mechanical exhaust rate shall be not less than 0.02 cfm per square foot (0.00001 m³/s • m²) of horizontal area and shall be automatically controlled to operate when the relative humidity in the space served exceeds 60 percent.

SECTION 407 AMBULATORY CARE FACILITIES AND GROUP I-2 OCCUPANCIES

406.1 General.

Mechanical ventilation systems for *ambulatory care facilities* and Group I-2 occupancies shall be designed and installed in accordance with this code, ASHRAE 170/ASHE and NFPA 99."

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**CHAPTER 14M-5
EXHAUST SYSTEMS, SMOKE CONTROL SYSTEMS,
AND ENERGY RECOVERY VENTILATION SYSTEMS**

14M-5-501 GENERAL.

The provisions of IMC Section 501 are adopted by reference with the following modifications:

1. Revise Section 501.1 to read:

"501.1 Scope.

Design, installation, *alteration, repair* and utilization of *exhaust systems*, smoke control systems, and *energy recovery ventilation systems* shall comply with this chapter."

2. Revise Section 501.2 to read:

"501.2 Independent exhaust systems required.

Exhaust systems shall be independent of each other as provided in Sections 501.2.1 through 501.2.6.

501.2.1 Environmental air exhaust systems.

Exhaust systems for *environmental air* shall be independent of *exhaust systems* for any source other than *environmental air*. *Exhaust systems* for *environmental air* shall be allowed to connect to other *exhaust systems* for *environmental air*.

501.2.2 Clothes dryer exhaust systems.

An *exhaust system* for a *clothes dryer* shall be independent of all other *exhaust systems*.

Exceptions:

1. Common *exhaust systems* for multiple commercial *clothes dryers* located in the same room or space, when installed in accordance with the *clothes dryer* manufacturer's installation instructions.
2. Common domestic clothes dryer exhaust systems that comply with Section 504.11.

501.2.3 Domestic cooking exhaust.

A domestic cooking exhaust system shall be independent of all other *exhaust systems*.

Exception: Common domestic kitchen exhaust systems that comply with Section 505.5.

501.2.4 Type I exhaust systems.

The *exhaust system* for a *Type I hood* shall be independent of all other *exhaust systems*.

Exception: *Exhaust systems* for interconnected hoods in accordance with Section 506.3.5.

501.2.5 Type II exhaust systems.

Exhaust systems for *Type II hoods* shall be independent of all other *exhaust systems*. *Exhaust systems* for *Type II hoods* shall be allowed to connect to other *exhaust systems* for *Type II hoods*.

501.2.6 Hazardous exhaust.

Each hazardous exhaust system subject to Section 509 shall be independent of all other *exhaust systems*."

3. Revise Section 501.3 by resetting "mechanical exhaust system" in italic type.
4. Revise Item 1 in Section 501.3.1 to read:
 - "1. For ducts conveying explosive or flammable vapors, fumes or dusts: 30 feet (9144 mm) from property lines; 15 feet (4572 mm) from operable openings into buildings; 6 feet (1829 mm) from exterior walls and roofs; 30 feet (9144 mm) from combustible walls and operable openings into buildings that are in the direction of the exhaust discharge; 15 feet (4572 mm) above adjoining grade."
5. Revise Items 3, 4, and 5 in Section 501.3.1 to read:
 - "3. For all *environmental air* and domestic cooking exhaust: 3 feet (914 mm) from property lines; 3 feet (914 mm) from operable openings, except where the exhaust opening is located not less than 1 foot (305 mm) above the gravity air intake opening into buildings for all occupancies other than Group U; and 10 feet (3048 mm) from mechanical air intakes. Such exhaust shall not be considered hazardous or noxious. Separation is not required between intake air openings and *occupiable space exhaust air* openings of an individual *dwelling unit* or *sleeping unit* where a factory-built intake/exhaust combination termination fitting is used to separate the air streams in accordance with the fan manufacturer's instructions.
 4. Exhaust outlets serving structures in *special flood hazard areas* shall be installed at or above the elevation required by Chapter 16-6 of the Municipal Code of Chicago for utilities and attendant equipment.
 5. For specific systems, see the following sections:
 - 5.1. *Clothes dryer* exhaust, Section 504.4.
 - 5.2. Commercial kitchen hoods and other kitchen exhaust *equipment*, Sections 506.3.13, 506.4 and 506.5.
 - 5.3. Dust, stock and refuse conveying systems, Section 510.2.
 - 5.4. Subslab soil exhaust systems, Section 511.4.
 - 5.5. Smoke control systems, Section 512.10.3.

5.6. Refrigerant discharge, Section 1105.7.

5.7. *Refrigeration machinery room* discharge, Section 1105.6.1.”

6. Revise Section 501.3.2 by deleting the third sentence.

7. Revise Section 501.4 to read:

“501.4 Pressure equalization.

Mechanical exhaust systems shall be sized to remove the quantity of air required by this chapter to be exhausted. The system shall operate when air is required to be exhausted. When mechanical exhaust is required in a room or space, such space shall be maintained with a neutral or negative pressure. If a greater quantity of air is supplied by a mechanical *supply air system* than is removed by a *mechanical exhaust system* for a room, adequate means shall be provided for the natural or mechanical exhaust of the additional quantity of 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 *supply air system* for a room, adequate *makeup air* shall be provided to satisfy the deficiency.”

8. Revise Section 501.5 by resetting “duct” in italic type.

9. Revise Section 501.6 by replacing “*dwelling*” with “*dwelling units*” and resetting each “duct” and “shaft” in italic type.

14M-5-502 REQUIRED SYSTEMS.

The provisions of IMC Section 502 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: “combustible liquid,” “control area,” “exhaust system,” “flammable liquid,” “mechanical exhaust system,” and “ventilation.”

2. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in roman type: “building.”

3. Revise Section 502.1 by replacing “An exhaust system” with “A *mechanical exhaust system*” and “occupied areas” with “*occupiable spaces*.”

4. Revise Section 502.1.1 by replacing “an exhaust system” with “a *mechanical exhaust system*.”

5. Revise Section 502.1.3 by resetting “appliance” and “equipment” in roman type.

6. Revise Section 502.3 to read:

“502.3 Battery-charging areas for powered industrial trucks and equipment.

Ventilation shall be provided in battery-charging areas for powered industrial trucks and *equipment* that is sufficient to prevent a dangerous accumulation of flammable gases.”

7. Revise Section 502.4 by replacing “Section 1207.6.1” with “Chapter 12.”

8. Add a new Section 502.6.1 to read:

"502.6.1 Classification.

Dry cleaning systems shall be classified as follows:

Type I. Those systems using Class I flammable liquid solvents having a flash point below 100°F (38°C).

Type II. Those systems using Class II combustible liquid solvents having a flash point at or above 100°F (38°C) and below 140°F (60°C).

Type III. Those systems using Class III combustible liquid solvents having a flash point at or above 140°F (60°C).

Types IV and V. Those systems using Class IV nonflammable liquid solvents."

9. Revise Section 502.6.1 by renumbering it Section 502.6.2, resetting "dry cleaning systems" in italic type, and deleting "at an *approved* location."
10. Revise Section 502.6.2 by renumbering it Section 502.6.3 and resetting "dry cleaning systems" in italic type.
11. Revise Section 502.6.3 by renumbering it Section 502.6.4 and replacing "ventilating" with "ventilation."
12. Revise Exceptions 1.3 and 1.4 to Section 502.7.3.2 to read:
- 1.3. Suitable *equipment* is used to monitor the vapor concentration.
- 1.4. An alarm is sounded and spray operations are automatically shut down if the vapor concentration exceeds 25 percent of the *lower flammable limit (LFL)*."
13. Revise Section 502.7.3.3 by resetting "lower flammable limit (LFL)" in italic type.
14. Revise Section 502.7.7 by replacing "*approved*" with "suitable."
15. Revise Exception 1 to Section 502.8.1 by deleting "Section 5904 of."
16. Revise Exception 2 to Section 502.8.1 by deleting "Chapter 56 of."
17. Revise Item 7 in Section 502.8.1.1 by deleting "have not been removed."
18. Revise Section 502.9.1 to read:

"502.9.1 Compressed gases—medical gas systems.

Rooms for the storage of compressed medical gases in amounts regulated by the *Chicago Fire Prevention Code*, and that do not have an exterior wall, shall be exhausted through a duct to the exterior of the building. Both separate airstreams shall be enclosed in a 2-hour-rated *shaft enclosure* from the room to the exterior. Mechanical ventilation shall be provided at a minimum rate of 1 cfm/ft² [0.00508 m³/(s × m²)] of the area of the room.

Gas cabinets for the storage of compressed medical gases in amounts regulated by the *Chicago Fire Prevention Code* shall be connected to an *exhaust system*. The average velocity of ventilation at the face of access ports or windows shall be not less than 200 feet per minute (1.02 m/s) with a minimum velocity of 150 feet per minute (0.76 m/s) at any point at the access port or window."

19. Revise Section 502.9.5, including its exceptions, to read:

"502.9.5 Flammable liquids and combustible liquids.

Exhaust ventilation systems shall be provided as required by Sections 502.9.5.1 through 502.9.5.5 for the storage, use, dispensing, mixing and handling of *flammable liquids* and *combustible liquids*. Unless otherwise specified, this section shall apply to any quantity of *flammable liquids* or *combustible liquids*.

Exceptions:

1. This section shall not apply to *flammable liquids* and *combustible liquids* that are exempt from the *Chicago Fire Prevention Code*.
 2. The storage of beer, distilled spirits and wine in barrels and casks conforming to the requirements of the *Chicago Building Code*."
20. Revise Section 502.9.5.1 by resetting "exhaust system" in italic type and by replacing "LFL" with "*lower flammable limit (LFL)*."
21. Revise Section 502.9.5.3 by deleting "in accordance with the International Fire Code."
22. Revise Section 502.9.5.4 by deleting the exception.
23. Revise Section 502.9.10.1 by replacing "an *approved*" with "a suitable."
24. Revise Section 502.9.11 by deleting "Chapter 64 of."
25. Revise Item 8 in Section 502.10.1 by deleting "Section 2705.2.3.4 of."
26. Revise Section 502.10.2 by resetting "shaft" in italic type.
27. Delete Section 502.13.
28. Revise Section 502.14 including its exceptions to read:

"502.14 Stationary motor vehicle operation.

Enclosed areas in which stationary motor vehicles are operated shall be provided with a *source capture system* that connects directly to the motor vehicle exhaust systems. Such system shall be engineered by a *registered design professional* or *professional engineer* or shall be factory-built *equipment* designed and sized for the purpose. This requirement shall be in addition to the *ventilation* required by Sections 403 and 404.

Exceptions:

1. Locations where the motor vehicles being operated or repaired are solely electrically powered.

2. *Private garages and carports.*
 3. Motor vehicle service areas where engines are operated inside the building only for the duration necessary to move the motor vehicles in and out of the building.”
29. Revise Section 502.15 by changing the heading to “Pits.”
30. Revise Section 502.16 and its subsections to read:

“502.16 Repair garages for vehicles fueled by lighter-than-air fuels.

Repair garages used for the conversion and repair of vehicles that use compressed fossil gas, liquefied fossil gas, hydrogen or other lighter-than-air motor fuels shall be provided with a *mechanical exhaust system* in accordance with Section 502.16.1 or 502.16.2 as applicable.

Exceptions:

1. *Repair garages* where work is not performed on the fuel system and is limited to exchange of parts and maintenance not requiring open flame or welding on the compressed fossil gas, liquefied fossil gas, hydrogen or other lighter-than-air-fueled motor vehicle.
2. *Repair garages* for hydrogen-fueled vehicles where work is not performed on the hydrogen storage tank and is limited to the exchange of parts and maintenance not requiring open flame or welding on the hydrogen-fueled vehicle. During the work, the entire hydrogen fuel system shall contain a quantity of hydrogen that is less than 200 cubic feet (5.6 m³).

502.16.1 Repair garages for hydrogen-fueled vehicles.

Repair garages used for the maintenance of hydrogen-fueled vehicles shall be provided with a *mechanical exhaust system* in accordance with this code and Chapter 6 of NFPA 2.

502.16.2 Exhaust system.

Repair garages used for the maintenance of compressed fossil gas, liquefied fossil gas or other lighter-than-air motor fuel, other than hydrogen, shall be provided with a *mechanical exhaust system* in accordance with Sections 502.16.2.1 and 502.16.2.2.

502.16.2.1 Design.

For indoor locations, air supply inlets and exhaust outlets for mechanical ventilation shall be arranged to provide uniformly distributed air movement with inlets uniformly arranged on walls near floor level and outlets located at the high point of the room in walls or the roof.

Failure of the *mechanical exhaust system* shall cause the fueling system to shut down.

The exhaust rate shall be not less than 1 cubic foot per minute (0.03 m³/min) per 12 cubic feet (0.34 m³) of room volume.

502.16.2.2 Operation.

The *mechanical exhaust system* shall operate continuously.

Exceptions:

1. *Mechanical exhaust systems* that are interlocked with a gas detection system designed in accordance with the *Chicago Fire Prevention Code*.
 2. *Mechanical exhaust systems* in garages that are used only for the maintenance of vehicles fueled by liquid fuels or odorized gases, such as compressed fossil gas, where the exhaust ventilation system is electrically interlocked with the lighting circuit."
31. Revise Section 502.19 by deleting "in an *approved* manner."
32. Revise Section 502.20 by replacing "an exhaust system" with "a *mechanical exhaust system*."

14M-5-503 MOTORS AND FANS.

The provisions of IMC Section 503 are adopted by reference with the following modifications:

1. Revise Section 503.1 by deleting "installed at an *approved* location" and by replacing each "*approved*" with "suitable."
2. Revise Section 503.2 by resetting "exhaust systems" in italic type.

14M-5-504 CLOTHES DRYER EXHAUST.

The provisions of IMC Section 504 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "clothes dryer," "combustible material," "exhaust system," "noncombustible material," and "shaft."

2. Revise Section 504.1 to read:

"504.1 Installation.

Clothes dryers shall be exhausted in accordance with the manufacturer's instructions. *Clothes dryer exhaust systems* shall convey the moisture and any *combustion products* to the outside of the building.

Exception: This section shall not apply to *listed and labeled* condensing (ductless) *clothes dryers* plumbed to a drain in accordance with the *Chicago Plumbing Code*."

3. Revise Section 504.2 by deleting "*approved*."

4. Revise Section 504.4 to read:

"504.4 Exhaust installation.

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 extend into or through *ducts* or *plenums*. *Clothes dryer* exhaust *ducts* shall be sealed in accordance with Section 603.9."

5. Revise Section 504.4.1 by adding a sentence to the end to read:

"Exhaust duct terminations shall not be located in exterior walls that are not allowed to have unprotected openings in accordance with the *Chicago Building Code*."

6. Revise Section 504.6 by replacing "dryer exhaust systems" with "*clothes dryer exhaust systems*."

7. Revise Section 504.7 by deleting everything after "closet enclosure."

8. Revise Section 504.9.6 to read:

"504.9.6 Exhaust duct required.

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

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

9. Revise Items 7 and 8 in Section 504.11 to read:

"7. The exhaust fan shall run continuously.

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

14M-5-505 DOMESTIC COOKING EXHAUST EQUIPMENT.

The provisions of IMC Section 505 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "exhaust system" and "shaft."

2. Revise Section 505.2, excluding the numbered items, to read:
"505.2 Domestic cooking exhaust equipment.
 Where domestic cooktops, ranges or open-top broilers are used for domestic purposes, domestic cooking exhaust *equipment* shall be provided. Where domestic cooking exhaust *equipment* is provided, it shall comply with the following as applicable:"
3. Revise Item 4 in Section 505.2 by replacing "the cooking" with "a cooking."
4. Revise Section 505.3 by deleting "and Section 904.4 of the *International Fire Code*."
5. Revise Exception 1 to Section 505.3 by replacing "installed" with "installed within Group R *dwelling units or sleeping units*."
6. Revise Exception 2 to Section 505.3 by resetting "building" in roman type.
7. Revise Items 7 and 8 in Section 505.5 to read:
 "7. The exhaust fan shall run continuously.
 8. Exhaust fan operation shall be monitored and shall initiate an audible or visual signal at a constantly attended location or at each connection point when the fan is not in operation."
8. Delete Section 505.6.
9. Revise Section 505.7 by resetting "occupancies" in roman type and deleting the exception.
10. Revise Section 505.8 by resetting "occupancies" in roman type and deleting the exception.

14M-5-506 COMMERCIAL KITCHEN HOOD DUCTS AND EXHAUST EQUIPMENT.

The provisions of IMC Section 506 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "access," "combustible material," "grease duct," "noncombustible material," "pollution-control unit," "shaft," "Type I hood," and "Type II hood."
2. Revise Section 506.1 to read:
"506.1 General.
 Commercial kitchen hood ducts and exhaust *equipment* shall comply with this section."
3. Revise Section 506.2 to read:
"506.2 Corrosion protection.
Ducts and exhaust equipment exposed to the outside atmosphere or subject to a corrosive environment shall be protected against corrosion in a suitable manner. *Ducts*

and exhaust equipment exposed to the outside atmosphere shall be installed in a manner to prevent the accumulation of standing water in a manner that promotes corrosion.”

4. Revise Section 506.3.2.4 by deleting “of *approved* design.”

5. Revise the first sentence of Section 506.3.2.5 to read:

“A *field test* shall be performed by the permit holder and accepted by the *building official* prior to the use or concealment of any portion of a *grease duct* system.”

6. Revise Section 506.3.5 by deleting Item 1.

7. Revise Section 506.3.6, excluding the exceptions, to read:

“506.3.6 Grease duct clearances.

Where enclosures are not required, *grease duct* systems and *exhaust equipment* serving a *Type I hood* shall have a *clearance to combustible assemblies* of not less than 18 inches (457 mm), and shall have a *clearance* to noncombustible construction of not less than 3 inches (76 mm).”

8. Revise the exceptions to Section 506.3.6 by adding an Exception 4 to read:

“4. The *clearance* to a *combustible assembly* consisting of *gypsum board* attached to *noncombustible materials* shall be not less than 3 inches (76 mm).”

9. Revise Section 506.3.7 by replacing “Grease duct systems serving a Type I hood” with “*Grease ducts*.”

10. Revise Item 6 in Section 506.3.7.1 by replacing “permit” with allow.”

11. Revise Item 5 in Section 506.3.8 by replacing “*approved*” with “suitable.”

12. Revise Section 506.3.8 by adding an Item 8 to read:

“8. Cleanout locations shall be legibly identified at the point of *access*.”

13. Revise Section 506.3.8.1 by replacing “*approved*” with “suitable.”

14. Revise Item 3 in Section 506.3.9 by replacing “*approved*” with “suitable.”

15. Revise Item 2 in Section 506.3.10 by deleting “and *approved*.”

16. Revise Item 6 in Section 506.3.10 by replacing “permit” with “allow.”

17. Revise the first sentence of Section 506.3.11 to read:

“A *grease duct* that penetrates a ceiling, wall, floor or any *concealed location* shall be enclosed from the point of penetration to the outlet terminal.”

18. Revise Section 506.3.11.1 to read:

"506.3.11.1 Shaft enclosure.

Grease ducts constructed in accordance with Section 506.3.1 shall be allowed to be enclosed in accordance with the *Chicago Building Code* requirements for *shaft* construction. Such *grease duct* systems and *exhaust equipment* shall have a *clearance* to *combustible assemblies* of not less than 18 inches (457 mm), and shall have a *clearance* to noncombustible construction of not less than 6 inches (152 mm). *Shaft enclosures* shall be sealed around the *grease duct* at the point of penetration and vented to the outside of the building through the use of weather-protected openings.

Exception: The *clearance* to a *combustible assembly* consisting of *gypsum board* attached to *noncombustible materials* shall be not less than 6 inches (152 mm)."

19. Revise Section 506.3.11.2 by replacing "combustibles" with "*combustible materials*."

20. Revise the last two sentences of Section 506.3.12 to read:

"Access openings shall be equipped with tight-fitting sliding or hinged doors that are equal in fire-resistive protection to that of the *shaft enclosure* or other enclosure. A sign shall be placed on access opening panels with wording as follows: ACCESS PANEL. DO NOT OBSTRUCT."

21. Revise Section 506.3.13.2 by replacing "3 feet (914 mm)" with "10 feet (3048 mm)."

22. Revise Section 506.3.13.3 to read:

"506.3.13.3 Termination location.

Exhaust outlets shall be located not less than 15 feet (4572 mm) horizontally from parts of the same or contiguous buildings, adjacent buildings and adjacent property lines and shall be located not less than 10 feet (3048 mm) above the adjoining grade level. Exhaust outlets shall be located not less than 10 feet (3048 mm) from air intake openings into any building.

Exceptions:

1. Exhaust outlets shall terminate not less than 5 feet (1524 mm) horizontally from parts of the same or contiguous building, an adjacent building, adjacent property line and air intake openings into a building where air from the exhaust outlet discharges away from such locations.
2. The minimum horizontal distance between vertical discharge fans and parapet-type structures shall be 2 feet (610 mm), provided that such structures are not higher than the top of the fan discharge opening."

23. Add a new Section 506.3.14 to read:

"506.3.14 Routing of grease ducts.

Horizontal runs of *grease ducts* shall not pass through interior walls separating a tenant space from other tenant spaces or common areas. Horizontal runs of *grease ducts* shall not pass through interior walls required to have a fire-resistance rating in order to

separate areas based on occupancy or use. Horizontal runs of *grease ducts* shall not pass through *motor-vehicle-related occupancies*."

24. Revise Section 506.4 to read:

"506.4 Ducts serving Type II hoods.

Exhaust systems serving *Type II hoods* shall comply with Sections 506.4.1 and 506.4.2."

25. Revise Section 506.4.1 by replacing "an *approved*" with "a suitable."

26. Revise Section 506.5 to read:

"506.5 Exhaust equipment.

Exhaust equipment, including fans and grease reservoirs, shall comply with Sections 506.5.1 through 506.5.6 and shall be *listed* for the application or *approved*."

27. Revise Item 14 to Section 506.5.2 to read:

"14. *Extra-heavy-duty cooking 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."

28. Delete Item 15 to Section 506.5.2.

29. Revise Section 506.5.3 by replacing each "an *approved*" with "a" and "permit" with "allow."

30. Revise Section 506.5.5 by replacing "combustible construction" with "*combustible material*."

14M-5-507 COMMERCIAL KITCHEN HOODS.

The provisions of IMC Section 507 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "exhaust system," "hood," "Type I hood," and "Type II hood."
2. Revise Section 507.1 to read:

"507.1 General.

Commercial kitchen *hoods* shall comply with the requirements of this section.

Commercial kitchen *hoods* shall be *Type I hoods* or *Type II hoods* and shall be designed to capture and confine cooking vapors and residues. A *Type I hood* shall be installed at or above *appliances* in accordance with Section 507.2. A *Type II hood* shall be installed at or above *appliances* in accordance with Section 507.3. Where any cooking *appliance* under a single hood requires a *Type I hood*, a *Type I hood* shall be installed. Where a *Type II hood* is required, a *Type I hood* or *Type II hood* shall be installed.

Exceptions:

1. Factory-built *commercial cooking recirculating systems* that are *listed and labeled* in accordance with UL 710B, and installed in accordance with Section 304.1, shall not be required to comply with Sections 507.1.5, 507.1.6, 507.2.3, 507.2.5, 507.2.8, 507.2.10 and 507.3.1. Spaces in which such systems are located shall be considered to be commercial kitchens and shall be ventilated in accordance with Table 403.3.1.1. For the purpose of determining the floor area required to be ventilated, each individual *appliance* shall be considered as occupying not less than 100 square feet (9.3 m²).
2. A *hood* shall not be required at or above any of the following:
 - 2.1. Factory-built *commercial cooking recirculating systems listed and labeled* in accordance with UL 710B, and installed in accordance with Section 304.1. Spaces in which such systems are located shall be considered to be commercial kitchens and shall be ventilated in accordance with Table 403.3.1.1. For the purpose of determining the floor area required to be ventilated, each individual *appliance* shall be considered as occupying not less than 100 square feet (9.3 m²).
 - 2.2. Cooking *appliances* equipped with integral down-draft exhaust systems are *listed and labeled* for the application in accordance with NFPA 96.
 - 2.3. Smoker ovens with the integral exhaust systems are *listed* and tested for the application.
 - 2.4. Ovens *listed and labeled* for use with wood fuel in accordance with UL 2162 and vented in accordance with the manufacturer's instructions.
 - 2.5. An electric cooking *appliance listed and labeled* in accordance with UL 197 for reduced grease emissions.
 - 2.6. Commercial electric dishwashers incorporating a self-contained condensing system *listed and labeled* in accordance with UL 921.
3. Where the heat and moisture loads from dishwashers are incorporated into the HVAC system design or into the design of a separate removal system. Spaces containing such dishwashers shall be provided with exhaust at a rate of 0.70 cfm per square foot [0.00356 m³/(s × m²)]. For the purpose of determining the floor area required to be exhausted, each individual dishwasher that is subject to this exception shall be considered as occupying not less than 100 square feet (9.3 m²). Such additional square footage shall be provided with exhaust at a rate of 0.70 cfm per square foot [0.00356 m³/(s × m²)].
4. Where the heat and moisture loads from cooking *appliances* that produce heat or moisture and do not produce grease or smoke as a result of the cooking process are incorporated into the HVAC system design or into the design of a separate removal system. Spaces containing such cooking *appliances* shall be provided with exhaust at a rate of 0.70 cfm per square foot [0.00356 m³/(s × m²)]. For the purpose of determining the floor area required to be exhausted, each individual *appliance* that is subject to this exception shall be considered as occupying not

less than 100 square feet (9.3 m²). Such additional square footage shall be provided with exhaust at a rate of 0.70 cfm per square foot [0.00356 m³/(s × m²)].”

3. Revise Section 507.1.2 to read:

“507.1.2 Domestic cooking appliances utilized for non-domestic use.

Domestic cooking *appliances* utilized for non-domestic cooking use shall be provided with either a *Type I hood* or *Type II hood* as required for the type of *appliances* and processes in accordance with Sections 507.2 and 507.3. Domestic cooking *appliances* utilized for domestic cooking shall comply with Section 505.”

4. Revise Section 507.1.3 to read:

“507.1.3 Fuel-burning appliances.

Appliances equipped with draft hoods or atmospheric burners shall not be located in the same room or space containing a *Type I hood* or *Type II hood* except where the *appliance* is located in a sealed enclosure equipped with a self-closing device with *combustion air* obtained from the outdoors or from other spaces in the building in accordance with Chapter 7 or the *Chicago Fuel Gas Code*.”

5. Revise Section 507.1.4 by replacing “provide” with “allow.”

6. Revise Section 507.1.6.1 to read:

“507.1.6.1 Canopy size and location.

The inside lower edge of canopy-type *Type I hoods* and *Type II hoods* shall overhang or extend a horizontal distance of not less than 6 inches (152 mm) beyond the edge of the top horizontal surface of the *appliance* on all open sides. The vertical distance between the front lower lip of the hood and such surface shall not exceed 4 feet (1219 mm).

Exception: The *hood* shall be allowed to be flush with the outer edge of the cooking surface where the *hood* is closed to the *appliance* side by a wall or panel of *noncombustible material*.”

7. Insert Figures 507.1.6.1(1) through (7) from the 2024 IMC Code and Commentary immediately following Section 507.1.6.1.

8. Insert Figure 507.1.6.2 from the 2024 IMC Code and Commentary immediately following Section 507.1.6.2.

9. Revise Section 507.1.7 by replacing “serving *commercial cooking appliances*” with “that include a *Type I hood*.”

10. Add a new Section 507.1.8 to read:

“507.1.8 Classification.

Commercial kitchen *hoods* shall be classified as follows:

Backshelf hood. A backshelf hood is also referred to as a low-proximity hood, or as a sidewall hood where wall mounted. Its front lower lip is low over the *appliance(s)* and is

"set back" from the front of the *appliance(s)*. It is always closed to the rear of the *appliances* by a panel where free-standing, or by a panel or wall where wall mounted, and its height above the cooking surface varies. (This style of hood can be constructed with partial end panels to increase its effectiveness in capturing the effluent generated by the cooking operation.)

Double island canopy hood. A double island canopy hood is placed over back-to-back *appliances* or *appliance* lines. It is open on all sides and overhangs both fronts and the sides of the *appliance(s)*. It could have a wall panel between the backs of the *appliances*. (The fact that *exhaust air* is drawn from both sides of the double canopy to meet in the center causes each side of this hood to emulate a wall canopy hood, and thus it functions much the same with or without an actual wall panel between the backs of the *appliances*.)

Eyebrow hood. An eyebrow hood is mounted directly to the face of an *appliance*, such as an oven and dishwasher, above the opening(s) or door(s) from which effluent is emitted, extending past the sides and overhanging the front of the opening to capture the effluent.

Pass-over hood. A pass-over hood is a free-standing form of a backshelf hood constructed low enough to pass food over the top.

Single island canopy hood. A single island canopy hood is placed over a single *appliance* or *appliance* line. It is open on all sides and overhangs the front, rear and sides of the *appliance(s)*. A single island canopy is more susceptible to cross drafts and requires a greater exhaust airflow than an equivalent sized wall-mounted canopy to capture and contain effluent generated by the cooking operation(s).

Wall canopy hood. A wall canopy exhaust hood is mounted against a wall above a single *appliance* or line of *appliance(s)*, or it could be free-standing with a back panel from the rear of the *appliances* to the hood. It overhangs the front and sides of the *appliance(s)* on all open sides. The wall acts as a back panel, forcing the *makeup air* to be drawn across the front of the cooking *equipment*, thus increasing the effectiveness of the hood to capture and contain effluent generated by the cooking operation(s)."

11. Revise Section 507.2.2 to read:

"507.2.2 Type I extra-heavy-duty.

Type I hoods for use over extra-heavy-duty cooking appliances shall not cover heavy-duty cooking appliances, medium-duty cooking appliances or light-duty cooking appliances. Such hoods shall discharge to an exhaust system that is independent of other exhaust systems."

12. Revise Section 507.2.4 to read:

"507.2.4 Type I supports.

Type I hoods shall be secured in place by supports of noncombustible material. Type I hood supports shall be adequate for the applied load of the hood, the unsupported grease duct systems, the effluent loading and the possible weight of personnel working in or on the hood."

13. Revise Exception 1 to Section 507.2.6 to read:
 - “1. *Clearance* shall not be required from *gypsum board* or 1/2-inch (12.7 mm) or thicker cementitious wallboard attached to a structure of *noncombustible material* provided that a smooth, cleanable, nonabsorbent and *noncombustible material* is installed between the *hood* and the *gypsum board* or cementitious wallboard over an area extending not less than 18 inches (457 mm) in all directions from the *hood*.”
14. Revise Section 507.2.8.1 by replacing “permit” with “allow” and deleting “or approved.”
15. Revise Section 507.2.9 by replacing “an *approved*” with “a.”
16. Revise Section 507.2.10 by replacing “Commercial food service hoods” with “Commercial kitchen *hoods*.”
17. Revise Section 507.2.10.1 by replacing “Type of Hood” with “Type of Commercial Kitchen Hood.”
18. Revise Section 507.2.10.2 by replacing “Type of Hood” with “Type of Commercial Kitchen Hood.”
19. Revise Section 507.2.10.3 by replacing “Type of Hood” with “Type of Commercial Kitchen Hood.”
20. Revise Section 507.2.11 to read:

“507.2.11 Fire suppression systems.
 A *Type I hood* shall be provided with an automatic fire suppression system complying with Section 904 of the *Chicago Building Code*.”
21. Revise Section 507.3 by replacing “products of combustion” with “*combustion products*.”
22. Revise Section 507.3.4.1 by replacing “Type of Hood” with “Type of Commercial Kitchen Hood.”

14M-5-508 COMMERCIAL KITCHEN MAKEUP AIR.

The provisions of IMC Section 508 are adopted by reference with the following modifications:

1. Revise Section 508.1 to read:

“508.1 Makeup air.
Makeup air shall be supplied during the operation of commercial kitchen exhaust systems that include a *Type I hood*. The amount of *makeup air* supplied to the building from all sources shall be approximately equal to the amount of *exhaust air* for all *exhaust systems* for the building. The *makeup air* shall not reduce the effectiveness of the *exhaust system*. *Makeup air* shall be provided by gravity or mechanical means or both. Mechanical *makeup air* systems shall be automatically controlled to start and operate simultaneously with the *exhaust system*. *Makeup air* intake opening locations shall comply with Section 401.4.”

2. Revise Section 508.1.2 to read:

"508.1.2 Makeup air ducts.

Makeup air ducts connecting to or within 18 inches (457 mm) of a *Type I hood* shall be constructed and installed in accordance with Sections 603.1, 603.3, 603.4, 603.9, 603.10 and 603.12. Duct insulation installed within 18 inches (457 mm) of a *Type I hood* shall be *noncombustible material* or shall be *listed* for the application."

3. Revise Section 508.2, including the exception, to read:

"508.2 Compensating hoods.

Manufacturers of *compensating hoods* shall provide a label indicating the minimum exhaust flow, the maximum makeup airflow or both that provides capture and containment of the exhaust effluent.

508.2.1 Connecting ductwork.

At least the first 4 feet (1219 mm) of the *makeup air* duct beyond the *compensating hood* shall be of the same gauge as the exhaust duct. A *fire damper* shall be installed between the heavier- and lighter-gauge ductwork."

14M-5-509 HAZARDOUS EXHAUST SYSTEMS.

The provisions of IMC Section 509 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "duct system," "exhaust system," "fire area," "hood," and "shaft."
2. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in roman type: "building" and "occupancy."
3. Revise Item 1 in Section 509.2 by replacing "lower flammability limit" with "*lower flammable limit (LFL)*."
4. Revise Section 509.2.1 by replacing "an *approved*" with "a."
5. Revise Section 509.2.2 by replacing "an *approved*" with "a."
6. Revise Section 509.3 by replacing "lower flammability limit" with "*lower flammable limit (LFL)*."
7. Revise Item 6 in the exception to Section 509.4 by replacing "*registered design professional*" with "*registered design professional or professional engineer*."
8. Revise Section 509.5.6 by replacing "combustible construction" with "*combustible materials*."

9. Revise Section 509.5.7 to read:
"509.5.7 Ducts.
Hazardous exhaust systems shall extend directly to the exterior of the building and shall not extend into or through *ducts* or *plenums*."
10. Add a new Section 509.5.8 to read:
"509.5.8 Routing of hazardous exhaust ducts.
Hazardous exhaust systems shall not pass through interior walls or floor/ceiling assemblies separating a tenant space from other tenant spaces or common areas. Horizontal runs of hazardous exhaust *ducts* shall not pass through any interior wall required to have a fire-resistance rating in order to separate areas based on occupancy or use."
11. Revise Section 509.6.1.1 by replacing "shafts" with "*shaft enclosures*."
12. Revise Section 509.6.2 by replacing "shafts" with "*shaft enclosures*."
13. Revise Section 509.6.3 to read:
"509.6.3 Wall assemblies.
Where allowed by Section 506.3.14, hazardous exhaust systems that penetrate fire-resistance-rated wall assemblies shall be enclosed in fire-resistance-rated construction from the point of penetration to the outlet terminal, except where the interior of the duct is equipped with an automatic fire suppression system. Ducts shall be enclosed in accordance with the *Chicago Building Code* requirements for *shaft* construction and such enclosure shall have a minimum fire-resistance rating of not less than the highest fire-resistance-rated wall assembly penetrated."
14. Revise Section 509.6.4 to read:
"509.6.4 Fire walls.
Hazardous exhaust *ducts* shall not penetrate a fire wall."
15. Revise Section 509.7 including its exceptions by deleting each "*approved*."
16. Revise Section 509.7.1 by deleting "*approved*."
17. Revise Section 509.8 by replacing "materials *approved*" with "materials suitable" and "*approved* G90" with "G90" and "nonmetallic" with "aluminum or nonmetallic."
18. Revise Section 509.8.2 by replacing each "combustibles" with "*combustible materials*."
19. Revise Table 509.8.2 by replacing the first "Clearance to Combustibles" with "Clearance to Combustible Materials" and "Clearance to Combustibles (inches)" with "Clearance (inches)."
20. Revise Section 508.8.3 by deleting each "*approved*."

14M-5-510 DUST, STOCK AND REFUSE CONVEYING SYSTEMS.

The provisions of IMC Section 510 are adopted by reference with the following modifications:

1. Revise Section 510.1.1 by resetting "noncombustible materials" in italic type, resetting "building" in roman type, replacing "combustible construction" with "*combustible assemblies*," and deleting the exceptions.
2. Revise Section 510.1.2 by resetting "high-heat," "boiler" and "furnace" in italic type.
3. Revise Section 510.1.3 to read:

"510.1.3 Conveying systems exhaust discharge.

An *exhaust system* shall discharge to the outside of the building either directly by *flue* or indirectly through the bin or vault into which the system discharges.

Exception: *Exhaust system* discharge shall be allowed to be recirculated provided that the solid particulate has been removed at a minimum efficiency of 99.9 percent at 10 microns (10.01 mm), vapor concentrations are less than 25 percent of the *lower flammable limit (LFL)*, and suitable *equipment* is used to monitor the vapor concentration."

4. Revise Section 510.1.4 to read:

"510.1.4 Spark protection.

The outlet of an open-air exhaust terminal shall be protected with a screen of *noncombustible material* to prevent the entry of sparks."

5. Revise the last sentence of Section 510.1.5 to read:

"Determination of concentrations or conditions that are deemed to not create a fire or explosion hazard shall be based on a Dust Hazard Analysis *approved by the fire code official.*"

6. Revise Section 510.1.5.1 by replacing "permit" with "allow."

7. Revise Section 510.1.5.2 to read:

"510.1.5.2 Hoods.

The relief vent shall be provided with a cowl or hood of *noncombustible material*, or with a counterbalanced relief valve or cover arranged to prevent the escape of hazardous materials, gases or liquids."

(Remainder of this page intentionally blank.)

14M-5-511 SUBSLAB SOIL EXHAUST SYSTEMS.

The provisions of IMC Section 511 are adopted by reference with the following modifications:

1. Revise Section 511.2 to read:

"511.2 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 cast iron; galvanized steel; copper or copper-alloy pipe and tube of a weight not less than type DWV; and plastic piping."

2. Revise Section 511.3 by replacing "Exhaust" with "Subslab soil exhaust."
3. Revise Section 511.5 by replacing "exhaust ducts" with "exhaust system ducts" and replacing "*approved*" with "*suitable*."

14M-5-512 SMOKE CONTROL SYSTEMS.

The provisions of IMC Section 512 are not adopted. The following is adopted as Section 512:

**"SECTION 512
SMOKE CONTROL SYSTEMS**

512.1 General.

Smoke control system shall comply with Section 909 of the *Chicago Building Code*."

14M-5-513 ENERGY RECOVERY VENTILATION SYSTEMS.

The provisions of IMC Section 513 are not adopted. The following is adopted as Section 513:

**"SECTION 513
ENERGY RECOVERY VENTILATION SYSTEMS**

513.1 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 Transformation 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.

513.2 Prohibited applications.

Energy recovery ventilation systems shall not be used in the following systems:

1. Hazardous exhaust systems subject to Section 509 and exhaust systems serving laboratories, as defined in Section 509.1.
2. Dust, stock and refuse systems that convey explosive or flammable vapors, fumes or dust.
3. Smoke control systems subject to Section 512.

4. Commercial kitchen exhaust systems serving *Type I hoods*.
5. *Clothes dryer* exhaust systems subject to Section 504.

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

513.3 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.

513.4 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 in accordance with Section 403.2.1.5.”

CHAPTER 14M-6 AIR MOVEMENT

14M-6-601 GENERAL.

The provisions of IMC Section 601 are not adopted. The following is adopted as Section 601:

“SECTION 601 GENERAL

601.1 Scope.

Air movement for the purpose of *air-conditioning systems*, heating systems, ventilation systems or *exhaust systems* shall comply with this chapter.

Exceptions:

1. As otherwise specified in Chapters 5 and 7.
2. *Ducts* discharging *combustible material* directly into any *combustion chamber* shall conform to the requirements of NFPA 82.

601.2 Air movement in corridors.

Corridors shall not serve as supply, return, exhaust, relief or ventilation air ducts.

Exceptions:

1. Use of a *corridor* as a source of *makeup air* for *exhaust systems* in ancillary rooms that open directly onto such *corridors*, including *toilet rooms*, *bathrooms*, dressing rooms and janitor closets, shall be allowed, provided that each such *corridor* is directly supplied with outdoor air at a rate greater than the rate of *makeup air* taken from the *corridor*.
2. Use of a *corridor* that is located entirely within a *dwelling unit* for conveying *return air* shall not be prohibited.

3. Use of a *corridor* that is located entirely within a tenant space and is not required to have a fire-resistance rating by Section 1020 of the *Chicago Building Code* for conveying *return air* shall not be prohibited.
4. Transfer air movement required to maintain pressurization difference within health care facilities in accordance with ASHRAE 170.

601.2.1 Corridor ceiling.

Use of the space between the *corridor* ceiling and the floor or roof structure above as a return air *plenum* is allowed for one or more of the following conditions:

1. The *corridor* is not required to be of fire-resistance-rated construction.
2. The *corridor* is separated from the *plenum* by fire-resistance-rated construction.
3. The air-handling system serving the *corridor* is shut down upon activation of the air-handling unit smoke detectors required by this code.
4. The air-handling system serving the *corridor* is shut down upon detection of sprinkler waterflow where the building is equipped throughout with an automatic sprinkler system.

601.3 Exit enclosures.

Equipment and ductwork for exit enclosure ventilation shall comply with one of the following items:

1. Such equipment and ductwork shall be located exterior to the building and shall be directly connected to the exit enclosure by ductwork enclosed in construction as required by the *Chicago Building Code* for the exit enclosure.
2. Where such equipment and ductwork are located within the exit enclosure, the intake air shall be taken directly from the outdoors and the exhaust air shall be discharged directly to the outdoors, or such air shall be conveyed through ducts enclosed in construction as required by the *Chicago Building Code* for the exit enclosure.
3. Where located within the building, such equipment and ductwork shall be separated from the remainder of the building, including other mechanical equipment, with construction as required by the *Chicago Building Code* for the exit enclosure.

In each case, openings into fire-resistance-rated construction shall be limited to those needed for maintenance and operation and shall be protected by self-closing fire-resistance-rated devices in accordance with the *Chicago Building Code* for enclosure wall opening protectives. Exit enclosure ventilation systems shall be independent of other building ventilation systems.

601.4 Contamination prevention.

Exhaust ducts under positive pressure, *chimneys* and *vents* shall not extend into or pass through *ducts* or *plenums*.

601.5 Return air openings.

Return air openings for heating systems, ventilation systems and *air-conditioning systems* shall comply with all of the following:

1. Openings shall not be located less than 10 feet (3048 mm) measured in any direction from an open *combustion chamber* or draft hood of another *appliance* located in the same room or space.
2. *Recirculated air* for heating systems or *air-conditioning systems* shall not be taken from a hazardous or insanitary location or a *refrigeration machinery room*.
3. The amount of *return air* taken from any room or space shall be not greater than the flow rate of *supply air* delivered to such room or space.
4. Return and transfer openings shall be sized in accordance with the *appliance* or *equipment* manufacturer's installation instructions, ACCA Manual D or the design of the *registered design professional* or *professional engineer*.
5. *Return air* taken from one *dwelling unit* or *sleeping unit* shall not be recirculated or transferred into another *dwelling unit* or *sleeping unit*.
6. Taking *return air* from a crawl space shall not be accomplished through a direct connection to the return side of a forced air furnace. Transfer openings in the crawl space enclosure shall not be prohibited.
7. *Recirculated air* for heating systems or *air-conditioning systems* shall not be taken from a *bathroom*, *toilet room*, kitchen, *motor-vehicle-related occupancy*, *boiler room*, *furnace room* or unconditioned attic.

Exceptions:

1. Taking *recirculated air* from a kitchen in a *dwelling unit* or *sleeping unit* is not prohibited where such return air openings serve the kitchen and are located not less than 10 feet (3048 mm) in any direction from domestic cooking appliances that require exhaust in accordance with Section 505.2.
2. Taking *recirculated air* from a kitchen in a *dwelling unit* or *sleeping unit* is not prohibited where:
 - 2.1. The kitchen and other *occupiable spaces* in the unit are a single room.
 - 2.2. There are no fuel-fired cooking appliances.
 - 2.3. The return air opening is located not less than 5 feet (1524 mm) in any direction from domestic cooking appliances that require exhaust in accordance with Section 505.2.

3. Dedicated forced air systems serving only a *motor-vehicle-related occupancy* shall not be prohibited from obtaining *return air* from the *motor-vehicle-related occupancy*.
8. *Return air* from a closet shall not require a dedicated closet supply duct. *Return air* taken from a closet smaller than 30 square feet (2.8 m²) shall require the closet door be undercut not less than 1½ inches (38 mm) or have either a louvered door or an air transfer grille, each with a net free area of not less than 30 square inches (19 355 mm²).
9. *Recirculated air* for heating systems or *air-conditioning systems* shall not be taken from indoor swimming pool enclosures and associated deck areas.

Exceptions:

1. Where the air from such spaces is dehumidified in accordance with Section 403.2.1, Item 2.
2. Dedicated HVAC systems serving only such spaces."

14M-6-602 PLENUMS.

The provisions of IMC Section 602 are adopted by reference with the following modifications:

1. Revise Section 602.1 to read:

"602.1 General.

Plenums shall comply with this section."

2. Revise Section 602.1.1 by adding a sentence at the end to read:

"Plenums used for *supply air* shall be provided with *access* for cleaning."

3. Revise Section 602.1.2 by resetting "fire area" in italic type.

4. Revise Section 602.2 to read:

"602.2 Construction of plenums.

Plenum enclosure construction materials shall comply with the *Chicago Building Code*.

The use of *gypsum board* to form *plenums* shall be limited to systems where the air temperatures do not exceed 125°F (52°C) and the building and mechanical system design conditions are such that the *gypsum board* surface temperature will be maintained above the airstream dew-point temperature. Supply air *plenums* formed by *gypsum board* shall not be incorporated in air-handling systems utilizing *direct evaporative cooling* systems."

5. Revise Item 5 in Section 602.2.1 by deleting "*approved*."

6. Revise Item 6 in Section 602.2.1 to read:

"Stud wall cavities in exterior walls shall not be utilized as *plenums*."

7. Revise Section 602.3 by replacing “noncombustible” with “*noncombustible materials.*”
8. Revise the exceptions to Section 602.3 to read:
 - “1. Materials exposed within *plenums* within individual *dwelling units* or *sleeping units* in Group R occupancies.
 2. *Combustible materials* fully enclosed within continuous noncombustible conduits, raceways or enclosures.
 3. Materials *listed* and *labeled* for installation within a *plenum* and *listed* for the application. Electrical devices within *plenums* shall comply with the *Chicago Electrical Code* requirements for *plenums*.
 4. Reserved.
 5. *Gypsum board* in accordance with Section 602.2.”
9. Revise Section 602.3.3 to read:

“602.3.3 Wiring.
Combustible electrical wires and cables and optical fiber cables located within a *plenum* shall be installed in accordance with the *Chicago Electrical Code.*”
10. Revise Section 602.3.4 to read:

“602.3.4 Fire sprinkler piping.
Plastic fire sprinkler piping shall not be exposed within a *plenum.*”
11. Revise Section 602.3.5 to read:

“602.3.5 Pneumatic tubing.
Combustible pneumatic tubing shall not be exposed within a *plenum.*”
12. Delete Section 602.3.6 and its exception.
13. Revise Section 602.3.7 and its exceptions to read:

“602.3.7 Foam plastic in plenums.
Foam plastic shall not be exposed in *plenums.*”
14. Revise Section 602.3.8 and its exception to read:

“602.3.8 Plastic plumbing piping and tubing.
Plastic piping and tubing used in plumbing systems shall not be exposed within a *plenum.*”
15. Revise Section 602.3.9 to read:

“602.3.9 Pipe and duct insulation within plenums.
Combustible pipe and duct insulation shall not be exposed within a *plenum.*”

16. Revise Section 602.3.10 to read:

"602.3.10 Other combustible materials.

Other *combustible materials* not covered by Section 602.3 shall not be exposed within a *plenum* unless *approved*."

17. Delete Section 602.4.

18. Add a new Section 602.5 to read:

"602.5 Telecommunication equipment areas.

In telecommunication equipment areas, *plenums* shall not exceed 2,500 square feet (232 m²). Multiple *plenums* shall be separated by tightly sealed sheet metal or an equivalent *noncombustible assembly*."

14M-6-603 DUCT CONSTRUCTION AND INSTALLATION.

The provisions of IMC Section 603 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "air dispersion system," "air distribution system," "duct," "furnace," and "volume damper."
2. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in roman type: "building."
3. Revise Section 603.1 to read:

"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 be subject to the fire and smoke protection requirements of the *Chicago Building Code*. *Ducts* shall be constructed, braced, reinforced and installed to provide structural strength and durability."

4. Revise the first sentence of Section 603.2 to read:

"*Ducts* installed within an individual *dwelling unit* or *sleeping unit* shall be sized in accordance with ACCA Manual D, the *appliance* manufacturer's installation instructions or other *approved* methods."

5. Revise the exception to Section 603.4 to read:

"Exception: *Ducts* installed within individual *dwelling units* or *sleeping units* shall have a minimum thickness as specified in Table 603.4."

(Remainder of this page intentionally blank.)

6. Replace Table 603.4 as shown:

TABLE 603.4—MINIMUM SHEET METAL THICKNESS FOR DUCTS INSTALLED WITHIN INDIVIDUAL DWELLING UNITS OR SLEEPING UNITS				
DUCT SIZE (inches)	GALVANIZED STEEL		ALUMINUM	
	MINIMUM THICKNESS (inches)	EQUIVALENT GAUGE	MINIMUM THICKNESS (inches)	EQUIVALENT B&S GAUGE
Round ducts and enclosed rectangular ducts				
14 or less	0.013	30	0.018	26
Over 14	0.016	28	0.023	24
Exposed rectangular ducts				
14 or less	0.016	28	0.023	24
Over 14	0.019	26	0.027	22
For SI: 1 inch = 25.4 mm.				

7. Revise Section 603.4.2 to read:

“603.4.2 Duct lap.

Crimp joints for round and oval metal *ducts* shall be lapped not less than 1 inch (25 mm) and the male end of each duct segment shall extend into the adjoining duct segment in the direction of airflow.”

8. Revise Section 603.5.1 to read:

“603.5.1 Gypsum ducts.

The use of *gypsum board* to form *ducts* shall be limited to return air systems where the air temperatures do not exceed 125°F (52°C) and the *gypsum board* surface temperature is maintained above the airstream dewpoint temperature. Supply air ducts formed by *gypsum board* shall not be incorporated in air-handling systems utilizing *direct evaporative cooling*.”

9. Revise Section 603.6.1.1 to read:

“603.6.1.1 Duct length.

Flexible air *ducts* used for *return air* or *supply air* with a velocity less than 1,000 feet per minute (5.08 m/s) shall be limited in length to 6 feet (1829 mm). Flexible air *ducts* used for *supply air* with a velocity of 1,000 feet per minute (5.08 m/s) or greater shall not be limited in length.”

10. Revise Section 603.6.2.1 by replacing “14 feet (4267 mm)” with “6 feet (1829 mm).”

11. Revise Section 603.7 to read:

“603.7 Rigid duct penetrations.

Rigid duct penetrations of walls, floors, ceilings and roofs and air transfer openings in such building components shall be protected as required by Section 607.

603.7.1 Ducts passing through private garages.

Rigid ducts that penetrate a wall or ceiling that separates a *dwelling unit* from a *private garage* shall be continuous, shall be constructed of sheet steel having a thickness of not less than 0.0187 inch (0.4712 mm) (No. 26 gage) and shall not have openings into the garage. *Fire dampers* and *smoke dampers* are not required in rigid ducts passing through the wall or ceiling separating a *dwelling unit* from a *private garage*."

12. Revise Section 603.8 to read:

"603.8 Underground ducts.

Ducts installed underground shall be suitable for such installation. Metallic *ducts* not having an protective coating shall be completely encased in not less than 2 inches (51 mm) of concrete."

13. Revise Section 603.8.1 to read:

"603.8.1 Slope.

Underground *ducts* shall have a minimum slope of $\frac{1}{8}$ inch per foot (10.4 mm/m) to allow drainage to a point provided with access."

14. Revise Section 603.8.2 to read:

"603.8.2 Sealing.

Underground *ducts* shall be sealed, secured and tested prior to concrete encasement or direct burial. Underground *ducts* shall be leak tested as required by Section C403 of the *Chicago Energy Transformation Code*."

15. Delete Section 603.13.

16. Revise Section 603.15 by replacing "approved" with "suitable."

17. Revise Section 603.16 by replacing "the elements" with "weather damage."

18. Revise the exception to Section 603.18.2 to read:

"Exception: Within individual *dwelling units* and *sleeping units*."

14M-6-604 INSULATION.

The provisions of IMC Section 604 are adopted by reference with the following modifications:

1. Revise Section 604.2 by resetting "Ducts" in italic type.
2. Revise Exception 2 to Section 604. 3 by replacing "outside of ducts" with "outside of *ducts*."
3. Revise Section 604.11 by resetting "ducts" in italic type.
4. Revise Section 604.12 by replacing "an *approved*" with "a."

14M-6-605 AIR FILTERS.

The provisions of IMC Section 605 are adopted by reference with the following modifications:

1. Revise Section 605.1 to read:

"605.1 General.

Mechanical *air distribution systems* shall be provided with air filters in accordance with Section 605.4. Filters shall be installed such that all *recirculated air, outdoor air and makeup air* is filtered upstream from any *heat exchanger* or coil. Filters shall be installed in a location that provides *access* for maintenance and replacement. Liquid adhesive coatings used on filters shall have a flash point not lower than 325°F (163°C)."

2. Revise Section 605.3 by resetting "Ducts" in italic type.
3. Add a new Section 605.4 to read:

"605.4 Particulate matter removal.

Air filters for ducted *air distribution systems* serving *occupiable spaces* in Group A, B, E, I, M and R occupancies shall have a minimum efficiency reporting value (MERV) of not less than 13. Air filters for ducted *air distribution systems* serving habitable spaces in Group F, H and S occupancies shall have a minimum efficiency reporting value (MERV) of not less than 8. Air filters for unducted *air distribution systems* and fan coil units shall have a minimum efficiency reporting value (MERV) of not less than 4.

Exceptions:

1. Air filters for ducted *air distribution systems* with a design capacity of 500 cfm (0.2 m³/s) or less shall have a minimum efficiency reporting value (MERV) of not less than 8.
2. Air filters for *recirculated air* at fan powered variable air volume terminal units with hydronic heating coils or electric resistance heating elements shall have a minimum efficiency reporting value (MERV) of not less than 4."

14M-6-606 SMOKE DETECTION SYSTEMS CONTROL.

The provisions of IMC Section 606 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "air distribution system" and "outdoor air."
2. Revise the exception to Section 606.2.1 to read:
"Exception: Smoke detectors are not required in the return air system where the space served by the air distribution system is protected by area smoke detectors in accordance with Section 907 of the *Chicago Building Code*. The area smoke detection system shall comply with Section 606.4."
3. Revise Item 2 in the exception to Section 606.2.2 by deleting "*approved.*"

4. Revise Section 606.3 by replacing "NFPA 72" with "Chapter 9 of the *Chicago Building Code*."

5. Revise Section 606.4 to read:

"606.4 Controls operation.

Upon activation, the smoke detectors shall shut down all operational capabilities of the air distribution system through a hard-wired interlock between the fans and the smoke detectors, not through programming. Air distribution systems that are part of a smoke control system shall be controlled in accordance with Section 909 and Appendix S of the *Chicago Building Code*."

6. Revise Section 606.4.1 including its exceptions to read:

"606.4.1 Connection to fire alarm system.

In buildings with a fire alarm system, duct smoke detectors shall be connected to the fire alarm system in accordance with Section 907 of the *Chicago Building Code*. Duct smoke detector trouble conditions shall activate a visible and audible signal at the fire alarm control panel and shall be identified as air duct detector trouble."

14M-6-607 DUCT AND TRANSFER OPENINGS.

The provisions of IMC Section 607 are not adopted. The following is adopted as Section 607:

**"SECTION 607
DUCT AND TRANSFER OPENINGS**

607.1 General.

The protection of duct penetrations and air transfer openings shall comply with Section 716 of the *Chicago Building Code*."

14M-6-608 BALANCING.

The provisions of IMC Section 608 are not adopted. The following is adopted as Section 608:

**"SECTION 608
BALANCING**

608.1 Means for balancing.

Air distribution systems, ventilation systems and *exhaust systems* shall be provided with means to adjust the system to achieve the design airflow rates.

608.2 Field test.

Air distribution systems shall be balanced by qualified individuals using methods in accordance with accepted industry standards to verify that the system is capable of supplying and exhausting the airflow rates required by Chapter 4 following installation, *alteration* or *repair*. A written report of the balancing *field test* shall be provided to the *owner* and shall be made available to the *building official* upon request."

CHAPTER 14M-7 COMBUSTION AIR

14M-7-700 CHAPTER 7.

The provisions of IMC Chapter 7 are not adopted. The following is adopted as Chapter 7 entitled "Combustion Air":

"SECTION 701 GENERAL

701.1 Scope.

Combustion air shall comply with this chapter.

Exceptions:

1. *Fireplaces and fireplace stoves.*
2. *Direct-vent appliances.*

SECTION 702 FUEL-BURNING APPLIANCES

702.1 Solid fuel-burning appliances.

Solid fuel-burning *appliances* shall be provided with *combustion air* in accordance with the *appliance* manufacturer's installation instructions.

702.2 Oil-fired appliances.

Oil-fired *appliances* shall be provided with *combustion air* in accordance with NFPA 31.

702.3 Gas-fired appliances.

Gas-fired *appliances* shall be provided with *combustion air* and dilution air in accordance with the *Chicago Fuel Gas Code*.

SECTION 703 DAMPERS

703.1 General.

Where *combustion air* openings are provided with *volume dampers*, *smoke dampers* or *fire dampers*, the *dampers* shall be interlocked with the firing cycle of the *appliances* served, so as to prevent operation of any *appliance* that draws *combustion air* from the room or space when any of the *dampers* are closed. Manual *dampers* shall not be installed in *combustion air ducts*. *Ducts* not provided with *dampers* and that pass through rated construction shall be enclosed in a *shaft* in accordance with the *Chicago Building Code*."

CHAPTER 14M-8 CHIMNEYS AND VENTS

14M-8-801 GENERAL.

The provisions of IMC Section 801 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "access," "commercial cooking appliance," "factory-built chimney," "fireplace," "flue," "flue liner," "masonry chimney," "masonry fireplace," "Type I hood," "vent," and "venting system."

2. Revise Section 801.1 to read:

"801.1 Scope.

Design, installation, *alteration, repair*, and utilization of *chimneys* and *vents* and their connection to fuel-burning *appliances* shall comply with this chapter."

3. Add a new Section 801.1.1 to read:

"801.1.1 Fuel gas-fired appliances.

Chimneys and *vents* for *fuel gas-fired appliances* shall comply with this chapter and Chapter 5 of the *Chicago Fuel Gas Code*."

4. Revise Section 801.2 by replacing "the products of *combustion*" with "all *combustion products*."

5. Revise Section 801.8 by replacing "closed by an *approved method*" with "permanently sealed."

6. Revise Section 801.10.1 by replacing "noncombustible seal" with "seal of *noncombustible material*."

7. Revise Section 801.13 by replacing "noncombustible cover" with "cover of *noncombustible material*."

8. Revise Section 801.16 and its subsection to read:

"801.16 Flue liner.

Masonry chimneys shall be lined. The *flue liner* material shall be compatible with the type of *appliance* connected, in accordance with the *appliance* listing and manufacturer's installation instructions. *Listed* materials used as *flue liners* shall be installed in accordance with their listings and the manufacturer's instructions.

801.16.1 Residential and low-heat appliances (general).

Flue liners for use with residential-type and *low-heat appliances* shall be limited to the following:

1. Clay *flue liners* complying with the requirements of ASTM C315 or equivalent. Clay *flue liners* shall be installed in accordance with the *Chicago Building Code*.
 2. *Listed* and *labeled* chimney lining systems complying with UL 1777.
 3. Other *approved* materials that will resist, without cracking, softening or corrosion, *flue gases* and condensate at temperatures up to 1,800°F (982°C)."
9. Revise Section 801.17 to read:

"801.17 Space around flue liner.

The space surrounding a *flue liner* 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 liner* in accordance with the manufacturer's installation instructions and this code."

10. Revise Section 801.18.4 by deleting "airspace."
11. Revise Section 801.18.4.1 by replacing "Noncombustible fireblocking" with "Fireblocking."
12. Revise the last sentence of Section 801.19 to read:
- "The *appliance* enclosures shall not communicate with *occupiable spaces*."
13. Revise Section 801.20 to read:

"801.20 Plastic piping.

Where plastic *piping* is used to vent an *appliance*, the *appliance* shall be *listed* for use with such venting materials and the *appliance* manufacturer's installation instructions shall identify the specific plastic *piping* material. The plastic pipe venting materials shall be *labeled* in accordance with the product standards specified by the *appliance* manufacturer or shall be *listed* and *labeled* in accordance with UL 1738."

14. Add a new Section 801.20.1 to read:

"801.20.1 Plastic vent joints.

Plastic pipe and fittings used to vent *appliances* shall be installed in accordance with the *appliance* manufacturer's instructions. Plastic pipe venting materials *listed* and *labeled* in accordance with UL 1738 shall be installed in accordance with the *vent* manufacturer's instructions. Where a primer is required, it shall be of a contrasting color."

14M-8-802 VENTS.

The provisions of IMC Section 802 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "pellet vent," "Type L vent," and "vent."

2. Revise Exception 1 to Section 802.6 by replacing "direct vent *appliances*" with "*direct-vent appliances*."
3. Revise Section 802.8 by replacing "combustibles" with "*combustible materials*."

14M-8-803 CONNECTORS.

The provisions of IMC Section 803 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "chimney connector," "combustible material," "damper," "flue gases," "high-heat appliances," "low-heat appliances," "masonry chimney," "medium-heat appliances," and "vent connector."
2. Revise Section 803.1 by resetting each "vent" in italic type.
3. Revise the third and fourth sentences of Section 803.6 to read:
"The name of the installer and date of installation shall be marked on a label affixed to the *damper*."
4. Revise Section 803.10.1 by replacing "an *approved*" with "a suitable."
5. Revise Section 803.10.2 by resetting "vent" in italic type.
6. Revise Section 803.10.3 by deleting "in an *approved* manner."
7. Revise Table 803.10.4 by replacing each "combustibles" with "combustible materials."
8. Revise Section 803.10.6 by replacing each "combustibles" with "*combustible materials*."
9. Revise Table 803.10.6 by replacing "Combustibles" with "Combustible Materials."

14M-8-804 DIRECT-VENT, INTEGRAL VENT AND MECHANICAL DRAFT SYSTEMS.

The provisions of IMC Section 804 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "fireplace," "mechanical draft system," "natural draft," and "vent connector."
2. Revise Item 3 in Section 804.3.8 by deleting the last sentence.

14M-8-805 FACTORY-BUILT CHIMNEYS.

The provisions of IMC Section 805 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "combustion chamber," "factory-built chimney," "fireplace," "flue gases," and "medium-heat appliance."

2. Revise Section 805.2 by deleting "buildings."
3. Revise Section 805.8 by replacing "combustibles" with "*combustible materials*."

14M-8-806 METAL CHIMNEYS.

The provisions of IMC Section 806 are adopted by reference with the following modification:

1. Revise Section 806.1 by resetting "Metal" in italic type.

CHAPTER 14M-9 SPECIFIC APPLIANCES, FIREPLACES AND SOLID FUEL-BURNING EQUIPMENT

14M-9-901 GENERAL.

The provisions of IMC Section 901 are not adopted. The following is adopted as Section 901:

"SECTION 901 GENERAL

901.1 Scope.

Design, installation, construction, maintenance, *alteration* and *repair* of the *appliances*, systems and *equipment* specifically identified in this chapter shall comply with this chapter.

901.1.1 Fuel-gas fired appliances and equipment.

Fuel gas-fired appliances, systems and equipment shall comply with this chapter and Chapter 6 of the *Chicago Fuel Gas Code*.

901.2 Hazardous locations.

Fireplaces and solid fuel-burning *appliances* shall not be installed in *hazardous locations*.

901.3 Solid fuel-burning fireplaces and appliances in Group I-2.

In Group I-2 occupancies, solid fuel-burning *fireplaces* and *appliances* are prohibited."

14M-9-902 MASONRY FIREPLACES.

The provisions of IMC Section 902 are adopted by reference with the following modification:

1. Revise Section 902.1 by resetting "Masonry fireplaces" in italic type.

(Remainder of page intentionally blank.)

14M-9-903 FACTORY-BUILT FIREPLACES.

The provisions of IMC Section 903 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "factory-built fireplace" and "fireplace."
2. Revise Section 903.2 by deleting "*approved*" and replacing "area" with "surface."

14M-9-904 PELLET FUEL-BURNING APPLIANCES.

The provisions of IMC Section 904 are adopted by reference without modification.

14M-9-905 FIREPLACE STOVES AND ROOM HEATERS.

The provisions of IMC Section 905 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "fireplace" and "fireplace stove."
2. Revise Section 905.3 by replacing "area" with "surface."

14M-9-906 FACTORY-BUILT BARBEQUE APPLIANCES.

The provisions of IMC Section 906 are adopted by reference with the following modification:

1. Revise Section 906.1 by deleting "shall be of an *approved* type and."

14M-9-907 INCINERATORS AND CREMATORIES.

The provisions of IMC Section 907 are adopted by reference with the following modification:

1. Add a new Section 907.2 to read:

"907.2 Commercial-industrial incinerators.

Commercial-industrial-type incinerators shall be constructed and installed in accordance with NFPA 82."

14M-9-908 COOLING TOWERS, EVAPORATIVE CONDENSERS AND FLUID COOLERS.

The provisions of IMC Section 908 are adopted by reference with the following modifications:

1. Revise Section 908.1 by replacing "air-conditioning *appliance*" with "*air conditioning appliance*."
2. Revise Section 908.3 by replacing "occupied spaces" with "*occupiable spaces*" and resetting each "building" in roman type.
3. Revise Section 908.5 by replacing "an *approved*" with "a."

4. Revise Section 908.6 to read:

"908.6 Drainage.

Drains, overflows and blowdown provisions shall be indirectly connected to an suitable disposal location. Discharge of chemical waste shall be only be allowed pursuant to a permit issued by the Department of Water Management or Metropolitan Water Reclamation District."

5. Revise Section 908.7 by resetting "refrigerant" in italic type and by deleting the second sentence.

14M-9-909 VENTED WALL FURNACES.

The provisions of IMC Section 909 are adopted by reference with the following modification:

1. Revise Section 909.6 by deleting the last sentence.

14M-9-910 FLOOR FURNACES.

The provisions of IMC Section 910 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "floor furnace," and "furnace."
2. Revise Section 910.2 to read:

"910.2 Placement.

The following provisions apply to *floor furnaces*:

1. *Floor furnaces* shall not be installed in the floor of any aisle or *corridor*.
2. The register of a *floor furnace* with a horizontal warm-air outlet shall not be placed closer than 6 inches (152 mm) to the nearest wall. A distance of not less than 18 inches (457 mm) from two adjoining sides of the floor furnace register to walls shall be provided to eliminate the necessity of occupants walking over the warm-air discharge. The remaining sides shall be allowed to be placed not closer than 6 inches (152 mm) to a wall. Wall-register models shall not be placed closer than 6 inches (152 mm) to a corner.
3. The furnace shall be placed so that a door, drapery or similar object cannot be nearer than 12 inches (305 mm) to any portion of the register of the furnace.
4. *Floor furnaces* shall not be installed in concrete floor construction built on grade.
5. The controlling thermostat for a *floor furnace* shall be located within the same room or space as the *floor furnace* or shall be located in an adjacent room or space that is permanently open to the room or space containing the *floor furnace*.
6. Where the story or level below the floor in which a *floor furnace* is installed contains habitable space, the *floor furnace* shall be installed in a nonhabitable

space that is separated from habitable spaces by an enclosure constructed of *noncombustible materials*. The enclosure shall provide *access, clearance* to all sides of not less than 6 inches (152 mm) and adequate *combustion air*."

3. Revise Section 910.3 to read:

"910.3 Support.

The floor supporting the *furnace* shall be designed for the weight of the *furnace* in accordance with the *Chicago Building Code*."

14M-9-911 DUCT FURNACES.

The provisions of IMC Section 911 are adopted by reference with the following modification:

1. Revise Section 911.1 by resetting "Duct furnaces" in italic type.

14M-9-912 INFRARED RADIANT HEATERS.

The provisions of IMC Section 912 are adopted by reference with the following modifications:

1. Revise Section 912.2 by resetting "noncombustible material" in italic type.
2. Revise Section 912.3 by resetting "combustible material" in italic type.

14M-9-913 CLOTHES DRYERS.

The provisions of IMC Section 913 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in italic type: "clothes dryer."
2. Revise Section 913.3 by replacing "combustibles" with "*combustible materials*."
3. Insert a new Section 913.4 to read:

"913.4 Airflow for condensing clothes dryers.

Where condensing (ductless) *clothes dryers* are installed in closets or rooms with a floor area of less than 70 square feet (6.5 m²) the space shall be connected to an *occupiable space* with either a louvered door or an air transfer grille, each with a net free area of not less than 30 square inches (19 355 mm²)."

14M-9-914 SAUNA HEATERS.

The provisions of IMC Section 914 are adopted by reference with the following modifications:

1. Revise Section 914.1.1 by replacing "an *approved*" with "a."
2. Revise Section 914.3 by resetting "building" in roman type.

3. Revise Section 914.5.1 by replacing "approved" with "suitable."
4. Revise the exception to Section 914.5.1 to read:

"Exception: A warning notice shall not be required for sauna rooms located within a *dwelling unit*."

14M-9-915 ENGINE AND GAS TURBINE-POWERED EQUIPMENT AND APPLIANCES.

The provisions of IMC Section 915 are adopted by reference with the following modifications:

1. Revise Section 915.1 by resetting "combustion" in roman type.
2. Revise Section 915.2 by resetting "combustion" in roman type.

14M-9-916 POOL AND SPA HEATERS.

The provisions of IMC Section 916 are adopted by reference without modification.

14M-9-917 COOKING APPLIANCES.

The provisions of IMC Section 917 are adopted by reference with the following modification:

1. Revise Section 917.2 by replacing "*dwelling units*" with "*dwelling units and sleeping units*."

14M-9-918 FORCED-AIR WARM-AIR FURNACES.

The provisions of IMC Section 918 are adopted by reference with the following modifications:

1. Revise Section 918.2 by resetting "heat pump" in italic type.
2. Revise Section 918.3 by resetting "volume dampers" and each "furnace" in italic type.
3. Revise Section 918.4 by resetting "ducts" in italic type.

14M-9-919 CONVERSION BURNERS.

The provisions of IMC Section 919 are adopted by reference with the following modification:

1. Revise Section 919.1 by resetting "conversion burners" in italic type.

14M-9-920 UNIT HEATERS.

The provisions of IMC Section 920 are adopted by reference with the following modifications:

1. Revise Section 920.1 by resetting "Unit heaters" in italic type.

2. Revise Section 920.2 by resetting "unit heater" and "noncombustible material" in italic type.
3. Revise Section 920.3 by resetting "unit heater" in italic type.
4. Revise Section 920.4 to read:

"920.4 Prohibited uses.

In Group I-2 occupancies and *ambulatory care facilities*, suspended-type unit heaters are prohibited."

14M-9-921 VENTED ROOM HEATERS.

The provisions of IMC Section 921 are adopted by reference with the following modification:

1. Revise Section 921.1 by resetting "Vented room heaters" in italic type.

14M-9-922 KEROSENE AND OIL-FIRED STOVES.

The provisions of IMC Section 922 are adopted by reference without modification.

14M-9-923 SMALL CERAMIC KILNS.

The provisions of IMC Section 923 are adopted by reference with the following modification:

1. Revise Section 923.1 to read:

"923.1 General.

Kilns shall be *listed* and *labeled* unless otherwise *approved*. Electric kilns shall comply with UL 499."

14M-9-924 STATIONARY FUEL CELL POWER PLANTS.

The provisions of IMC Section 924 are adopted by reference with the following modification:

1. Revise Section 924.1 by replacing "Stationary fuel cell power systems" with "*Stationary fuel cell power plants.*"

14M-9-925 MASONRY HEATERS.

The provisions of IMC Section 925 are adopted by reference without modification.

14M-9-926 GASEOUS HYDROGEN SYSTEMS.

The provisions of IMC Section 926 are adopted by reference without modification.

14M-9-927 RADIANT HEATING SYSTEMS.

The provisions of IMC Section 927 are adopted by reference without modification.

14M-9-928 EVAPORATIVE COOLING EQUIPMENT.

The provisions of IMC Section 928 are adopted by reference with the following modification:

1. Revise Item 4 in Section 928.1 by replacing "an *approved*" with "a."

14M-9-929 UNVENTED ALCOHOL FUEL-BURNING DECORATIVE APPLIANCES.

The provisions of IMC Section 929 are adopted by reference without modification.

14M-9-930 LARGE-DIAMETER CEILING FANS.

The provisions of IMC Section 930 are adopted by reference with the following modification:

1. Revise Section 930.1 by resetting "large-diameter ceiling fans" in italic type.

14M-9-931 STEAM BATH EQUIPMENT.

The provisions of IMC Section 931 are adopted by reference without modification.

**CHAPTER 14M-10
BOILERS, WATER HEATERS AND PRESSURE VESSELS**

14M-10-1001 GENERAL.

The provisions of IMC Section 1001 are adopted by reference with the following modifications:

1. Revise Section 1001.1, excluding the exceptions, to read:

 "1001.1 Scope.
 Installation, *alteration* and *repair* of *boilers, water heaters* and *pressure vessels* shall comply with this chapter."

2. Revise the exceptions to section 1001.1 by resetting each "pressure vessels" and "boiler" in italic type and by resetting "occupancies" in roman type.

3. Add a new exception 9 to Section 1001.1 to read:

 "9. *Water heaters* with a heat input of less than 200,000 BTU/hour (58,614 W), a capacity of less than 120 gallons (454.2 L), and a maximum operating temperature less than 210°F (99°C)."

4. Add a new Section 1001.2 to read:

"1001.2 License required.

Operation of *boilers* shall require a license in accordance with Chapter 4-344 of the *Municipal Code of Chicago*."

14M-10-1002 WATER HEATERS.

The provisions of IMC Section 1002 are not adopted. The following is adopted as Section 1002:

**"SECTION 1002
WATER HEATERS**

1002.1 General.

Water heaters and potable hot water storage tanks shall be *listed* and *labeled* and installed in accordance with the manufacturer's instructions, the *Chicago Plumbing Code* and this code. The potable water connections and relief valves for all water heaters shall conform to the requirements of the *Chicago Plumbing Code*. Potable hot water storage tanks heated by indirect means shall comply with Section VIII of the ASME Boiler and Pressure Vessel Code."

14M-10-1003 PRESSURE VESSELS.

The provisions of IMC Section 1003 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in italic type: "pressure vessel."
2. Revise Section 1003.2 by deleting "and shall be *approved*."

14M-10-1004 BOILERS.

The provisions of IMC Section 1004 are adopted by reference with the following modifications:

1. Revise Section 1004.3 by replacing "permit" with "allow" and resetting each "repair" in italic type.
2. Revise Section 1004.5 to read:

"1004.5 Floors.

Boilers shall be mounted on floor assemblies of *noncombustible materials*, unless *listed* for mounting on a combustible floor assembly."

3. Revise Section 1004.7 by replacing "installing contractor" with "installer" and "installer" with "installer to the *owner*."

14M-10-1005 BOILER CONNECTORS.

The provisions of IMC Section 1005 are adopted by reference with the following modifications:

1. Revise Section 1005.1, including the exception, by resetting each "boiler" and "modular boiler" in italic type and by replacing "low-pressure steam boiler" with "*low-pressure boiler.*"
2. Revise Section 1005.2 by resetting "boilers" in italic type.

14M-10-1006 SAFETY AND PRESSURE RELIEF VALVES AND CONTROLS.

The provisions of IMC Section 1006 are adopted by reference with the following modifications:

1. Revise Section 1006.1 to read:
"1006.1 Safety valves for steam boilers.
Steam boilers shall be protected with a *safety valve* as required by the ASME *Boiler and Pressure Vessel Code.*"
2. Revise Section 1006.2 to read:
"1006.2 Safety relief valves for hot water boilers.
Hot water boilers shall be protected with a safety relief valve or valves as required by the ASME *Boiler and Pressure Vessel Code.*"
3. Revise Section 1006.3 to read:
"1006.3 Pressure relief for pressure vessels.
Pressure vessels shall be protected with a *pressure relief valve* or pressure-limiting device, such as a rupture disc, as required by the manufacturer's installation instructions for the *pressure vessel* in accordance with Section VIII of the ASME *Boiler and Pressure Vessel Code.*"
4. Revise Section 1006.4 to read:
"1006.4 Approval of safety and safety relief valves.
Safety and safety relief valves shall be *listed and labeled* in accordance with the ASME *Boiler and Pressure Vessel Code.* Safety and safety relief valves shall have a minimum rated capacity for the *equipment or appliances* served. Safety and safety relief valves shall be set in accordance with the ASME *Boiler and Pressure Vessel Code.*"
5. Revise Section 1006.5 to read:
"1006.5 Installation.
Safety or relief valves or other pressure relieving devices shall be connected to the safety or relief valve opening on the *boiler or pressure vessel.* Valves shall not be located on either side of a safety or relief valve connection. The relief valve discharge shall allow water to be drained with no buildup. The relief valve shall discharge by gravity."

6. Revise Section 1006.6 to read:

"1006.6 Safety and relief valve discharge.

Safety and relief valve discharge pipes shall be of rigid pipe that is suitable for the temperature of the system. 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 *Boiler and Pressure Vessel Code* and the *Chicago Plumbing Code*."

7. Revise Section 1006.7 to read:

"1006.7 Boiler safety devices.

Boilers shall be equipped with controls and limit devices as required by the ASME *Boiler and Pressure Vessel Code*, the manufacturer's installation instructions and the conditions of the listing."

8. Revise Section 1006.8 by adding a sentence at the end to read:

"Electrical conduit and wire shall not be installed in the floor slab under a *boiler*."

14M-10-1007 BOILER LOW-WATER CUTOFF.

The provisions of IMC Section 1007 are not adopted. The following is adopted as Section 1007:

**"SECTION 1007
BOILER LOW-WATER CUTOFF**

1007.1 General.

Steam and hot water boilers shall be protected with a low-water cutoff control as required by Section VIII of the ASME *Boiler and Pressure Vessel Code*.

1007.2 Operation.

The low-water cutoff shall automatically stop the combustion operation of the *appliance* when the water level drops below the lowest safe water level as defined in the ASME *Boiler and Pressure Vessel Code*."

14M-10-1008 STEAM BLOWOFF VALVE.

The provisions of IMC Section 1008 are not adopted. The following is adopted as Section 1008:

**"SECTION 1008
STEAM BLOWOFF VALVE**

1008.1 General.

Every steam boiler shall be equipped with a quick-opening blowoff valve. Steam boilers with an allowable working pressure in excess of 100 psi shall include a second valve; the valve closest to the boiler shall be quick-acting; the second valve shall be slow-acting.

The valve(s) shall be installed in the opening provided on the *boiler*. The minimum size of the valve or valves shall be specified in accordance with Sections I and IV the ASME *Boiler and Pressure Vessel Code*.

1008.2 Discharge.

Blowoff valves shall discharge to a safe place of disposal. Blowoff valves for *high-pressure boilers* shall discharge into a tank in accordance with Section VIII of the ASME *Boiler and Pressure Vessel Code*. Where discharging to the drainage system, the installation shall conform to the *Chicago Plumbing Code*."

14M-10-1009 HOT WATER BOILER EXPANSION TANK.

The provisions of IMC Section 1009 are adopted by reference without modification.

14M-10-1010 GAUGES.

The provisions of IMC Section 1010 are adopted by reference with the following modifications:

1. Revise the second sentence of Section 1010.2 to read:

"The pressure gauge scale shall be in accordance with the ASME *Boiler and Pressure Vessel Code* and shall indicate the pressure up to one and one-half times the maximum allowable working pressure of the *boiler*, but not less than 30 psi (207 kPa)."

2. Revise Section 1010.2.1 by adding a sentence at the end to read:

"The lowest point of the gauge glass shall be a minimum of one inch above the lowest permissible water level recommended by the boiler manufacturer."

14M-10-1011 TESTS.

The provisions of IMC Section 1011 are adopted by reference with the following modifications:

1. Revise Section 1011.1 by resetting "boilers" and "pressure vessels" in italic type, deleting "or the manufacturer's requirements, and such tests shall be *approved*," and replacing "submitted" with "made available."
2. Revise Section 1011.2 by resetting "boilers" and "pressure vessels" in italic type.

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CHAPTER 14M-11 REFRIGERATION SYSTEMS

14M-11-1101 GENERAL.

The provisions of IMC Section 1101 are adopted by reference with the following modifications:

1. Revise Section 1101.1 and its subsections to read:

“1101.1 Scope.

Design, installation, construction and *repair of refrigeration systems* shall comply with this chapter.

1101.1.1 Refrigerants other than ammonia.

Refrigeration systems using a *refrigerant* other than ammonia shall comply with this chapter, the *Chicago Fire Prevention Code* and either ASHRAE 15 or ASHRAE 15.2, as applicable. *Refrigeration systems* containing carbon dioxide as the refrigerant shall also comply with IAR CO2.

1101.1.2 Ammonia refrigerant.

Refrigeration systems using ammonia refrigerant shall comply with Section 1112 and shall not otherwise be required to comply with this chapter.”

2. Replace Table 1101.2 as shown:

TABLE 1101.2—FACTORY-BUILT EQUIPMENT AND APPLIANCES	
EQUIPMENT	STANDARD
Air-conditioning equipment	UL/CSA 60335-2-40
Packaged terminal air conditioners and heat pumps	UL/CSA 60335-2-40
Split-system air conditioners and heat pumps	UL/CSA 60335-2-40
Dehumidifiers	UL/CSA 60335-2-40
Unit coolers	UL/CSA 60335-2-89
Commercial refrigerators, freezers, beverage coolers and walk-in coolers	UL/CSA 60335-2-89
Refrigerating units and walk-in coolers	UL 60335-2-89
Refrigerant-containing components and accessories	UL 207
Drinking water coolers	UL 399
Refrigerated vending machines	UL 541
Ice makers	UL 563
Residential refrigerators, freezers, beverage coolers and walk-in coolers	UL/CSA 60335-2-24

3. Revise Section 1101.2.1 to read:

"1101.2.1 Group A2L, A2, A3 and B1 high-probability systems.

High-probability systems using Group A2L, A2, A3 or B1 *refrigerants* shall comply with UL 484, UL/CSA 60335-2-40 or UL/CSA 60335-2-89."

4. Revise Section 1101.3 by deleting "in an *approved* manner."
5. Revise Section 1101.5 by replacing "with the" with "with this code and the."
6. Delete Section 1101.6.
7. Revise Section 1101.7 to read:

"1101.7 Changing refrigerant.

Changes of *refrigerant* in an existing system to a *refrigerant* with a different *refrigerant designation* shall be allowed only where in accordance with the following:

1. The *owner* shall consent in writing in advance to a change of *refrigerant*.
 2. The change in *refrigerant* shall be in accordance with one of the following:
 - 2.1. Written instructions of the original *equipment* manufacturer.
 - 2.2. An evaluation of the system by a *professional engineer* that validates safety and suitability of the replacement *refrigerant*.
 3. Where the replacement *refrigerant* is classified into the same *refrigerant safety group classification*, requirements that were applicable to the existing system shall continue to apply.
 4. Where the replacement *refrigerant* is classified in a different *refrigerant safety group classification*, the system shall comply with the requirements of this code for a new installation."
8. Revise Section 1101.8 to read:

"1101.8 Refrigerant discharge.

Notification of *refrigerant* discharge shall be provided to the *fire code official* in accordance with the *Chicago Fire Prevention Code*."

14M-11-1102 SYSTEM REQUIREMENTS.

The provisions of IMC Section 1102 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "air-conditioning system," "equipment," "owner," "refrigerant," and "refrigerant safety group classification."

2. Revise Section 1102.1 by replacing "field pressure test" with "*field test*," refrigerant classification" with "*refrigerant safety group classification*," "pressure tested" with "field tested," and "Section 1108" with "Section 1110."
3. Revise Section 1102.2.1 by replacing "refrigerant safety group" with "*refrigerant safety group classification*."
4. Revise Section 1102.2.2 to read:

"1102.2.2 Purity.

Refrigerants used in refrigeration systems shall be new refrigerants, recovered refrigerants or reclaimed refrigerants in accordance with Section 1102.2.2.1, 1102.2.2.2 or 1102.2.2.3. Where required by the owner or the building official, the installer shall furnish a signed declaration that the refrigerant used meets the requirements of Section 1102.2.2.1, 1102.2.2.2 or 1102.2.2.3.

Exception: The *refrigerant* used shall meet the purity specifications set by the manufacturer of the *equipment* or *appliance* in which such *refrigerant* is used where such specifications are stricter than those specified in Sections 1102.2.2.1, 1102.2.2.2 and 1102.2.2.3."

5. Revise Section 1102.2.2.2 by replacing "refrigeration" with "*refrigeration systems*."
6. Revise Section 1102.3 by replacing "refrigeration" with "*refrigeration systems*."

14M-11-1103 REFRIGERATION SYSTEM CLASSIFICATION.

The provisions of IMC Section 1103 are adopted by reference with the following modifications:

1. Revise Section 1103.1 to read:

"1103.1 Refrigerant safety group classification.

Refrigerants shall be assigned a refrigerant safety group classification in accordance with ASHRAE 34 as listed in Table 1103.1. Refrigerants without a refrigerant designation or without a refrigerant safety group classification in ASHRAE 34 shall be classified in accordance with the criteria in ASHRAE 34 as a single-compound refrigerant or a refrigerant blend of two or more compounds. Documentation supporting the proposed classification shall be submitted to the building official.

2. Revise Table 1103.1 by changing the title to read:

"Refrigerant Safety Group Classification, Amount and OEL"

3. Revise Section 1103.2 to read:

"1103.2 Occupancy classification.

Occupancies shall be classified in accordance with Chapter 3 of the *Chicago Building Code* and this section. Where *equipment* or *appliances*, other than piping, are located outside a building and within 20 feet (6096 mm) of any building opening, such *equipment* or *appliances* shall be governed by the occupancy classification of the building. For purposes of this chapter, occupancy classifications shall be defined as follows:

Institutional occupancy means spaces classified as Group I-1, Condition 2, I-2, I-3 and I-4 occupancies.

Residential occupancy means spaces classified as Group I-1, Condition 1, R-1, R-2, R-3, R-4 and R-5 occupancies.

Commercial occupancy means spaces classified as Group B and M occupancies and portions of Group S-2 occupancies used as public parking garages.

Industrial occupancy means spaces classified as Group F, H, S or U occupancies other than Group S-2 parking garages.

Mixed occupancy occurs where two or more occupancies are located within the same building. Where each occupancy is isolated from the rest of the building by tight walls, floors and ceilings and by self-closing doors, the requirements for each occupancy shall apply to its portion of the building. Where the various occupancies are not so isolated, the occupancy having the most stringent requirements shall be the governing occupancy."

4. Revise Section 1103.3 and its subsections to read:

"1103.3 Refrigeration system classification.

Refrigeration systems shall be classified as *low-probability systems* or *high-probability systems* according to the degree of probability that *refrigerant* leaked from a failed connection, seal or component could enter an *occupiable space*. The distinction is based on the basic design or location of the components.

1103.3.1 Low-probability systems.

Double-indirect open-spray systems, indirect closed systems and indirect-vented closed systems shall be classified as *low-probability systems*, provided that all *refrigerant*-containing piping and fittings are isolated where the quantities in Table 1103.1 are exceeded.

1103.3.2 High-probability systems.

Direct systems and indirect open-spray systems shall be classified as *high-probability systems*.

Exception: An indirect open-spray system shall not be required to be classified as a *high-probability system* if the pressure of the secondary coolant is at all times (operating and standby) greater than the pressure of the *refrigerant*.

1103.3.3 Indirect system types.

Indirect systems are distinguished by the following methods of application:

Closed systems are those in which a secondary fluid is either cooled or heated by the refrigerating system and then circulated within a closed circuit in indirect contact with the air or other substance to be cooled or heated.

Double-indirect open-spray systems are those in which the secondary substance for an indirect open-spray system is heated or cooled by an intermediate coolant circulated from a second enclosure.

Open-spray systems are those in which a secondary coolant is cooled or heated by the refrigerating system and then circulated in direct contact with the air or other substance to be cooled or heated.

Vented closed systems are those in which a secondary coolant is cooled or heated by the refrigerating system and then passed through a closed circuit in the air or other substance to be cooled or heated, except that the evaporator or condenser is placed in an open or appropriately vented tank."

14M-11-1104 REFRIGERATION SYSTEM APPLICATION REQUIREMENTS.

The provisions of IMC Section 1104 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "condenser," "evaporator," "exhaust system," "high-probability system," "hood," "low-probability pump," "piping," "refrigerant," and "refrigeration system."
2. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in roman type: "occupancy."
3. Throughout each provision of this section, replace the singular and plural forms of "machinery room" with "refrigeration machinery room" capitalized and set in italic type where appropriate.
4. Revise Section 1104.1 to read:

"1104.1 General.

The *refrigerant*, occupancy and *refrigeration system classification* cited in this section shall be determined in accordance with Sections 1103.1, 1103.2 and 1103.3, respectively."

5. Revise Section 1104.2.2 by replacing the title with "Industrial occupancies with refrigerated rooms" and by replacing "machinery" with "refrigeration machinery," "1104.3.4" with "1104.3.5," "lower flammability limit (LFL)" with "*lower flammable limit (LFL)*," and "control and pressure relief valves" with "control valves and *pressure relief valves*."
6. Revise Section 1104.3 by replacing "1104.3.4" with "1104.3.5."
7. Revise Section 1104.3.1, excluding the exception, to read:

"1104.3.1 High-probability air conditioners, heat pumps and dehumidifiers.

High-probability systems used as air-conditioning systems, heat pumps or dehumidifiers shall use Group A1 or A2L refrigerant."

8. Revise Section 1104.3.2, including the exceptions, to read:

"1104.3.2 Group A2 and B2 refrigerants.

Group A2 and B2 *refrigerants* shall not be used in *high-probability systems*.

Exceptions:

1. Laboratories where the floor area per occupant is not less than 100 square feet (9.3 m²).
2. Industrial occupancies.
3. *Equipment listed* for and used in residential occupancies containing a maximum of 6.6 pounds (3 kg) of Group A2 or B2 *refrigerant*.
4. *Equipment listed* for and used in commercial occupancies containing a maximum of 22 pounds (10 kg) of Group A2 or B2 *refrigerant*."

9. Add a new Section 1104.3.3 to read:

"1104.3.3 Group A3 and B3 refrigerants.

Group A3 and B3 *refrigerants* shall not be used except where *approved* by the *fire code official*.

Exceptions:

1. *Listed self-contained refrigeration systems* having a maximum of 0.331 pounds (150 g) of Group A3 *refrigerant*.
2. Industrial occupancies.
3. *Self-contained refrigeration systems*, using Group A3 *refrigerant*, that are *listed* to UL 60335-2-89.
4. *Self-contained refrigeration systems*, using Group A3 *refrigerant*, that are *listed* to UL 60335-2-40."

10. Renumber Section 1104.3.3 as Section 1104.3.4.

11. Renumber Section 1104.3.4 as Section 1104.3.5.

12. Revise Section 1104.4.1 by replacing "occupied space" with "*occupiable space*."

13. Revise Section 1104.4.2 to read:

"1104.4.2 Communicating spaces.

Where an *evaporator* or *condenser* is located in a *duct system*, the volume of the smallest, enclosed *occupiable space* served by the *duct system* shall be used to determine the maximum allowable quantity of *refrigerant* in the system.

Exception: If airflow to any enclosed space cannot be reduced below one-quarter of its maximum, the entire space served by the *duct system* shall be used to determine the maximum allowable quantity of *refrigerant* in the system."

14. Revise Section 1104.4.3 to read:

"1104.4.3 Plenums.

Where the space above a suspended ceiling is used as a supply or return air *plenum*, this space shall be included in calculating the volume of the enclosed space."

14M-11-1105 REFRIGERATION MACHINERY ROOM, GENERAL REQUIREMENTS.

The provisions of IMC Section 1105 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "combustion chamber," "ducts," "pressure relief device," and "refrigerant."
2. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in roman type: "building."
3. Throughout each provision of this section, replace the singular and plural forms of "machinery room" with "refrigeration machinery room" capitalized and set in italic type where appropriate.
4. Revise Section 1105.2 by replacing "air handlers" with "*air-handling units*."
5. Revise Section 1105.3 by deleting "Sections 608.9 and 608.18."
6. Revise the exception to Section 1105.6 by replacing "refrigerating system" with "*refrigeration system*."
7. Revise Section 1105.6.1 by replacing "Exhaust" with "*Exhaust air*."
8. Revise Section 1105.6.1.1 by replacing "refrigerating" with "refrigeration."
9. Revise Section 1105.7 by deleting "fusible plugs."
10. Revise Section 1105.8 by deleting "Section 608.11 of."
11. Revise Section 1105.9 to read:

"1105.9 Number of exits and exit access doorways.

The number of exits and exit access doorways for *refrigeration machinery rooms* shall be provided in accordance with Section 1006 of the *Chicago Building Code*."

(Remainder of page intentionally blank.)

14M-11-1106 REFRIGERATION MACHINERY ROOM, SPECIAL REQUIREMENTS.

The provisions of IMC Section 1106 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in italic type: "refrigerant."
2. Throughout each provision of this section, replace the singular and plural forms of "machinery room" with "refrigeration machinery room" capitalized and set in italic type where appropriate.
3. Revise Section 1106.2 by replacing "room" with "*refrigeration machinery room*."
4. Revise Section 1106.5.1 to read:

"1106.5.1 Refrigeration system emergency shutoff.

A clearly identified switch of the break-glass type or with a tamper-resistant cover shall provide off-only control of *compressors*, refrigerant pumps, and normally closed, automatic refrigerant valves located in the *refrigeration machinery room*. Additionally, this *equipment* shall be automatically shut off whenever the refrigerant vapor concentration in the *refrigeration machinery room* exceeds the vapor detector's upper detection limit or 25 percent of the *lower explosive limit (LEL)*, whichever is lower."

5. Revise Section 1106.5.2 by replacing "an *approved*" with "a."
6. Revise Section 1106.6 by deleting "*approved*."

14M-11-1107 PIPING MATERIAL.

The provisions of IMC Section 1107 are adopted by reference with the following modifications:

1. Revise Section 1107.2 by deleting "and shall be *approved* for reuse."
2. Revise Section 1107.4 to read:

"1107.4 Piping materials standards.

Refrigerant *piping* shall conform to one or more of the standards listed in Table 1107.4. For *refrigeration systems* serving only a single *dwelling unit* or *sleeping unit*, refrigerant *piping* shall be limited to aluminum, copper and copper alloy. The exterior of the *piping* shall be protected from corrosion and degradation."

3. Revise Table 1107.4 by replacing "pipe" with "piping" in the title.
4. Delete Section 1107.4.1.
5. Revise Section 1107.5 to read:

"1107.5 Pipe fittings.

Refrigerant pipe fittings shall be suitable for installation with the *piping* materials to be installed and shall conform to one of more of the standards listed in Table 1107.5 or shall be *listed* and *labeled* as complying with UL 207. For *refrigeration systems* serving

only a single *dwelling unit* or *sleeping unit*, refrigerant fittings shall be limited to aluminum, copper, copper alloy, stainless steel, and steel.”

6. Revise Section 1107.5.1 by deleting each “brazed.”
7. Revise the heading rows of Table 1107.5.1 as shown:

FITTING SIZE (inch)	BRAZED CUP DEPTH (inch)	
	MINIMUM	MAXIMUM

14M-11-1108 JOINTS AND CONNECTIONS.

The provisions of IMC Section 1108 are adopted by reference with the following modifications:

1. Revise Section 1108.1 by replacing “an *approved*” with “a suitable.”
2. Revise Section 1108.1.1 by replacing “*approved*” with “suitable.”
3. Revise Section 1108.3 to read:

“1108.3 Joint preparation and installation.

Where required by Sections 1108.4 through 1108.8, the preparation and installation of *brazed joints*, *mechanical joints*, threaded joints and *welded joints* shall comply with Sections 1108.3.1 through 1108.3.5.”

4. Revise the first two sentences of Section 1108.3.1 to read:

“For *brazed joints*, joint surfaces shall be cleaned. Flux shall be applied where required by the braze filler metal manufacturer. The piping being brazed shall be *purged* of air to remove the oxygen and filled with one of the following inert gases: oxygen-free nitrogen, helium or argon.”

5. Revise Section 1108.3.2 to read:

“1108.3.2 Mechanical joints.

Mechanical joints shall be installed in accordance with the manufacturer’s instructions. *Mechanical joints* shall not be used with Group A2, A3, B1, B2L, B2, or B3 *refrigerants*.”

6. Revise Section 1108.3.2.1 by replacing “Flared fittings” with “*Flared joints*.”

7. Revise Section 1108.3.3 to read:

“1108.3.3 Soldered joints prohibited.

Soldered joints shall not be used in *refrigeration systems*.”

8. Revise Section 1108.3.4 by replacing “Threads” with “For threaded joints, threads” and “*approved*” with “suitable.”

9. Revise Section 1108.3.5 to read:

"1108.3.5 Welded joints.

For *welded joints*, joint surfaces to be welded shall be cleaned. Joints shall be welded with a suitable filler metal."

10. Revise Section 1108.4 to read:

"1108.4 Aluminum tube.

Joints between aluminum tubing or fittings shall be *brazed joints, mechanical joints or welded joints* conforming to Section 1108.3."

11. Revise Section 1108.5 to read:

"1108.5 Copper or copper-alloy pipe.

Joints between copper or copper-alloy pipe or fittings shall be *brazed joints, mechanical joints, threaded joints or welded joints* conforming to Section 1108.3."

12. Revise Section 1108.6 to read:

"1108.6 Copper or copper-alloy tube.

Joints between copper or copper-alloy tubing or fittings shall be *brazed joints or mechanical joints*."

13. Revise Section 1108.7 to read:

"1108.7 Steel pipe.

Joints between steel pipe or fittings shall be *mechanical joints, threaded joints or welded joints* conforming to Section 1108.3."

14. Revise Section 1108.8 to read:

"1108.8 Steel tube.

Joints between steel tubing or fittings shall be *mechanical joints or welded joints* conforming to Section 1108.3."

14M-11-1109 REFRIGERANT PIPE INSTALLATION.

The provisions of IMC Section 1109 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "compressor," "compressor unit," "concealed location," "condenser," "condensing unit," "liquid receiver," "piping," "shaft enclosure," and "stop valve."
2. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in roman type: "building."
3. Revise Exception 3 to Section 1109.2.2 by replacing "*machinery room*" with "*refrigeration machinery room*."

4. Revise Items 1 and 2 in Section 1109.2.3 to read:

- “1. Exposed within a fire-resistance-rated *corridor*.
2. Within an interior exit stairway.”

5. Revise Exception 2 to Section 1109.2.5 to read:

- “2. *Piping in a direct refrigeration system where the refrigerant quantity does not exceed the limits of Table 1103.1 for the smallest occupiable space through which the piping passes.*”

6. Revise Section 1109.2.7 to read:

“1109.2.7 Piping identification.

Refrigerant piping located in areas other than the room or space where the refrigerating equipment is located shall be identified. The *piping* identification shall be located at intervals not exceeding 20 feet (6096 mm) on the *refrigerant piping* or pipe insulation. The minimum height of lettering of the identification label shall be $\frac{1}{2}$ inch (12.7 mm). The identification shall indicate the *refrigerant designation* and *refrigerant safety group classification* of *refrigerant* used in the *piping* system. For Group A2L and B2L *refrigerants*, the identification shall also include the following statement: WARNING—RISK OF FIRE. FLAMMABLE REFRIGERANT. For Group A2, A3, B2 and B3 *refrigerants*, the identification shall also include the following statement: DANGER—RISK OF FIRE OR EXPLOSION. FLAMMABLE REFRIGERANT. For any Group B *refrigerant*, the identification shall also include the following statement: DANGER—TOXIC REFRIGERANT.

Exception: For *refrigeration systems* serving only a single *dwelling unit* or *sleeping unit*, *piping* identification shall not be required.”

7. Revise Section 1109.3.2. to read:

“1109.3.2 Shaft ventilation.

Shafts required by Section 1109.2.5 that contain *piping* using Group A2L or B2L *refrigerant* shall be naturally or mechanically ventilated. *Shafts* required by Section 1109.2.5 that contain *piping* using Group A2, A3, B2 or B3 *refrigerant* shall be continuously mechanically ventilated and shall include a refrigerant detector.

Exceptions:

1. For *refrigeration systems* using Group A2L *refrigerant* and serving only a single *dwelling unit* or *sleeping unit*, shaft ventilation shall not be required where the *piping* is continuous and without fittings in the *shaft*.
2. The *shaft* shall not be required to be ventilated for double-wall refrigerant pipe where the interstitial space of the double-wall pipe is vented to the outdoors.

1109.3.2.1 Exhaust outlet.

Exhaust outlet shall comply with Section 501.3.1, provided that exhaust outlets for *shafts* that contain *pipng* using Group A2L *refrigerant* shall be treated as other product-conveying outlets.

1109.3.2.2 Natural ventilation.

Naturally ventilated *shafts* shall have a pipe, duct or conduit not less than 4 inches (102 mm) in diameter that connects to the lowest point of the *shaft* and extends to the outdoors. The pipe, duct or conduit shall be level or pitched downward to the outdoors.

1109.3.2.3 Mechanical ventilation.

Mechanically ventilated *shafts* shall have a minimum airflow velocity in accordance with Table 1109.3.2. The *mechanical exhaust system* shall be continuously operated or activated by a refrigerant detector.

1109.3.2.4 Refrigerant detectors.

Systems utilizing a refrigerant detector shall activate the *mechanical exhaust system* at a maximum refrigerant concentration of 25 percent of the *lower flammable limit (LFL)* of the *refrigerant*. The detector, or a sampling tube that draws air to the detector, shall be located in an area where *refrigerant* from a leak will concentrate."

8. Revise Section 1109.4 by deleting "in an *approved* manner."
9. Revise Exception 3 to Section 1109.6 to read:
 - "3. *Listed and labeled self-contained refrigeration systems.*"

14M-11-1110 REFRIGERATION PIPING SYSTEM TEST.

The provisions of IMC Section 1110 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "compressor," "compressor unit," "condenser," "condensing unit," "evaporator," "pipng," "pressure vessel," "refrigerant," and "refrigeration system."
2. Revise Section 1110.1 by replacing "pressure tested" with "subject to a *field test*."
3. Revise Section 1110.3 by replacing "field pressure testing the *refrigeration system*" with "*field tests of the refrigeration systems.*"
4. Revise Section 1110.3.1 by changing the title to "Test gases prohibited."
5. Revise Exception 2 to Section 1110.4 by replacing "LFL" with "*lower flammable limit (LFL).*"
6. Revise Section 1110.6 by deleting "and tubing."

7. Revise Section 1110.7 to read:

"1110.7 Installer certification.

The installer shall issue a written certification of testing to the *building official* for all *refrigeration systems* containing 55 pounds (25 kg) or more of *refrigerant*. The certification shall give the test date, name of the *refrigerant*, test medium and the test pressure applied to the high-pressure side and the low-pressure side of the *refrigeration system*. The certification shall be signed by the individual who performed the test."

14M-11-1111 IMC SECTION 1111.

The provisions of IMC Section 1111 are not adopted.

14M-11-1112 AMMONIA REFRIGERANT SYSTEMS.

The following is adopted as a new Section 1112:

**"SECTION 1112
AMMONIA REFRIGERANT SYSTEMS**

1112.1 General.

Refrigeration systems using ammonia refrigerant shall comply with IIAR 2 for system design, IIAR 3 for valves, IIAR 4 for installation, IIAR 5 for start-up, IIAR 6 and Sections 1112.2 through 1112.5.

Exception: Sections 1112.2 through 1112.6 shall not apply where the amount of ammonia in an independent circuit does not exceed 0.014 pounds per 1,000 cubic feet (0.224 g/m³) of *occupiable space*, determined in accordance with Section 1104.4.

1112.2 Refrigeration machinery room.

All components containing ammonia refrigerant shall be located either outdoors or in a *refrigeration machinery room*. *Refrigeration machinery rooms* shall be constructed in accordance with the *Chicago Building Code*. *Refrigeration machinery rooms* for *refrigeration systems* using ammonia refrigerant shall be clearly designated with permanent signage at each entrance to the room.

1112.3 Emergency dump valve.

Refrigeration systems containing more than 100 pounds (45.36 kg) of ammonia shall be provided with a hand-operated emergency valve. The emergency valve shall be connected to the low side of the *refrigeration system* and be provided with *ready access* for fire department use. Clear operational instructions for use of the emergency valve shall be provided at the location of the valve. Discharge from above the hand-operated emergency valve shall be into a mixing chamber made from ASTM Schedule 40 black iron pipe with weld cap ends. The mixing chamber shall have a minimum length of 72 inches (1.28 m) and be sized per Table 1112.3. Dumped refrigerants shall flow into the mixing chamber through an inlet tube extending longitudinally into the mixing chamber for a minimum length of 64 inches (1.62 m). The inlet tube shall be made of ASTM Schedule 40 black iron pipe and be sized per Table 1112.3. The downstream end of the

inlet tube shall be capped with a weld cap fitting and the sides of the inlet tube near the weld cap fitting on the downstream end shall be perforated with one-quarter (1/4 inch) (12.2 mm) drilled holes spaced on 1-inch (25.4 mm) centers and arranged in rows. Perforations in the inlet pipe shall be provided per Table 1112.3. Flushing water shall be supplied through a 3-inch (76.2 mm) cast iron Siamese fitting, or equivalent approved by the *fire code official*, with two flappers, welded into the side of the mixing chamber on a 45-degree angle to its longitudinal axis near the inlet end. The effluent mixture of water and ammonia shall flow longitudinally out of the discharge end of the mixing chamber through an ASTM Schedule 40 black iron pipe welded into the end cap of the chamber. The discharge pipe shall be sized per Table 1112.3. The discharge pipe shall connect to the city sewer through a solid connection without intervening valves or traps.

TABLE 1112.3—EMERGENCY DUMP VALVE COMPONENTS				
SYSTEM CAPACITY (Pounds of Ammonia)	MINIMUM NOMINAL PIPE SIZE (Inches)			MINIMUM PERFORATIONS IN INLET PIPE
	Mixing Chamber	Discharge Pipe	Inlet Tube	
101 – 1,000	6	3	2	144
1,001 – 2,000	6	3	3	216
2,001 – 5,000	6	4	3	216
5,001 – 10,000	8	4	3	216

For SI: 1 pound = 0.453 kg, 1 inch = 25.4 mm.

1112.4 Safety equipment.

Where a *refrigeration systems* containing more than 100 pounds (45.36 kg) of ammonia, two self-contained, breathing air apparatuses (SCBA) approved by the Bureau of Mines of the United States Department of the Interior shall be kept in a suitable cabinet immediately outside the entrance to the *refrigeration machinery room*. SCBA equipment shall be rated for at least 30 minutes.

1112.5 Ventilation systems.

The ventilation system in the *refrigeration machinery room* shall be operated continuously. The inlet to the exhaust fan or fans, or air-duct connection, shall be located near the ceiling, and the outlet from the fan or fans, or air-duct connection, shall terminate outside the building above the roof of the highest story of the building, and shall be at least 30 feet (9.144 m) from any penthouse, skylight, or ventilation air-intake.

1112.6 Ammonia discharge.

Piping shall terminate downward at an angle of 45 degrees from the horizontal and shall be provided with a permanent warning sign attached to the piping at the point of termination. The sign shall have a yellow background and shall state in black letters not less than 3 inches (76.2 mm) in height in both English and Spanish: AMMONIA VENT-DANGER and AMONIACO DESCARGA-PELIGRO."

CHAPTER 14M-12 HYDRONIC PIPING

14M-12-1201 GENERAL.

The provisions of IMC Section 1201 are not adopted. The following is adopted as Section 1201:

"SECTION 1201 GENERAL

1201.1 Scope.

Construction, installation, *alteration* and *repair* of hydronic piping that is part of an *air-conditioning system*, heating system or ventilation system shall comply with this chapter.

1201.2 Hydronic piping systems.

Hydronic piping systems shall include steam, hot water, radiant heating, radiant cooling, chilled water, steam condensate, ground source heat pump loop systems, and snow- and ice-melting. Potable cold and hot water distribution systems shall comply with the *Chicago Plumbing Code*.

1201.3 Sizing.

Piping and piping system components for hydronic systems shall be sized for the demand of the system.

1201.4 Standards.

As an alternative to the provisions of Sections 1202 and 1203, *piping* shall be designed, installed, inspected and tested in accordance with ASME B31.9."

14M-12-1202 MATERIAL.

The provisions of IMC Section 1202 are adopted by reference with the following modifications:

1. Revise Section 1202.2 by deleting everything after "foreign materials."
2. Revise Section 1202.4 to read:

"1202.4 Piping materials standards.

Hydronic piping shall conform to the standards listed in Table 1202.4. The exterior of the piping shall be protected from corrosion and degradation."

3. Revise Table 1202.4 by changing the title to "Hydronic Piping."
4. Revise Section 1202.5 by replacing "*approved*" with "suitable."
5. Revise Section 1202.7 by replacing "*approved*" with "suitable."

14M-12-1203 JOINTS AND CONNECTIONS.

The provisions of IMC Section 1203 are adopted by reference with the following modifications:

1. Revise Section 1203.1 by replacing "an *approved*" with "a suitable."
2. Revise Section 1203.1.1 by replacing "*approved*" with "suitable."
3. Revise Section 1203.3 to read:

"1203.3 Joint preparation and installation.

Where required by Sections 1203.4 through 1203.12, the preparation and installation of *brazed joints, mechanical joints, soldered joints, plastic solvent cement joints, threaded joints* and *welded joints* shall comply with Sections 1203.3.1 through 1203.3.8.2."

4. Revise Section 1203.3.1 to read:

"1203.3.1 Brazed joints.

Where *brazed joints* are used, joint surfaces shall be cleaned. Flux shall be applied where required. The joint shall be brazed with a filler metal conforming to AWS A5.8M/A5.8."

5. Revise Section 1203.3.2 by resetting "Mechanical joints" in italic type.
6. Revise Section 1203.3.4, excluding the numbered items and exception, to read:

"1203.3.4 Plastic solvent cement joints.

Where *plastic solvent cement joints* are used, joint surfaces shall be clean and free from moisture. Primer shall be applied to CPVC and PVC pipe-joint surfaces. Joints shall be made while the cement is wet. Solvent cement conforming to the following standards shall be applied to all joint surfaces:"

7. Revise Section 1203.3.5 to read:

"1203.3.5 Threaded joints.

Where threaded joints are used, threads shall conform to ASME B1.20.1. Schedule 80 or heavier plastic pipe shall be threaded with dies specifically designed for plastic pipe. Thread lubricant, pipe-joint compound or tape shall be applied on the male threads only."

8. Revise Section 1203.3.6 to read:

"1203.3.6 Welded joints.

Where *welded joints* are used, joint surfaces shall be cleaned. Joints shall be welded with a suitable filler metal."

9. Revise Section 1203.4 by replacing "solvent-cemented" with "*plastic solvent cement joints*."

10. Revise Section 1203.5 to read:
"1203.5 Copper or copper-alloy pipe.
Joints between copper or copper-alloy pipe or fittings shall be *brazed joints, mechanical joints, soldered joints*, threaded joints or *welded joints* conforming to Section 1203.3."
11. Revise Section 1203.6.1 by resetting "Flared joints" in italic type.
12. Revise Section 1203.7 to read:
"1203.7 CPVC plastic pipe.
Joints between CPVC plastic pipe or fittings shall be *mechanical joints, plastic solvent cement joints* or threaded joints conforming to Section 1203.3."
13. Revise Section 1203.8 to read:
"1203.8 CPVC/AL/CPVC plastic pipe.
Joints between CPVC/AL/CPVC plastic pipes or fittings shall be *mechanical joints, plastic solvent cement joints* or threaded joints conforming to Section 1203.3."
14. Revise Section 1203.9 by resetting "Mechanical joints" in italic type.
15. Revise Section 1203.10 by replacing "solvent-cement" with "*plastic solvent cement joints*."
16. Revise Section 1203.11 to read:
"1203.11 Steel pipe.
Joints between steel pipe or fittings shall be *mechanical joints* that are made with an elastomeric seal or shall be *threaded joints* or *welded joints* conforming to Section 1203.3."
17. Revise Section 1203.12 by replacing "mechanical or welded joints" with "*mechanical joints or welded joints*."
18. Revise Section 1203.13 to read:
"1203.13 Stainless steel pipe.
Joints between stainless steel pipe or fittings shall be *mechanical joints* that are made with an elastomeric seal or shall be *threaded joints* or *welded joints* conforming to Section 1203.3."
19. Revise Section 1203.14 by replacing "mechanical or welded joints" with "*mechanical joints or welded joints*."
20. Revise Section 1203.16 by resetting "Mechanical joints" in italic type.
21. Revise Section 1203.16.2 by replacing "Solder joints" with "*Soldered joints*."
22. Revise Section 1203.17 by resetting "Mechanical joints" in italic type.

23. Revise Section 1203.17.2 by replacing "Solder joints" with "*Soldered joints.*"
24. Revise Section 1203.18 by resetting "Mechanical joints" in italic type.
25. Revise Section 1203.18.2 by replacing "Solder joints" with "*Soldered joints.*"

14M-12-1204 PIPE INSULATION.

The provisions of IMC Section 1204 are adopted by reference with the following modification:

1. Revise Section 1204.1 by resetting "buildings" in roman type, replacing "an air" with "a," and deleting the exception.

14M-12-1205 VALVES.

The provisions of IMC Section 1205 are adopted by reference with the following modifications:

1. Revise Section 1205.1.2 by resetting "buildings" in roman type.
2. Revise Section 1205.1.3 by resetting "pressure vessel" in italic type.

14M-12-1206 PIPING INSTALLATION.

The provisions of IMC Section 1206 are adopted by reference with the following modifications:

1. Revise Section 1206.2 by replacing "permit" with "allow."
2. Revise Section 1206.5 by changing the title to "Clearance to combustible materials."
3. Revise Section 1206.7 to read:

"1206.7 Water hammer.

Hydronic piping system shall be designed to reduce the possibility of water hammer. An air chamber or water hammer arrestor shall be installed where quick-closing valves are utilized. Water hammer arrestors shall be installed in accordance with the manufacturer's instructions. Water hammer arrestors shall conform to ASSE 1010. Air chambers shall comply with Section 604.9.1 of the *Chicago Plumbing Code.*"

4. Revise Section 1206.9 by resetting "building" in roman type.
5. Delete Section 1206.9.1.

14M-12-1207 TRANSFER FLUID.

The provisions of IMC Section 1207 are adopted by reference without modification.

14M-12-1208 TESTS.

The provisions of IMC Section 1208 are adopted by reference without modification.

14M-12-1209 EMBEDDED PIPING.

The provisions of IMC Section 1209 are adopted by reference with the following modifications:

1. Revise Section 1209.1 by deleting "*approved.*"
2. Revise Section 1209.3 by resetting "building" in roman type.
3. Revise Section 1209.4 by deleting "by *approved* methods."
4. Delete Section 1209.6.3.
5. Delete Section 1209.7.2.

14M-12-1210 PLASTIC PIPE GROUND SOURCE HEAT PUMP LOOP SYSTEMS.

The provisions of IMC Section 1210 are adopted by reference with the following modifications:

1. Revise Section 1210.1 to read:
"1210.1 Ground-source heat pump loop water piping.
Piping and tubing material for water-based *ground source heat pump loop systems* shall conform to this section."
2. Revise Section 1210.2 by replacing "ground-source heat pump loop systems" with "*ground source heat pump loop systems.*"
3. Revise Section 1210.3 by replacing "ground-source heat pump loop system" with "*ground source heat pump loop system.*"
4. Revise Section 1210.4 by deleting "heat pump ground."
5. Revise Section 1210.5 by replacing "*approved*" with "suitable."
6. Revise Section 1210.6 by replacing each "an *approved*" with "a suitable."
7. Revise Section 1210.6.1 by replacing "*approved*" with "suitable."
8. Revise Section 1210.6.3 by resetting "thermoplastic" in italic type.
9. Revise Section 1210.6.3.1 by resetting "Mechanical joints" in italic type.
10. Revise Section 1210.6.3.2 by resetting "thermoplastic" in italic type and by deleting "by an *approved* procedure."
11. Revise Section 1210.6.5 by resetting "Mechanical joints" in italic type.
12. Revise Section 1210.7.2 by resetting "building" in roman type.
13. Revise Section 1210.7.3 by resetting "pressure vessel" in italic type.
14. Revise Section 1210.8.2 by resetting "building" in roman type.

15. Revise Section 1210.8.3 by changing the title to "Clearance from combustible materials" and by resetting "combustible materials" in the body in italic type.
16. Revise Section 1210.8.4 by resetting "building" in roman type.
17. Revise Section 1210.8.5 by resetting "building" in roman type.
18. Delete Section 1210.8.6.
19. Revise Section 1210.8.8 by replacing "Ground-source heat pump ground-loop systems" with "*Ground source heat pump loop systems.*"
20. Revise Section 1210.8.9 by replacing "Ground-source heat pump ground-loop systems" with "*Ground source heat pump loop systems*" and by resetting "building" in roman type.
21. Revise Section 1210.11 by replacing "Ground-source heat pump ground-loop" with "*Ground source heat pump loop system.*"

CHAPTER 14M-13 FUEL OIL PIPING AND STORAGE

14M-13-1301 GENERAL.

The provisions of IMC Section 1301 are adopted by reference with the following modifications:

1. Revise Section 1301.1 to read:

"1301.1 Scope.
Design, installation, construction and *repair of fuel oil storage and piping systems shall comply with this chapter.*"
2. Revise Section 1301.2 to read:

"1301.2 Storage.
Fuel oil storage shall comply with the Chicago Fire Prevention Code."
3. Revise Section 1301.4 by deleting "*approved.*"
4. Revise Section 1301.5 by deleting "Section 5704.2.13 of" and inserting "and Illinois law" at the end.

14M-13-1302 MATERIAL.

The provisions of IMC Section 1302 are adopted by reference with the following modifications:

1. Revise Section 1302.4 by replacing "flammable and combustible liquids" with "*flammable liquids and combustible liquids.*"
2. Revise Section 1302.5 by deleting "shall be *approved* for the piping systems, and."

3. Revise Section 1305.6 to read:
"1302.6 Bending of pipe.
Pipe shall be suitable for bending. Pipe bends shall be made with appropriate tools. The bend shall not exceed the structural limitations of the pipe."
4. Revise Section 1305.8 by replacing "flammable and combustible liquids" with "*flammable liquids and combustible liquids.*"

14M-13-1303 JOINTS AND CONNECTIONS.

The provisions of IMC Section 1303 are adopted by reference with the following modifications:

1. Revise the first sentence of Section 1303.1 to read:
"Joints and connections shall be of a type suitable for *fuel oil piping systems.*"
2. Revise Section 1303.1.1 by deleting each "*approved.*"
3. Revise the first two sentences of Section 1303.3.1 to read:
"For *brazed joints*, all joint surfaces shall be cleaned. Flux shall be applied where required."
4. Revise Section 1303.3.2 by resetting "Mechanical joints" in italic type.
5. Revise the first sentence of Section 1303.3.3 to read:
"For threaded joints, threads shall conform to ASME B1.20.1."
6. Revise Section 1303.3.4 to read:
"1303.3.4 Welded joints.
For *welded joints*, all joint surfaces shall be cleaned. The joint shall be welded with a suitable filler metal."
7. Revise Section 1303.4 to read:
"1303.4 Copper or copper-alloy pipe.
Joints between copper or copper-alloy pipe or fittings shall be *brazed joints, mechanical joints, threaded joints, press-connect joints or welded joints* complying with Section 1303.3."
8. Revise Section 1303.5 to read:
"1303.5 Copper or copper-alloy tubing.
Joints between copper or copper-alloy tubing or fittings shall be *brazed joints, mechanical joints or press-connect joints* complying with Section 1303.3."

9. Revise Section 1303.7 to read:

“1303.7 Steel and stainless steel pipe.

Joints between steel or stainless steel pipe or fittings shall be threaded joints, *press-connect joints* or *welded joints* complying with Section 1303.3 or *mechanical joints* complying with Section 1303.7.1.”

10. Revise Section 1303.7.1 by deleting “*approved*” and by resetting each “Mechanical joints” in italic type.

11. Revise Section 1303.8 to read:

“1303.8 Steel and stainless steel tubing.

Joints between steel or stainless steel tubing or fittings shall be *mechanical joints*, *press-connect joints* or *welded joints* complying with Section 1303.3.”

12. Revise Section 1303.9 by replacing “permit” with “allow.”

14M-13-1304 PIPING SUPPORT.

The provisions of IMC Section 1304 are adopted by reference without modification.

14M-13-1305 FUEL OIL SYSTEM INSTALLATION.

The provisions of IMC Section 1305 are adopted by reference with the following modifications:

1. Delete Section 1305.2.1.
2. Revise Section 1305.5 by replacing “fuel-oil-burning” with “*fuel oil*-burning.”

14M-13-1306 OIL GAUGING.

The provisions of IMC Section 1306 are adopted by reference with the following modification:

1. Revise Section 1306.5 by replacing “permit” with “allow.”

14M-13-1307 FUEL OIL VALVES.

The provisions of IMC Section 1307 are adopted by reference with the following modifications:

1. Revise Section 1307.2 by replacing “fuel-oil-burning” with “*fuel oil*-burning.”
2. Revise Section 1307.4 by replacing “fuel-oil-burning” with “*fuel oil*-burning.”

14M-13-1308 TESTING.

The provisions of IMC Section 1308 are adopted by reference without modification.

CHAPTER 14M-14 SOLAR THERMAL SYSTEMS

14M-14-1401 GENERAL.

The provisions of IMC Section 1401 are adopted by reference with the following modifications:

1. Revise Section 1401.1 to read:

"1401.1 Scope.
Design, installation, construction, *alteration* and *repair* of *solar thermal systems* shall comply with this chapter."
2. Revise Section 1401.2, including the exception, by replacing "solar systems" with "*solar thermal systems*" and "solar system" with "*solar thermal system*."
3. Revise Section 1401.3 by resetting "Heat exchangers" in italic type and replacing "*approved*" with "suitable."
4. Revise Section 1401.4 by resetting "Solar thermal systems" in italic type.

14M-14-1402 DESIGN AND INSTALLATION.

The provisions of IMC Section 1402 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "access," "food-grade fluid," "heat exchanger," "noncombustible material," and "solar thermal system."
2. Revise Section 1402.1 by deleting the second sentence.
3. Revise Section 1402.3.1 by replacing "indirect solar systems" with "*indirect solar thermal systems*."
4. Revise Section 1402.4.1 by replacing "permit" with "allow."
5. Delete Section 1402.6.
6. Revise Section 1402.7.1 by replacing "solar system" with "*solar thermal system*" and "*approved*" with "suitable."
7. Revise Section 1402.8.1.2 by deleting "or fire-retardant-treated wood."
8. Revise the exception to Section 1402.8.1.3 by deleting "*approved*."
9. Revise Section 1402.8.3 by replacing "Potable" with "Potable water."
10. Revise Section 1402.8.4 by replacing "*approved*" with "suitable."

14M-14-1403 HEAT TRANSFER FLUIDS.

The provisions of IMC Section 1403 are adopted by reference with the following modifications:

1. Revise Section 1403.1 by replacing "solar system" with "*solar thermal system.*"
2. Revise Section 1403.3 by resetting "food-grade fluid" in italic type and by deleting "third-party" and "by an *approved* agency."
3. Revise Section 1403.4 by deleting "Chapter 60 of."
4. Revise Section 1403.5 to read:

"1403.5 Flammable gases and liquids.

A flammable liquid or flammable gas shall not be utilized as a heat transfer fluid."

14M-14-1404 LABELING.

The provisions of IMC Section 1404 are adopted by reference with the following modification:

1. Revise the first sentence of Section 1404.4 to read:

"Heat exchangers shall be labeled to indicate the *equipment* type with one of the following:"

CHAPTER 14M-15 REFERENCED STANDARDS

14M-15-1500 IMC CHAPTER 15.

The provisions of IMC Chapter 15 are adopted by reference with the following modifications:

1. Delete the cross-reference to provisions of the IMC following each reference.
2. Insert the following under ASHRAE:
"15.2—2022: Safety Standard for Refrigeration Systems in Residential Applications"
3. Delete the following under ICC:
"IBC—24: International Building Code"
"IECC—24: International Energy Conservation Code"
"IFC—24: International Fire Code"
"IFGC—24: International Fuel Gas Code"
"IPC—24: International Plumbing Code"
"IRC—24: International Residential Code"

4. Delete the following under NFPA:

“70—23: National Electrical Code”

“72—22: National Fire Alarm and Signaling Code”

5. Insert the following under UL:

“399—2017: Drinking Water Coolers - with revisions through July 2023”

“541—2016: Refrigerated Vending Machines - with revisions through November 2020”

“563—2009: Ice Makers - with revisions through May 2021”

“1738—2010: Venting Systems for Gas-Burning Appliances, Categories II, III and IV—
with Revisions through August 2021”

“UL/CSA 60335-2-24—2022: Household and Similar Electrical Appliances – Safety –
Part 2-24: Particular Requirements for Refrigerating Appliances, Ice-Cream Appliances
and Ice-Makers”

(Remainder of this page intentionally blank.)

SECTION 2. The Municipal Code of Chicago is hereby amended by repealing Title 14G (2019 Interim Fuel Gas Code) in its entirety and replacing it as follows:

**TITLE 14G
2026 FUEL GAS CODE**

**CHAPTER 14G-1
SCOPE AND PURPOSE**

14G-1-001 ADOPTION OF THE INTERNATIONAL FUEL GAS CODE BY REFERENCE.

The *International Fuel Gas Code*, 2024 edition, second printing, and all erratum thereto identified by the publisher (hereinafter referred to as "IFGC"), including Appendices A and B, is adopted by reference and shall be considered part of the requirements of this title except as modified by the specific provisions of this title.

If a conflict exists between a provision modified by this title and a provision adopted without modification, the modified provision shall control.

14G-1-002 CITATIONS.

Provisions of IFGC which are incorporated into this title by reference may be cited as follows:

14G-[IFGC chapter number]-[IFGC section number]

provided the adopted appendices shall be deemed to be part of a new Chapter 9.

14G-1-002 GLOBAL MODIFICATIONS.

The following modifications shall apply to each provision of IFGC incorporated into this title:

1. Replace each occurrence of "*International Building Code*" with "*Chicago Building Code*."
2. Replace each occurrence of "NFPA 70" with "the *Chicago Electrical Code*."
3. Replace each occurrence of "*International Fire Code*" with "*Chicago Fire Prevention Code*."
4. Replace each occurrence of "*International Mechanical Code*" with "*Chicago Mechanical Code*."
5. Replace each occurrence of "*International Energy Conservation Code*" with "*Chicago Energy Transformation Code*."
6. Replace each occurrence of "*International Plumbing Code*" with "*Chicago Plumbing Code*."
7. Replace each occurrence of "code official" or "code official" with "building official."
8. Replace each occurrence of "permitted" with "allowed."

9. Delete each bracketed designation of ICC code development committee responsibility preceding a section number.
10. Delete parenthetical references in section titles such as "(IFGC)" and "(IFGS)."

14G-1-100 CHAPTER 1.

The provisions of IFGC Chapter 1 are not adopted. The following is adopted as Chapter 1 entitled "Scope and Purpose":

"SECTION 101 GENERAL

101.1 Title.

This Title 14G of the Municipal Code of Chicago shall be known as the *Chicago Fuel Gas Code*, hereinafter referred to as "this code."

101.2 Scope.

This code shall regulate the design, installation, *repair, alteration* and utilization of *pipng systems, appliances, gaseous hydrogen systems* and related accessories in accordance with Sections 101.2.1 through 101.2.5.

101.2.1 Gaseous hydrogen systems.

Gaseous hydrogen systems shall be regulated by Chapter 7.

101.2.2 Piping systems.

These regulations cover *pipng systems for fossil gas* with an operating pressure of 125 pounds per square inch gauge (psig) (862 kPa gauge) or less, and for *LP-gas* with an operating pressure of 20 psig (140 kPa gauge) or less, except as provided in Section 402.7. Coverage shall extend from the *point of delivery* to each *gas outlet*, including shutoff valves at *gas outlets*. *Piping system* requirements shall include design, materials, components, fabrication, assembly, installation, testing, inspection, operation and maintenance.

101.2.3 Appliances.

Requirements for *appliances* and related accessories shall include installation, *combustion air and dilution air, venting systems* and connections to *pipng systems*.

101.2.4 Systems, appliances and equipment outside the scope.

This code shall not apply to the following:

1. Portable *LP-gas appliances and equipment* of all types that is not connected to a fixed fuel *pipng system*.
2. Oxygen-fueled cutting and welding systems.
3. Industrial gas applications using gases such as acetylene and acetylenic compounds, hydrogen, ammonia, carbon monoxide, oxygen and nitrogen.

4. Petroleum refineries, pipeline compressor or pumping stations, loading terminals, compounding plants, refinery tank farms and fossil gas processing plants.
5. Integrated chemical plants or portions of such plants where flammable or combustible liquids or gases are produced by, or used in, chemical reactions.
6. Liquefied fossil gas (LFG) installations.
7. Proprietary items of *equipment*, apparatus or instruments such as gas-generating sets, compressors and calorimeters.
8. *LP-gas equipment* for vaporization, gas mixing and gas manufacturing.
9. Temporary *LP-gas piping* for buildings under construction or renovation that is not to become part of the permanent *piping system*.
10. Installation of *LP-gas* systems for railroad switch heating.
11. Installation of hydrogen gas, *LP-gas* and compressed fossil gas (CFG) systems on vehicles.
12. Except as provided in Section 401.1.1, *piping, meters, pressure regulators* and other appurtenances used by the serving gas supplier in the distribution of *fuel gas*, other than undiluted *LP-gas*.
13. *Piping systems* for mixtures of gas and air within the flammable range with an operating pressure greater than 10 psig (69 kPa gauge).
14. *Portable fuel cell appliances* that are neither connected to a fixed *piping system* nor interconnected to a power grid.

101.2.5 Other fuels.

Requirements for mechanical systems and appliances utilizing fuels other than *fuel gas* shall be regulated by the *Chicago Mechanical Code*.

101.3 Purpose.

The purpose of this code is to establish minimum requirements to provide a reasonable level of safety, health, property protection and general welfare by regulating and controlling the design, construction, installation, quality of materials, location and use of *fuel gas equipment* and *fuel gas systems*."

(Remainder of page intentionally blank.)

CHAPTER 14G-2 DEFINITIONS

14G-2-201 GENERAL.

The provisions of IFGC Section 201 are not adopted. The following is adopted as Section 201:

"SECTION 201 GENERAL

201.1 Definitions.

The definitions in Section 202 shall apply to italicized words throughout this code, except where specifically limited to a particular chapter or section. Unless the context requires otherwise, the definitions in Section 202 shall also apply to non-italicized words throughout this code.

201.2 Interchangeability.

Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural includes the singular.

201.3 Words defined in other codes.

Where non-italicized words are not defined in this code and are defined in the *Chicago Construction Codes Administrative Provisions, Chicago Building Code, Chicago Conveyance Device Code, Chicago Electrical Code, Chicago Fire Prevention Code, Chicago Mechanical Code, Chicago Energy Transformation Code, Chicago Plumbing Code, Chicago Building Rehabilitation Code, or Chicago Minimum Requirements for Existing Buildings*, such words shall have the meanings ascribed to them in those codes unless the context requires otherwise.

201.4 Words not defined.

Where italicized words are not defined in Section 202 or non-italicized words are not defined in Section 202 or any of the codes referenced in Section 201.3, such words shall have the meaning given in the latest edition of Merriam Webster's Collegiate Dictionary as the context implies."

14G-2-202 DEFINITIONS.

The provisions of IFGC Section 202 are adopted by reference with the following modifications:

1. Revise the title of Section 202 to read: "Definitions."
2. Revise the definition of "access (to)" to read:
"ACCESS (TO). As defined in Chapter 2 of the *Chicago Mechanical Code.*"
3. Insert the following definitions:
"AIR, COMBUSTION. As defined in Chapter 2 of the *Chicago Mechanical Code.*

- AIR, DILUTION.** Air that is introduced into a *draft hood* and is mixed with the *flue gases*.”
4. Delete the definition of “air, exhaust.”
 5. Revise the definition of “air, makeup” to read:
“**AIR, MAKEUP.** As defined in Chapter 2 of the *Chicago Mechanical Code*.”
 6. Delete the definition of “air conditioner, gas fired.”
 7. Delete the definition of “air conditioning.”
 8. Delete the definition of “air-handling unit.”
 9. Revise the definition of “alteration” to read:
“**ALTERATION.** As defined in Chapter 2 of the *Chicago Building Rehabilitation Code*.”
 10. Delete the definition of “anodeless riser.”
 11. Revise the definition of “appliance” to read:
“**APPLIANCE.** As defined in Chapter 2 of the *Chicago Mechanical Code*.”
 12. Insert the following definition:
“**APPLIANCE SHUTOFF VALVE.** See “Valve, appliance shutoff.””
 13. Delete the definition of “appliance, automatically controlled.”
 14. Insert the following definitions:
“**APPLIANCE, LOW-HEAT.** As defined in Chapter 2 of the *Chicago Mechanical Code*.
APPLIANCE, MEDIUM-HEAT. As defined in Chapter 2 of the *Chicago Mechanical Code*.”
 15. Revise the definition of “appliance, vented” to read:
“**APPLIANCE, VENTED.** As defined in Chapter 2 of the *Chicago Mechanical Code*.”
 16. Insert the following definition:
“**APPLIANCE CONNECTOR.** See “Connector, appliance.””
 17. Delete the definition of “appliance type” and its subsections.
 18. Revise the definition of “approved” to read:
“**APPROVED.** As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.”
 19. Delete the definition of “approved agency.”

20. Delete the definition of "atmospheric pressure."
21. Delete the definition of "automatic ignition."
22. Insert the following definition:
"AUTOMATIC VALVE. See "Valve, automatic."
23. Revise the definition of "barometric draft regulator" by resetting "chimney" and "vent connector" in italic type.
24. Insert the following definitions:
"BOILER. As defined in Chapter 2 of the *Chicago Mechanical Code*.
BOILER, UNLISTED. See "Unlisted boiler."
25. Delete the definition of "boiler, low-pressure" and its subsections.
26. Delete the definition of "bonding jumper."
27. Revise the definition of "brazing" to read:
"BRAZING. As defined in Chapter 2 of the *Chicago Mechanical Code*."
28. Delete the definition of "Btu."
29. Insert the following definition:
"BUILDING OFFICIAL. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
30. Revise the definition of "burner" and its subsections to read:
"BURNER. A device for the final conveyance of the gas, or a mixture of gas and air, to the combustion zone.
BURNER, CONVERSION. As defined in Chapter 2 of the *Chicago Mechanical Code*.
BURNER, POWER. A *burner* in which gas, air or both are supplied at pressures exceeding, for gas, the line pressure, and for air, atmospheric pressure, with this added pressure being applied at the *burner*."
31. Insert the following definitions:
"CENTRAL-HEATING FURNACE. See "Furnace, central-heating."
CHICAGO BUILDING CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.
CHICAGO BUILDING REHABILITATION CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO CONSTRUCTION CODES ADMINISTRATIVE PROVISIONS. Title 14A of the *Municipal Code of Chicago*.

CHICAGO CONVEYANCE DEVICE CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO ELECTRICAL CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO ENERGY TRANSFORMATION CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO FIRE PREVENTION CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO MECHANICAL CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO MINIMUM REQUIREMENTS FOR EXISTING BUILDINGS. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO PLUMBING CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."

32. Revise the definition of "chimney" and its subsections to read:

"CHIMNEY. As defined in Chapter 2 of the *Chicago Building Code*.

CHIMNEY, FACTORY-BUILT. As defined in Chapter 2 of the *Chicago Building Code*.

CHIMNEY, MASONRY. As defined in Chapter 2 of the *Chicago Building Code*.

CHIMNEY, METAL. As defined in Chapter 2 of the *Chicago Building Code*."

33. Revise the definition of "clearance" to read:

"CLEARANCE. As defined in Chapter 2 of the *Chicago Mechanical Code*."

34. Revise the definition of "clothes dryer" and its subsections to read:

"CLOTHES DRYER. As defined in Chapter 2 of the *Chicago Mechanical Code*."

35. Delete the definition of "code."

36. Delete the definition of "code official."

37. Revise the definition of "combustible assembly" to read:

"COMBUSTIBLE ASSEMBLY. As defined in Chapter 2 of the *Chicago Mechanical Code*."

38. Revise the definition of "combustible material" to read:
"**COMBUSTIBLE MATERIAL.** As defined in Chapter 2 of the *Chicago Mechanical Code.*"
39. Revise the definition of "combustion" to read:
"**COMBUSTION.** As defined in Chapter 2 of the *Chicago Mechanical Code.*"
40. Revise the definition of "combustion air" to read:
"**COMBUSTION AIR.** See "Air, combustion.""
41. Revise the definition of "combustion chamber" to read:
"**COMBUSTION CHAMBER.** As defined in Chapter 2 of the *Chicago Mechanical Code.*"
42. Revise the definition of "combustion products" to read:
"**COMBUSTION PRODUCTS.** As defined in Chapter 2 of the *Chicago Mechanical Code.*"
43. Revise the definition of "concealed location" to read:
"**CONCEALED LOCATION.** As defined in Chapter 2 of the *Chicago Mechanical Code.*"
44. Revise the definition of "concealed piping" by deleting "(see "Concealed location")".
45. Revise the definition of "condensate" to read:
"**CONDENSATE.** As defined in Chapter 2 of the *Chicago Mechanical Code.*"
46. Revise the definition of "connector, appliance (fuel)" by deleting "(fuel)" and resetting "system" in italic type.
47. Revise the definition of "connector, chimney or vent" to read:
"**CONNECTOR, VENT.** See "Vent connector.""
48. Delete the definition of "construction documents."
49. Revise the definition of "control" to read:
"**CONTROL.** As defined in Chapter 2 of the *Chicago Mechanical Code.*"
50. Revise the definition of "conversion burner" to read:
"**CONVERSION BURNER.** See "Burner, conversion.""
51. Revise the definition of "counter appliances" by resetting "Appliances" in italic type.
52. Delete the definition of "cubic foot."

53. Revise the definition of "damper" to read:
"DAMPER. As defined in Chapter 2 of the *Chicago Mechanical Code*."
54. Revise the definition of "decorative appliance, vented" by resetting "vented" in italic type.
55. Revise the definition of "decorative appliances for installation in vented fireplaces" by resetting "vented" in italic type.
56. Delete the definition of "design flood elevation."
57. Revise the definition of "dilution air" to read:
"DILUTION AIR. See "Air, dilution.""
58. Insert the following definitions:
"DIRECT-FIRED NON-RECIRCULATING INDUSTRIAL AIR HEATER. See "Industrial air heater, direct-fired non-recirculating."
"DIRECT-FIRED RECIRCULATING INDUSTRIAL AIR HEATER. See "Industrial air heater, direct-fired recirculating.""
59. Revise the definition of "direct-vent appliances" to read:
"DIRECT-VENT APPLIANCE. As defined in Chapter 2 of the *Chicago Mechanical Code*."
60. Revise the definition of "draft" and its subsections to read:
"DRAFT. As defined in Chapter 2 of the *Chicago Mechanical Code*.
"DRAFT, INDUCED. As defined in Chapter 2 of the *Chicago Mechanical Code*.
"DRAFT, NATURAL. As defined in Chapter 2 of the *Chicago Mechanical Code*."
61. Revise the definition of "draft hood" by resetting "vent connector" and "flue gases" in italic type.
62. Revise the definition of "drip" to read:
"DRIP. As defined in Chapter 2 of the *Chicago Mechanical Code*."
63. Revise the definition of "duct furnace" to read:
"DUCT FURNACE. As defined in Chapter 2 of the *Chicago Mechanical Code*."
64. Revise the definition of "duct system" to read:
"DUCT SYSTEM. As defined in Chapter 2 of the *Chicago Mechanical Code*."
65. Revise the definition of "dwelling unit" to read:
"DWELLING UNIT. As defined in Chapter 2 of the *Chicago Building Code*."

66. Insert the following definition:
“**ENCLOSED FURNACE.** See “Furnace, enclosed.””
67. Revise the definition of “equipment” to read:
“**EQUIPMENT.** As defined in Chapter 2 of the *Chicago Mechanical Code.*”
68. Revise the definition of “exterior masonry chimneys” to read:
“**EXTERIOR MASONRY CHIMNEY.** A *masonry chimney* exposed to the outdoors on one or more sides below the roof line.”
69. Insert the following definition:
“**FAN-ASSISTED COMBUSTION APPLIANCE.** See “Appliance, fan-assisted combustion.””
70. Revise the definition of “fireplace” and its subsections to read:
“**FIREPLACE.** As defined in Chapter 2 of the *Chicago Building Code.*
FIREPLACE, FACTORY-BUILT. As defined in Chapter 2 of the *Chicago Building Code.*
FIREPLACE, MASONRY. As defined in Chapter 2 of the *Chicago Building Code.*”
71. Delete the definition of “firing valve.”
72. Revise the definition of “flame safeguard” to read:
“**FLAME SAFEGUARD.** As defined in Chapter 2 of the *Chicago Mechanical Code.*”
73. Delete the definition of “flood hazard area.”
74. Revise the definition of “floor furnace,” excluding its subsections, to read:
“**FLOOR FURNACE.** As defined in Chapter 2 of the *Chicago Mechanical Code.*”
75. Revise the subsections below the definition of “floor furnace” by resetting each “floor furnace” and “floor furnaces” in italic type.
76. Delete the definition of “flue, appliance.”
77. Revise the definition of “flue collar” by resetting “draft hood,” “vent connector” and “venting system” in italic type.
78. Revise the definition of “flue gases” to read:
“**FLUE GASES.** As defined in Chapter 2 of the *Chicago Mechanical Code.*”
79. Revise the definition of “flue liner (lining)” to read:
“**FLUE LINER.** As defined in Chapter 2 of the *Chicago Mechanical Code.*”

80. Insert the following definitions:

“FORCED DRAFT VENTING SYSTEM. See “Venting system, forced draft.”

FOSSIL GAS. A combustible mix of gaseous hydrocarbons, primarily consisting of methane (CH₄). Fossil gas is typically extracted from geologic formations, but can also be produced through other means, including anaerobic digestion.”

81. Revise the definition of “fuel gas” to read:

“FUEL GAS. *Fossil gas, hydrogen gas, liquefied petroleum gas* or mixtures of these gases intended to be combusted as fuel.”

82. Revise the definition of “furnace” to read:

“FURNACE. As defined in Chapter 2 of the *Chicago Mechanical Code.*”

83. Revise the definition of “furnace, central” by replacing “central” with “central-heating.”

84. Delete the definition of “furnace plenum.”

85. Insert the following definition:

“GAS OUTLET. The point at which a gas-fired *appliance* connects to the *gas piping system.*”

86. Revise the definition of “gaseous hydrogen system” to read:

“GASEOUS HYDROGEN SYSTEM. An assembly of *piping*, devices and apparatus designed to generate, store, contain, distribute or transport a nontoxic, gaseous hydrogen containing mixture having at least 95 percent hydrogen gas by volume and not more than 1 percent oxygen by volume. *Gaseous hydrogen systems* consist of items such as compressed gas containers, reactors and appurtenances, including *pressure regulators*, pressure relief devices, manifolds, pumps, compressors and interconnecting *piping and controls.*”

87. Revise the definition of “hazardous location” to read:

“HAZARDOUS LOCATION. As defined in Chapter 2 of the *Chicago Mechanical Code.*”

88. Delete the definition of “house piping.”

89. Delete the definition of “hydrogen fuel-gas room.”

90. Revise the definition of “hydrogen-generating appliance” to read:

“HYDROGEN-GENERATING APPLIANCE. As defined in Chapter 2 of the *Chicago Mechanical Code.*”

91. Revise the definition of “ignition pilot” by resetting “main burner” in italic type.

92. Revise the definition of "ignition source" to read:
"IGNITION SOURCE. As defined in Chapter 2 of the *Chicago Mechanical Code*."
93. Insert the following definitions:
"INDUCED DRAFT. See "Draft, induced."
INDUCED DRAFT VENTING SYSTEM. See "Venting system, induced draft."
94. Revise the definition of "industrial air heaters, direct-fired non-recirculating" by replacing "products of combustion" with "*combustion products*" and resetting "burners" in italic type.
95. Revise the definition of "industrial air heaters, direct-fired recirculating" by replacing "products of combustion" with "*combustion products*" and resetting "burners" in italic type.
96. Revise the definition of "joint, flanged" to read:
"JOINT, FLANGED. As defined in Chapter 2 of the *Chicago Mechanical Code*."
97. Revise the definition of "joint, flared" to read:
"JOINT, FLARED. As defined in Chapter 2 of the *Chicago Mechanical Code*."
98. Revise the definition of "joint, mechanical" to read:
"JOINT, MECHANICAL. As defined in Chapter 2 of the *Chicago Mechanical Code*."
99. Delete the definition of "joint, plastic adhesive."
100. Delete the definition of "joint, plastic heat fusion."
101. Revise the definition of "joint, welded" to read:
"JOINT, WELDED. As defined in Chapter 2 of the *Chicago Mechanical Code*."
102. Revise the definition of "labeled" to read:
"LABELED. As defined in Chapter 2 of the *Chicago Building Code*."
103. Delete the definition of "leak check."
104. Delete the definition of "limit control."
105. Revise the definition of "liquefied petroleum gas" to read:
"LIQUEFIED PETROLEUM GAS or LP-GAS. Liquefied petroleum gas composed predominately of propane, propylene, butanes or butylenes, or mixtures thereof that is gaseous under normal atmospheric conditions, but is capable of being liquefied under moderate pressure at normal temperatures."

106. Revise the definition of "listed" to read:
"LISTED. As defined in Chapter 2 of the *Chicago Building Code*."
107. Delete the definition of "living space."
108. Insert the following definition:
"LOW-HEAT APPLIANCE. See "Appliance, low-heat.""
109. Delete the definition of "lubricated plug-type valve."
110. Revise the definition of "burner" by resetting "combustion" in italic type.
111. Insert the following definitions:
"MAKEUP AIR. See "Air, makeup."
MECHANICAL DRAFT VENTING SYSTEM. See "Venting system, mechanical draft."
MEDIUM-HEAT APPLIANCE. See "Appliance, medium-heat.""
112. Delete the definition of "modulating."
113. Revise the definition of "noncombustible materials" to read:
"NONCOMBUSTIBLE MATERIALS. As defined in Chapter 2 of the *Chicago Mechanical Code*."
114. Insert the following definitions:
"NATURAL DRAFT. See "Draft, natural."
NATURAL DRAFT VENTING SYSTEM. See "Venting system, natural draft.""
115. Delete the definition of "occupancy."
116. Revise the definition of "offset (vent)" to read:
"OFFSET (VENT). As defined in Chapter 2 of the *Chicago Mechanical Code*."
117. Delete the definition of "orifice."
118. Delete the definition of "outlet."
119. Revise the definition of "oxygen depletion safety shutoff system (ODS)" by replacing "main and pilot burners" with "*main burner* and *secondary burners*."
120. Delete the definition of "peer review."
121. Revise the definition of "pilot" by resetting "main burner" and "burners" in italic type.

122. Revise the definition of "piping" and its subsections to read:
"PIPING. As defined in Chapter 2 of the *Chicago Mechanical Code*."
123. Revise the definition of "piping system" to read:
"PIPING SYSTEM (for this code only). The *piping*, *valves* and fittings from the *point of delivery* to the *gas outlets of appliance shutoff valves*."
124. Delete the definition of "plastic, thermoplastic."
125. Insert the following definition:
"PLENUM. As defined in Chapter 2 of the *Chicago Mechanical Code*."
126. Revise the definition of "point of delivery" to read:
"POINT OF DELIVERY. For *fossil gas* systems, the *point of delivery* is the outlet of the *service meter assembly* or the outlet of the service regulator or *service shutoff valve* where a *meter* is not provided. Where a *system shutoff* is provided after the outlet of the *service meter assembly*, such valve shall be considered to be downstream of the *point of delivery*. For undiluted *liquefied petroleum gas* systems, the *point of delivery* shall be considered to be the outlet of the *service pressure regulator*, exclusive of line gas regulators, in the system."
127. Insert the following definition:
"POWER BURNER. See "Burner, power.""
128. Delete the definition of "press-connect joint."
129. Revise the definition of "pressure drop" by resetting "regulators" and "burners" in italic type.
130. Revise the definition of "purge" to read:
"PURGE. As defined in Chapter 2 of the *Chicago Mechanical Code*."
131. Revise the definition of "quick-disconnect device" by resetting "connector" in italic type.
132. Revise the definition of "ready access (to)" to read:
"READY ACCESS (TO). As defined in Chapter 2 of the *Chicago Mechanical Code*."
133. Delete the definition of "registered design professional."
134. Revise the definition of "regulator, service pressure" to read:
"REGULATOR, SERVICE PRESSURE. For *fossil gas* systems, a device installed by the serving gas supplier to reduce and limit the service line pressure to delivery pressure. For undiluted *liquefied petroleum gas* systems, the regulator located upstream from all line gas *pressure regulators*, where installed, and downstream from any first stage or a high *pressure regulator* in the system."

135. Revise the definition of "relief opening" to read:
"RELIEF OPENING. The opening provided in a *draft hood* to allow the ready escape to the atmosphere of the flue products from the *draft hood* in the event of no *draft*, back draft or stoppage beyond the *draft hood*, and to allow air into the *draft hood* in the event of a strong chimney updraft."
136. Revise the definition of "relief valve, pressure" by resetting "automatic valve" in italic type.
137. Delete the definition of "relief valve, temperature" and its subsections.
138. Delete the definition of "relief valve, vacuum."
139. Insert the following definition:
"REPAIR. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code.*"
140. Delete the definition of "riser, gas."
141. Revise the definition of "room heater, vented" to read:
"ROOM HEATER, VENTED. See "Vented room heater."
142. Delete the definition of "safety shutoff device."
143. Revise the definition of "service meter assembly" by resetting "regulator" in italic type.
144. Insert the following definition:
"SERVICE SHUTOFF VALVE. See "Valve, service shutoff."
145. Revise the definition of "shaft" to read:
"SHAFT. As defined in Chapter 2 of the *Chicago Building Code.*"
146. Revise the definition of "sleeping unit" to read:
"SLEEPING UNIT. As defined in Chapter 2 of the *Chicago Building Code.*"
147. Delete the definition of "specific gravity."
148. Revise the definition of "stationary fuel cell power plant" to read:
"STATIONARY FUEL CELL POWER PLANT. As defined in Chapter 2 of the *Chicago Mechanical Code.*"
149. Revise the definition of "system shutoff" by resetting "system" in italic type.
150. Delete the definition of "thermostat."
151. Delete the definition of "third-party certification agency."
152. Delete the definition of "third-party certified."

153. Delete the definition of "third-party tested."
154. Delete the definition of "toilet, gas-fired."
155. Delete the definition of "transition fittings, plastic to steel."
156. Revise the definition of "unit heater" to read:
"UNIT HEATER. As defined in Chapter 2 of the *Chicago Mechanical Code*."
157. Insert the following definition:
"UNVENTED APPLIANCE. See "Appliance, unvented.""
158. Revise the definition of "valve" and its subsections to read:
"VALVE. A device used in *pipng* to control the gas supply to any section of a system of *pipng* or to an *appliance*.
VALVE, APPLIANCE SHUTOFF. A *valve* located in the *pipng system*, used to isolate individual *appliances* for purposes such as service or replacement.
VALVE, AUTOMATIC. An automatic or semiautomatic device consisting essentially of a *valve* and operator that control the gas supply to the *burner(s)* during operation of an *appliance*. The operator shall be actuated by application of gas pressure on a flexible diaphragm, by electrical means, by mechanical means, or by other *approved* means.
VALVE, SERVICE SHUTOFF. A *valve*, installed by the serving gas supplier between the source of supply and the *point of delivery*, to shut off the entire *pipng system*."
159. Revise the definition of "vent," excluding its subsections, to read:
"VENT. As defined in Chapter 2 of the *Chicago Mechanical Code*."
160. Revise the sub-definition of "Type B vent" by resetting "draft hoods" in italic type.
161. Revise the definition of "vent connector" to read:
"VENT CONNECTOR. As defined in Chapter 2 of the *Chicago Mechanical Code*."
162. Revise the definition of "vent gases" to read:
"VENT GASES. *Combustion products* from *appliances* plus excess air plus *dilution air* in the *vent connector*, *vent* or *chimney* above the *draft hood* or *draft regulator*."
163. Insert the following definition:
"VENTED APPLIANCE. See "Appliance, vented.""
164. Revise the definition of "vented room heater" to read:
"VENTED ROOM HEATER. As defined in Chapter 2 of the *Chicago Mechanical Code*."

165. Revise the definition of "vented wall furnace" to read:
"VENTED WALL FURNACE. As defined in Chapter 2 of the *Chicago Mechanical Code*."
166. Revise the definition of "venting system" and its subsections to read:
"VENTING SYSTEM. As defined in Chapter 2 of the *Chicago Mechanical Code*.
VENTING SYSTEM, FORCED DRAFT. A portion of a *venting system* using a fan or other mechanical means to cause the removal of *flue gases* or *vent gases* under positive static vent pressure.
VENTING SYSTEM, INDUCED DRAFT. A portion of a *venting system* using a fan or other mechanical means to cause the removal of *flue gases* or *vent gases* under nonpositive static vent pressure.
VENTING SYSTEM, MECHANICAL DRAFT. A *venting system* designed to remove *flue gases* or *vent gases* by mechanical means, that consists of either an *induced draft venting system* or a *forced draft venting system*.
VENTING SYSTEM, NATURAL DRAFT. A *venting system* designed to remove *flue gases* or *vent gases* under nonpositive static vent pressure entirely by *natural draft*."
167. Delete the definition of "wall heater, unvented-type."
168. Revise the definition of "water heater" to read:
"WATER HEATER. As defined in Chapter 2 (Article 2) of the *Chicago Plumbing Code*."

CHAPTER 14G-3 GENERAL REQUIREMENTS

14G-3-301 GENERAL.

The provisions of IFGC Section 301 are not adopted. The following is adopted as Section 301:

"SECTION 301 GENERAL

301.1 Scope.

Installation of *equipment* and *appliances* regulated by this code shall comply with this chapter and applicable provisions of Chapter 3 of the *Chicago Mechanical Code*."

14G-3-302 IFGC SECTION 302.

The provisions of IFGC Section 302 are not adopted.

14G-3-303 PROHIBITED LOCATIONS.

The provisions of IFGC Section 303 are not adopted. The following is adopted as Section 303:

"SECTION 303 PROHIBITED LOCATIONS

303.1 General.

Appliances shall not be located in sleeping rooms, bathrooms, toilet rooms, storage closets or surgical rooms, or in a space that opens only into such rooms or spaces.

Exceptions:

1. *Direct-vent appliances* installed in accordance with the conditions of the listing and the manufacturer's instructions.
2. *Vented room heaters, wall furnaces, vented decorative appliances, vented gas fireplaces, vented gas fireplace heaters and decorative appliances for installation in vented fireplaces* installed in rooms that meet the required volume criteria of Section 304.5.
3. Reserved.
4. Reserved.
5. *Appliances* installed in a dedicated enclosure in which all *combustion air* is taken directly from the outdoors, in accordance with Chapter 7 of the *Chicago Mechanical Code*. Access to such enclosure shall be through a solid door, weather-stripped in accordance with the exterior door air leakage requirements of the *Chicago Energy Transformation Code* and equipped with a self-closing device.
6. A *clothes dryer* is installed in a residential bathroom or toilet room having a permanent opening with an area of not less than 100 square inches (0.06 m²) that communicates with a space outside of a sleeping room, bathroom, toilet room or storage closet.

303.2 Fireplaces and decorative appliances in Group I-2 occupancies.

In Group I-2, Condition 2 occupancies, gas *fireplace appliances* and decorative gas *appliances* shall be prohibited except where such *appliances* are direct-vent *appliances* installed in public lobby and waiting areas that are not within smoke compartments containing patient sleeping areas. In Group I-2, Condition 1 occupancies, gas *fireplace appliances* and decorative gas *appliances* shall be prohibited in patient sleeping rooms. In all Group I-2 occupancies, the *appliance* controls shall be located where they can be accessed only by facility staff. Such fireplaces shall comply with Sections 501.2 and 604.1 of this code."

14G-3-304 COMBUSTION, VENTILATION AND DILUTION AIR.

The provisions of IFGC Section 304 are adopted by reference with the following modifications:

1. Revise the first sentence of Section 304.1 to read:
"Combustion air and dilution air for appliances installed in buildings shall be provided by application of one of the methods prescribed in Sections 304.5 through 304.9."
2. Revise the last sentence of Section 304.1 to read:
"Direct-vent appliances, gas appliances of other than natural draft design, vented gas appliances not designated as Category I and appliances equipped with power burners shall be provided with combustion air and dilution air in accordance with the appliance manufacturer's instructions."
3. Revise the exception to Section 304.1 to read:
"Exception: Domestic *clothes dryers* that are provided with *makeup air* in accordance with Section 614.7."
4. Revise Section 304.2 to read:
"304.2 Appliance location.
Appliances shall be located so as not to interfere with proper circulation of combustion air, ventilation air and dilution air."
5. Revise Section 304.3 by resetting "barometric draft regulator," "draft hood," and "regulator" in italic type.
6. Revise Section 304.4 by resetting "clothes dryers" and "makeup air" in italic type and by replacing "and" with "or."
7. Revise the first sentence of Section 304.5 to read:
"The required volume of indoor air shall be determined in accordance with Section 304.5.1 or 304.5.2."
8. Revise Section 304.5.1 to read:
"304.5.1 Tabular method.
The minimum required volume shall be determined based on Table 304.5.1 using either the simplified method or assumed air infiltration rate method where the year of building construction is known. The tabular method shall not be used where the total appliance input exceeds 300,000 Btu/h (87.9 kW). Interpolation shall be allowed."
9. Add a new Table 304.5.1 as shown:

(Remainder of page intentionally blank.)

**TABLE 304.5.1—REQUIRED COMBUSTION AIR INTERIOR VOLUME
BASED ON APPLIANCE INPUT RATING**

APPLIANCE INPUT (Btu/h)	SIMPLIFIED METHOD (ft ³) ^a	ASSUMED AIR INFILTRATION RATE (AAIR) METHOD (ft ³) ^d			
		FAN-ASSISTED APPLIANCES		OTHER THAN FAN-ASSISTED APPLIANCES	
		Building built 2001-present ^b	Building built before 2001 ^c	Building built 2001-present ^b	Building built before 2001 ^c
5,000	250	375	188	525	263
10,000	500	750	375	1,050	525
15,000	750	1,125	563	1,575	788
20,000	1,000	1,500	750	2,100	1,050
25,000	1,250	1,875	938	2,625	1,313
30,000	1,500	2,250	1,125	3,150	1,575
35,000	1,750	2,625	1,313	3,675	1,838
40,000	2,000	3,000	1,500	4,200	2,100
45,000	2,250	3,375	1,688	4,725	2,363
50,000	2,500	3,750	1,875	5,250	2,625
55,000	2,750	4,125	2,063	5,775	2,888
60,000	3,000	4,500	2,250	6,300	3,150
65,000	3,250	4,875	2,438	6,825	3,413
70,000	3,500	5,250	2,625	7,350	3,675
75,000	3,750	5,625	2,813	7,875	3,938
80,000	4,000	6,000	3,000	8,400	4,200
85,000	4,250	6,375	3,188	8,925	4,463
90,000	4,500	6,750	3,375	9,450	4,725
95,000	4,750	7,125	3,563	9,975	4,988
100,000	5,000	7,500	3,750	10,500	5,250
125,000	6,250	9,375	4,688	13,125	6,563
150,000	7,500	11,250	5,625	15,750	7,875
175,000	8,750	13,125	6,563	18,375	9,188
200,000	10,000	15,000	7,500	21,000	10,500
225,000	11,250	16,875	8,438	23,625	11,813
250,000	12,500	18,750	9,375	26,250	13,125
275,000	13,750	20,625	10,313	28,875	14,438
300,000	15,000	22,500	11,250	31,500	15,750

For SI: 1 cubic foot = 0.028 m³, 1 British thermal unit per hour = 0.293 W.

a. The simplified method shall not be used where the air infiltration rate is known to be less than 0.40 air changes per hour.

b. 0.2 air changes per hour (ACH) assumed for pressure differential produced by natural draft-venting and infiltration for buildings built since Chicago adopted an energy code.

c. 0.4 air changes per hour (ACH) assumed for pressure differential produced by natural draft-venting and infiltration for buildings built before Chicago adopted an energy code.

d. If the year of construction is not known, use the simplified method.

10. Revise Section 304.6.2 by resetting "vent connectors" in italic type.
11. Delete Section 304.8.
12. Revise Section 304.9.1 by resetting "makeup air" in italic type.
13. Revise Section 304.9.2 by resetting "main burner" in italic type.
14. Revise the first sentence of Section 304.10 to read:
"The required size of openings for *combustion air*, ventilation air and *dilution air* shall be based on the net free area of each opening."

15. Revise Section 304.11 to read:

"304.11 Combustion air ducts.

Combustion air ducts shall comply with all of the following:

1. Ducts shall be constructed of galvanized steel complying with Chapter 6 of the *Chicago Mechanical Code* or of a material having equivalent corrosion resistance, strength and rigidity.
2. Ducts shall terminate in an unobstructed space allowing free movement of *combustion air* to the *appliances*.
3. Ducts shall serve a single enclosure.
4. Ducts shall not serve both upper and lower combustion air openings where both such openings are used. The separation between ducts serving upper and lower combustion air openings shall be maintained to the source of *combustion air*.
5. Ducts shall not be screened where terminating in an attic space.
6. Horizontal upper combustion air ducts shall not slope downward toward the source of *combustion air*.
7. The remaining space surrounding a chimney liner, gas vent, special gas vent or plastic *pipng* installed within a *masonry chimney*, *metal chimney* or *factory-built chimney* shall not be used to supply *combustion air*.

Exception: Direct-vent gas-fired *appliances* designed for installation in a solid fuel-burning *fireplace* where installed in accordance with the manufacturer's instructions.

8. Combustion air intake openings located on the exterior of a building shall have the lowest side of such openings located not less than 12 inches (305 mm) vertically from the adjoining finished ground level."
16. Revise Section 304.12 by resetting "combustion air" in italic type and replacing Item 1 to read:
"1. Fired appliances shall be located in a mechanical room separate or partitioned off from other areas with provisions for *combustion air* and *dilution air* from outdoors."

14G-3-305 INSTALLATION.

The provisions of IFGC Section 305 are adopted by reference with the following modifications:

1. Revise Section 305.1 to read:

"305.1 General.

Equipment and appliances shall be installed in accordance with Section 304 of the *Chicago Mechanical Code* and this section."

2. Delete Sections 305.2 through 305.8, including subsections.

3. Revise Section 305.9 to read:

"305.9 Motor-vehicle-related occupancies

Appliances installed in enclosed, basement and underground motor-vehicle-related occupancies shall be installed in accordance with NFPA 88A."

4. Delete Section 305.12.

14G-3-306 IFGC SECTION 306.

The provisions of IFGC Section 306 are not adopted.

14G-3-307 IFGC SECTION 307.

The provisions of IFGC Section 307 are not adopted.

14G-3-308 IFGC SECTION 308.

The provisions of IFGC Section 308 are not adopted.

14G-3-309 IFGC SECTION 309.

The provisions of IFGC Section 309 are not adopted.

14G-3-310 ELECTRICAL BONDING.

The provisions of IFGC Section 310 are not adopted. The following is adopted as Section 310:

**"SECTION 310
ELECTRICAL BONDING**

310.1 General.

Each above-ground portion of a gas *pipng system* that is likely to become energized shall be electrically continuous and bonded to an effective ground-fault current path. *Pipng* shall be considered to be bonded where it is connected to one or more

appliances that are connected to the equipment grounding conductor of the circuit that supplies that *appliance(s)*.”

CHAPTER 14G-4 GAS PIPING INSTALLATIONS

14G-4-401 GENERAL.

The provisions of IFGC Section 401 are adopted by reference with the following modifications:

1. Revise Section 401.1 to read:

“401.1 Scope.

Design, installation, *alteration, repair* and utilization of *pipng systems* from the *point of delivery* to the connections with *appliances* shall comply with this chapter.”

2. Revise Section 401.1.1 to read:

“401.1.1 Utility piping systems located within buildings.

Piping ahead of the *point of delivery* and located within a building shall be installed in accordance with the structural safety and fire protection provisions of the *Chicago Building Code*.”

3. Revise Section 401.3 by resetting “systems” in italic type.

4. Revise Section 401.4 to read:

“401.4 Additional appliances.

Where an additional *appliance* is to be served, the existing *pipng system* shall be checked to determine if it has adequate capacity for all *appliances* served. If inadequate, the existing *pipng system* shall be enlarged as required or a separate *pipng system* of adequate capacity shall be provided.”

5. Delete Section 401.5.

6. Revise Section 401.6 to read:

“401.6 Interconnections.

Where two or more *meters* are installed on the same premises but supply separate consumers, the *pipng systems* shall not be interconnected on or past the outlet side of the *meters*.”

7. Revise Section 401.7 to read:

“401.7 Piping meter identification.

Piping from multiple meter installations shall be marked with a permanent identification by the installer so that the *pipng system* supplied by each *meter* is readily identifiable.”

8. Revise Section 401.8 to read:

"401.8 Minimum sizes.

Pipe utilized for the installation, extension or *alteration* of any *pipng system* shall be sized to supply the full number of *gas outlets* for the intended purpose and shall be sized in accordance with Section 402."

9. Revise Section 401.9 by deleting Exceptions 3 and 4.
10. Revise Section 401.10 by deleting "tubing."

14G-4-402 PIPE SIZING.

The provisions of IFGC Section 402 are adopted by reference with the following modifications:

1. Revise Section 402.1 by resetting "systems" and "demand" in italic type.
2. Revise Section 402.2 by deleting the last sentence.
3. Revise Section 402.4 to read:

"402.4 Sizing tables and equations.

Where Tables 402.4(1) through 402.4(7) are used to size *pipng*, the pipe length shall be determined in accordance with Section 402.4.1, 402.4.2 or 402.4.3.

Where Equations 4-1 and 4-2 are used to size *pipng*, the *pipng* shall have smooth inside walls and the pipe length shall be determined in accordance with Section 402.4.1, 402.4.2 or 402.4.3."

4. Revise Table 402.4 by replacing each "natural gas" with "fossil gas."
5. Delete Tables 402.4(8) through (37).
6. Revise Section 402.4.1 by replacing "outlet" with "*gas outlet*."
7. Revise Section 402.4.2 by replacing each "outlet" with "*gas outlet*."
8. Revise Section 402.4.3 by replacing each "outlet" with "*gas outlet*."
9. Delete Section 402.5.

14G-4-403 PIPING MATERIALS.

The provisions of IFGC Section 403 are adopted by reference with the following modifications:

1. Revise Section 403.1 by deleting "or shall be *approved*."
2. Revise Section 403.2 by replacing "used again" with "reused."

3. Revise Section 403.3 and its subsections to read:

"403.3 Allowed materials.

Only materials listed in Sections 403.3.1 and 403.3.2 are allowed for use in *pipng systems*.

403.3.1 Steel.

Steel pipe shall be not lighter than Schedule 40 and shall comply with the dimensional standards of ASME B36.10M and ASTM A53/A53M.

403.3.2 Reserved."

4. Delete Section 403.4 and its subsections.
5. Revise Section 403.5 and its subsections to read:

"403.5 Plastic pipe, tubing and fittings.

Plastic pipe, tubing, and fittings shall not be used."

6. Revise Section 403.6 to read:

"403.6 Workmanship and defects.

Piping and fittings at the time of installation shall meet the following requirements:

1. *Piping* and fittings shall be clear and free from cutting burrs and visible defects in structure or threading.
2. *Piping* and fittings shall be thoroughly cleaned to remove chip, scale and debris.
3. Visible defects in *pipng* and fittings shall not be repaired.
4. *Piping* and fittings with visible defects shall be replaced."

7. Revise Section 403.9.1 to read:

"403.9.1 Pipe joints.

Pipe joints shall be threaded, flanged or welded."

8. Delete Sections 403.9.2 through 403.9.4.
9. Revise Section 403.9.5 by deleting Items 3, 4, 6, and 7 and by revising Items 2 and 8 to read:

"2. Fittings used with steel pipe shall be steel, malleable iron or cast iron."

"8. Special fittings. Fittings such as couplings, proprietary-type joints, saddle tees, gland-type compression fittings and flared, flareless and compression-type tubing fittings shall be: used within the fitting manufacturer's pressure-temperature recommendations; and used within the service conditions anticipated with respect to vibration, fatigue, thermal expansion and contraction."

10. Delete Section 403.10.
11. Revise Section 403.11 to read:
"403.11 Flanges.
Steel flanges shall be in accordance with ASME B16.5 or ASME B16.47."
12. Revise Section 403.12 by deleting the last sentence.
13. Delete Section 403.12.3.

14G-4-404 PIPING SYSTEM INSTALLATION.

The provisions of IFGC, Section 404 are adopted by reference with the following modifications:

1. Revise the first sentence of Section 404.1 to read:
"Materials used shall be installed in accordance with applicable standards."
2. Delete Section 404.2.
3. Revise Section 404.3 by replacing "townhouse unit" with "*dwelling unit or sleeping unit.*"
4. Revise Section 404.4 by resetting "Concealed" in italic type.
5. Revise Section 404.5 by resetting "concealed locations" in italic type and by deleting Item 2.
6. Delete Section 404.7 and its subsections.
7. Revise Section 404.8 by replacing "approved" with "suitable."
8. Revise Section 404.8.2 by resetting "access" in italic type.
9. Revise Section 404.10 by deleting "and metallic tubing" and by replacing "an *approved*" with "a."
10. Revise Section 404.11.2 to read:
"404.11.2 Protection methods.
Underground *pipng* shall have a factory-applied, electrically-insulating coating. Fittings and joints between sections of coated pipe shall be coated in accordance with the coating manufacturer's instructions."
11. Delete Section 404.11.4.
12. Revise Section 404.12.1 to read:
"404.12.1 Individual outdoor appliances.
Individual lines to outdoor grills and other *appliances* shall be installed not less than 8 inches (203 mm) below finished grade, provided that the location is not susceptible to physical damage."

13. Revise Section 404.14.2 by resetting "access" in italic type.
14. Revise the Exception to Section 404.15 by resetting "quick-disconnect devices" and "gas convenience outlets" in italic type.
15. Revise Section 404.16 to read:

"404.16 Location of gas outlets.

The unthreaded portion of *gas outlets* shall extend not less than 1 inch (25 mm) through finished ceilings and walls and where extending through floors or outdoor patios and slabs, shall be not less than 2 inches (51 mm) above them. The outlet fitting or *pipng* shall be securely supported. *Gas outlets* shall not be placed behind doors. *Gas outlets* shall be located in the room or space where the *appliance* is installed."

16. Delete Section 404.17 and its subsections.
17. Revise the exceptions to Section 404.19 to read:
 - "1. Gas filters.
 2. A fitting or device where the *gas piping* system has been sized to accommodate the *pressure drop* of the fitting or device."

14G-4-405 PIPING CHANGES IN DIRECTION.

The provisions of IFGC Section 405 are not adopted. The following is adopted as Section 405:

**"SECTION 405
PIPING CHANGES IN DIRECTION**

405.1 General.

Changes in direction of pipe shall be made by the use of fittings.

405.2 Reserved.

405.3 Reserved.

405.4 Elbows.

Factory-made welding elbows or transverse segments cut therefrom shall have an arc length measured along the crotch of not less than 1 inch (25 mm) in pipe sizes 2 inches (51 mm) and larger."

14G-4-406 INSPECTION, TESTING AND PURGING.

The provisions of IFGC Section 406 are adopted by reference with the following modifications:

1. Revise Section 406.1.1 by resetting "pressure tests" in italic type.

2. Revise Section 406.1.2 to read:
"406.1.2 Repairs and additions.
In the event *repairs* or *alterations* are made to the *pipng system* after the *pressure test*, the affected *pipng* shall be tested."
3. Revise Section 406.1.3 by replacing "*approved*" with "suitable."
4. Revise Section 406.4 by resetting "pressure tests" in italic type.
5. Revise Section 406.4.2 by deleting "or a system in a single-family dwelling."
6. Revise Section 406.5.1 by replacing "*approved*" with "suitable."
7. Revise Section 406.6.1 by resetting "systems" in italic type.
8. Revise Section 406.6.2 by replacing "outlets" with "*gas outlets*."
9. Revise Section 406.7.1 by deleting "or tubing."
10. Revise Table 406.7.1.1 by deleting footnote a.
11. Revise Section 406.7.2 by deleting "or tubing."
12. Revise Section 406.7.2.1 by resetting each "fuel gas," "combustion chamber" and "burner" in italic type.

14G-4-407 PIPING SUPPORT.

The provisions of IFGC Section 407 are adopted by reference without modification.

14G-4-408 DRIPS AND SLOPED PIPING.

The provisions of IFGC Section 408 are adopted by reference with the following modifications:

1. Revise Section 408.1 by resetting "dry gas" in italic type.
2. Revise Section 408.2 by resetting each "drip" and "condensate" in italic type.
3. Revise Section 408.3 to read:
"408.3 Location of drips.
Drips shall be provided with *ready access* to allow cleaning or emptying. A *drip* shall not be located where the *condensate* is subject to freezing."
4. Revise Section 408.4 by resetting "shutoff valve" and "clothes dryers" in italic type and by replacing "vented" with "*vented decorative*."

14G-4-409 SHUTOFF VALVES.

The provisions of IFGC Section 409 are adopted by reference with the following modifications:

1. Revise Section 409.1.1 by deleting "shall be of an *approved* type;"
2. Revise Section 409.1.2 by deleting "furnace."
3. Revise Section 409.3.1 to read:

"409.3.1 Multiple-tenant buildings.

In multiple-tenant buildings, shutoff valves shall be provided for each tenant. Each tenant shall have access to the shutoff valve serving that tenant's space."

4. Revise Section 409.5 by replacing "a shutoff valve" with "an *appliance shutoff valve*."
5. Revise Section 409.5.1 to read:

"409.5.1 Located within same room.

The *appliance shutoff valve* shall be located in the same room as the *appliance*. The *appliance shutoff valve* shall be within 6 feet (1829 mm) of the *appliance*, and shall be installed upstream of the union, connector or *quick disconnect device* it serves. Such *appliance shutoff valves* shall be provided with access. Shutoff valves serving movable *appliances*, such as cooking *appliances* and *clothes dryers*, shall be considered to be provided with access where installed behind such appliances. *Appliance shutoff valves* located in the firebox of a *fireplace* shall be installed in accordance with the *appliance* manufacturer's instructions."

6. Revise Section 409.5.2 by resetting each "vented" and each "decorative" in italic type.
7. Revise Section 409.5.3 by resetting "shutoff valve" in italic type.
8. Revise Section 409.6 to read:

"409.6 Shutoff valve for laboratories.

Where provided with two or more *gas outlets*, including table-, bench- and hood-mounted outlets, each laboratory space in educational, research, commercial and industrial occupancies shall be provided with a single dedicated shutoff valve through which all such *gas outlets* shall be supplied. The dedicated shutoff valve shall have *ready access*, be located within the laboratory space served, be located adjacent to the egress door from the space and shall be identified by permanent signage stating: GAS SHUTOFF."

9. Delete Section 409.7.

14G-4-410 FLOW CONTROLS.

The provisions of IFGC Section 410 are adopted by reference with the following modifications:

1. Revise Section 410.1 by replacing "*approved*" with "*listed*."

2. Revise Section 410.2 by deleting "be *approved* and shall."
3. Revise the exception to Section 410.3 by replacing "an *approved*" with "a."
4. Revise Section 410.5 to read:

"410.5 Flashback arrestor check valve.

Where *fuel gas* is used with oxygen in any hot work operation, a *listed* protective device that serves as a combination *flashback arrestor check valve* and backflow check valve shall be installed at a suitable location on both the fuel gas and oxygen supply lines. Where the pressure of the piped *fuel gas* supply is insufficient to ensure such safe operation, *equipment* shall be installed between the gas *meter* and the *appliance* that increases pressure to the level required for such safe operation."

14G-4-411 APPLIANCE AND MANUFACTURED HOME CONNECTIONS.

The provisions of IFGC Section 411 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "access," "appliance connector," "appliance shutoff valve," "demand," "gas convenience outlet," "listed," "piping system," and "quick-disconnect device."
2. Revise Section 411.1 by deleting Items 2 and 3 and by replacing "convenience outlets" with "*gas convenience outlets*" in Item 6.
3. Revise Section 411.1.2 by replacing "Connectors and tubing" with "*Appliance connectors*."
4. Revise Section 411.1.3 by replacing "*Appliance* fuel connectors" with "*Appliance connectors*."
5. Revise Section 411.1.5 to read:

"411.1.5 Connection of internal combustion engines.
Internal combustion engines shall not be rigidly connected to the gas supply *piping*."
6. Revise Section 411.2 by deleting Item 2.

14G-4-412 IFGC SECTION 412.

The provisions of IFGC Section 412 are not adopted.

14G-4-413 IFGC SECTION 413.

The provisions of IFGC Section 413 are not adopted.

14G-4-414 SUPPLEMENTAL AND STANDBY GAS SUPPLY.

The provisions of IFGC Section 414 are adopted by reference without modification.

14G-4-415 PIPING SUPPORT INTERVALS.

The provisions of IFGC Section 415 are adopted by reference with the following modifications:

1. Revise Section 415.1 by deleting the second sentence.
2. Revise Table 415.1 by deleting the third and fourth columns.

14G-4-416 OVERPRESSURE PROTECTION DEVICES.

The provisions of IFGC Section 416 are adopted by reference with the following modification:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in italic type: "pressure relief valve."

**CHAPTER 14G-5
CHIMNEYS AND VENTS**

14G-5-501 GENERAL.

The provisions of IFGC Section 501 are adopted by reference with the following modifications:

1. Revise Section 501.1 to read:

 "501.1 Scope.
 Design, installation, *alteration, repair* and utilization of *chimneys* and *vents* and their connection to *fuel gas-fired appliances* shall comply with this chapter and Chapter 8 of the *Chicago Mechanical Code*."

2. Revise Section 501.2 by replacing "the products of combustion" with "*all combustion products*."

3. Delete Section 501.3.

4. Revise Section 501.4 by resetting "Chimneys" and "vents" in italic type.

5. Delete Sections 501.5 through 501.7 and their subsections.

6. Revise Item 4 in Section 501.8 to read:

 "4. Domestic *clothes dryers* exhausted in accordance with the requirements of Section 614."

7. Delete Item 6 in Section 501.8.

8. Revise Item 7 in Section 501.8 by resetting "counter" in italic type.
9. Revise the second paragraph of Section 501.8 to read:

"Where the *appliances* listed in Items 5 through 11 are installed so that the aggregate input rating exceeds 20 British thermal units (Btu) per hour per cubic foot (207 watts per m³) of volume of the room or space in which such *appliances* are installed, one or more shall be provided with *venting systems* or other means for conveying the *vent gases* to the outdoor atmosphere so that the aggregate input rating of the remaining *unvented appliances* does not exceed 20 Btu per hour per cubic foot (207 watts per m³)."

10. Delete Sections 501.9 and Section 501.10.
11. Revise Section 501.11 by resetting "*Masonry chimneys*" in italic type.
12. Delete Section 501.12.
13. Delete Section 501.15 and its subsections.

14G-5-502 VENTS.

The provisions of IFGC Section 502 are adopted by reference with the following modification:

1. Delete Sections 502.2 through 502.7 and their subsections.

14G-5-503 VENTING OF APPLIANCES.

The provisions of IFGC Section 503 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "baffle," "barometric draft regulator," "burner," "condensate," "conversion burner," "damper," "draft hood," "draft regulator," "factory-built chimney," "flue gases," "incinerator," "low-heat appliance," "main burner," "masonry chimney," "mechanical draft system," "medium-heat appliance," "metal chimney," "natural draft venting system," "occupiable space," "relief opening," "vent connector," and "venting system."
2. Revise Section 503.3.3 to read:

"503.3.3 Mechanical draft venting systems.

Mechanical draft venting systems shall comply with the following:

1. *Mechanical draft venting systems* shall be *listed* in accordance with UL 378 and shall be installed in accordance with the manufacturer's instructions for both the *appliance* and the *mechanical draft venting system*.
2. *Appliances* requiring venting shall be allowed to be vented by means of *mechanical draft venting systems*.

3. *Forced draft venting systems* and all portions of *induced draft venting systems* under positive pressure during operation shall be designed and installed so as to prevent leakage of flue or vent gases into a building.
 4. *Vent connectors* serving *appliances* vented by *natural draft* shall not be connected to any portion of *mechanical draft venting systems* operating under positive pressure.
 5. Where a *mechanical draft venting system* is employed, provisions shall be made to prevent the flow of gas to the *main burners* when the draft system is not performing so as to satisfy the operating requirements of the *appliance* for safe performance."
3. Revise Section 503.3.5 to read:

"503.3.5 Air ducts and plenums.
Venting systems shall not extend into or pass through any fabricated air duct or *plenum*."
 4. Delete Section 503.3.6.
 5. Revise Table 503.4 by deleting the row for "Gas-fired toilets."
 6. Revise Section 503.5 by replacing "Masonry, metal and factory-built chimneys" with "*Masonry chimneys, metal chimneys and factory-built chimneys*."
 7. Revise Section 503.5.3 by replacing "an *approved*" with "a."
 8. Revise Section 503.5.5 by replacing "mechanical draft" with "*induced draft*."
 9. Revise Section 503.5.6 by replacing "vent connector to a chimney" with "*vent connector to a chimney*."
 10. Revise Section 503.5.7.2 by replacing "safety shutoff devices" with "*flame safeguards*."
 11. Revise Section 503.5.10 by replacing "masonry, metal or factory-built chimney" with "*masonry chimney, metal chimney or factory-built chimney*."
 12. Revise Section 503.6 to read:

"503.6 Vents.
Vents shall comply with Sections 503.6.1 through 503.6.14."
 13. Revise Section 503.6.4 by resetting each "appliances" in roman type.
 14. Revise Section 503.6.10.4 to read:

"503.6.10.4 Induced draft.
Chimney venting systems using *induced draft* shall be sized in accordance with engineering methods."
 15. Revise Section 503.6.11.1 by replacing "combustion, ventilation and dilution air" with "*combustion air, ventilation air and dilution air*."

16. Revise Section 503.6.13 to read:

"503.6.13 Marking.

Gas vents shall be permanently identified by a label attached to the wall or ceiling at a point where the *vent connector* enters the gas vent. The label shall read: THIS GAS VENT IS FOR APPLIANCES THAT BURN GAS. DO NOT CONNECT TO SOLID OR LIQUID FUEL-BURNING APPLIANCES OR INCINERATORS."

17. Revise Section 503.7.2 to read:

"503.7.2 Outdoor use prohibited.

Uninsulated single-wall metal pipe shall not be used outdoors for venting *appliances*."

18. Revise Section 503.7.3 by replacing "*approved*" with "*suitable*."
19. Revise Section 503.10.3.1 by replacing "fan-assisted combustion system" with "*fan-assisted combustion*."
20. Revise Table 503.10.5 by deleting the row for "Listed gas-fired toilets."
21. Revise Section 503.10.6 by deleting Item 3.
22. Revise Section 503.10.11 by replacing "masonry or metal chimney" with "*masonry chimney or metal chimney*."
23. Revise the exception to Section 503.12.1 by replacing "blast, power or pressure burners" with "*power burners*."
24. Revise Section 503.12.2.1 by replacing each "of a *listed or approved* type" with "*listed*."
25. Revise Section 503.12.4 by replacing "barometric-draft regulator" with "*barometric draft regulator*."
26. Revise Section 503.15 by deleting each "*Approved*."
27. Revise Section 503.16 by replacing "*approved*" with "*suitable*."

14G-5-504 SIZING OF CATEGORY I APPLIANCE VENTING SYSTEMS.

The provisions of IFGC Section 504 are adopted by reference with the following modifications:

1. Revise Section 504.1 by replacing each "fan-assisted *appliance*" with "*fan-assisted combustion appliance*" and "FAN-ASSISTED COMBUSTION SYSTEM" with "FAN-ASSISTED COMBUSTION APPLIANCE."
2. Revise Table 504.2(6) by deleting all rows except those for "-10 to 4°F."
3. Revise Section 504.2.1 by resetting "venting system" in italic type and by replacing "fan-assisted *appliance*" with "*fan-assisted combustion appliance*."
4. Revise Section 504.2.2 by resetting "outlet" in roman type and by replacing each "fan-assisted *appliance*" with "*fan-assisted combustion appliance*."

5. Revise Section 504.2.3 by resetting "venting system" in italic type.
6. Delete Section 504.2.5.
7. Revise Section 504.2.7 by resetting "masonry chimneys" in italic type.
8. Revise Section 504.2.8 by resetting "vent connector" in italic type and by replacing "approved" with "accepted."
9. Revise Section 504.2.9 by resetting "venting system" and each "vent connector" in italic type.
10. Revise Section 504.2.11 by resetting "Vent connectors" in italic type.
11. Revise Section 504.2.12 by resetting "vent" and "vent connector" in italic type.
12. Revise Section 504.2.13 by resetting "masonry chimneys" in italic type and by replacing "fan-assisted *appliances*" with "fan-assisted combustion appliances."
13. Delete Tables 504.3(6a) and (6b).
14. Revise Table 504.3(7b) by deleting all rows except those for "-10 to 4°F."
15. Revise Section 504.3.1 by resetting "venting system" and each "vent connector" in italic type and by replacing "fan-assisted *appliances*" with "fan-assisted combustion appliances."
16. Revise Section 504.3.2 by resetting "vent connector" in italic type.
17. Revise Section 504.3.3 by resetting "vent connector" in italic type and by replacing "fan-assisted *appliances*" with "fan-assisted combustion appliances."
18. Revise Section 504.3.4 by resetting "vent connectors" in italic type.
19. Revise Section 504.3.9 by resetting "vent connectors" in italic type.
20. Delete Section 504.3.10.
21. Revise Section 504.3.11 by resetting "connector" and "flue collar" in italic type.
22. Revise Section 504.3.17 by replacing "approved" with "accepted."
23. Revise Section 504.3.19 by resetting "masonry chimneys" in italic type.
24. Revise Section 504.3.20 by deleting all references to Tables 504.3(6a) and (6b) and by resetting "venting system" and "vent connectors" in italic type.
25. Revise Section 504.3.21 by resetting each "vent connectors" in italic type and by replacing each "fan-assisted *appliances*" with "fan-assisted combustion appliances."
26. Revise Section 504.3.22 by replacing "permit" with "allow" and by resetting "vent connectors" and "venting system" in italic type.

27. Revise Section 504.3.23 by resetting "masonry chimneys" in italic type and by replacing "fan-assisted *appliances*" with "fan-assisted *combustion appliances*."
28. Revise Section 504.3.24 by replacing "permits" with "allows."

14G-5-505 DIRECT-VENT, INTEGRAL VENT, MECHANICAL VENT AND VENTILATION/EXHAUST HOOD VENTING.

The provisions of IFGC Section 505 are not adopted. The following is adopted as Section 505:

**"SECTION 505
DIRECT-VENT, INTEGRAL VENT, MECHANICAL VENT AND
VENTILATION/EXHAUST HOOD VENTING**

505.1 General.

The installation of *direct-vent appliances* and integral vent appliances shall be in accordance with Section 503. *Mechanical draft venting systems* and exhaust hood venting systems shall be designed and installed in accordance with Section 503.

505.1.1 Commercial cooking appliances vented by exhaust hoods.

Hoods over commercial cooking appliances shall operate in accordance with Section 507.1.1 of the *Chicago Mechanical Code*. The method of interlock between the exhaust hood system and the *appliances* equipped with standing pilot burner ignition systems shall not cause such pilots to be extinguished. Where a solenoid valve is installed in the gas *pipng* as part of an interlock system, gas *pipng* shall not be installed to bypass such valve."

14G-5-506 IFGC SECTION 506.

The provisions of IFGC Section 506 are not adopted.

**CHAPTER 14G-6
SPECIFIC APPLIANCES**

14G-6-601 GENERAL.

The provisions of IFGC Section 601 are not adopted. The following is adopted as Section 601:

**"SECTION 601
GENERAL**

601.1 Scope.

Design, installation, *alteration, repair* and utilization of the *appliances, systems* and *equipment* described in this chapter shall comply with this chapter and Chapter 9 of the *Chicago Mechanical Code*. *Water heaters* shall comply with Section 624 and Chapter 10 of the *Chicago Mechanical Code*."

14G-6-602 DECORATIVE APPLIANCES FOR INSTALLATION IN FIREPLACES.

The provisions of IFGC Section 602 are not adopted. The following is adopted as Section 602:

**“SECTION 602
DECORATIVE APPLIANCES FOR INSTALLATION IN FIREPLACES**

602.1 General.

Decorative appliances for installation in fireplaces designed for burning solid fuel shall be *listed* in accordance with ANSI Z21.60/CSA 2.26 and shall be installed in accordance with the manufacturer’s instructions. Manually lighted fossil gas decorative appliances shall be *listed* in accordance with ANSI Z21.84.

602.2 Flame safeguard device.

Decorative appliances for installation in fireplaces designed for burning solid fuel, with the exception of those *listed* in accordance with ANSI Z21.84, shall utilize a direct ignition device, an ignitor or a pilot flame to ignite the fuel at the *main burner*, and shall be equipped with a *flame safeguard*.”

14G-6-603 LOG LIGHTERS.

The provisions of IFGC Section 603 are adopted by reference with the following modification:

1. Revise Section 603.1 by resetting “Log lighters” in italic type.

14G-6-604 VENTED GAS FIREPLACES (DECORATIVE APPLIANCES).

The provisions of IFGC Section 604 are adopted by reference with the following modification:

1. Delete Section 604.2.

14G-6-605 VENTED GAS FIREPLACE HEATERS.

The provisions of IFGC Section 605 are adopted by reference with the following modification:

1. Revise Section 605.1 by resetting “fireplace” in roman type.

14G-6-606 IFGC SECTION 606.

The provisions of IFGC Section 606 are not adopted.

14G-6-607 IFGC SECTION 607.

The provisions of IFGC Section 607 are not adopted.

14G-6-608 VENTED WALL FURNACES.

The provisions of IFGC Section 608 are adopted by reference with the following modifications:

1. Revise Section 608.1 by resetting "Vented wall furnaces" in italic type.
2. Revise Section 608.2 by resetting "Vented wall furnaces" in italic type.
3. Delete Sections 608.3 through 608.6.

14G-6-609 FLOOR FURNACES.

The provisions of IFGC Section 609 are adopted by reference with the following modifications:

1. Revise Section 609.1 by resetting "Floor furnaces" in italic type.
2. Delete Sections 609.2 through 609.6.

14G-6-610 DUCT FURNACES.

The provisions of IFGC Section 610 are adopted by reference with the following modifications:

1. Revise Section 610.1 by resetting "Duct furnaces" in italic type.
2. Revise Section 610.2 by resetting "duct furnaces" and "furnace" in italic type and by resetting "access" in roman type.
3. Revise Section 610.3 by resetting each "draft hood" and "duct furnaces" in italic type and by resetting "combustion air inlets" in roman type.
4. Revise Section 610.4 by resetting each "duct furnace" and "return air" in italic type and by deleting "(s)".

14G-6-611 NONRECIRCULATING DIRECT-FIRED INDUSTRIAL AIR HEATERS.

The provisions of IFGC Section 611 are adopted by reference with the following modifications:

1. Revise Section 611.2 by deleting the second sentence.
2. Revise Section 611.5 by resetting "main burners" in italic type.
3. Revise Section 611.7 by resetting each "relief openings" and "main burner" in italic type and by replacing "permit" with "allow" and "approved" with "accepted."
4. Revise Section 611.8 by resetting "burners" in italic type.

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14G-6-612 RECIRCULATING DIRECT-FIRED INDUSTRIAL AIR HEATERS.

The provisions of IFGC Section 612 are adopted by reference with the following modifications:

1. Delete Section 612.3.
2. Revise Section 612.5 by resetting each "main burner" in italic type.
3. Revise Section 612.7 by resetting each "relief openings" and "main burner" in italic type and by replacing "permit" with "allow" and "approved" with "accepted."

14G-6-613 CLOTHES DRYERS.

The provisions of IFGC Section 613 are adopted by reference with the following modification:

1. Revise Section 613.1 by resetting "clothes dryers" in italic type.

14G-6-614 CLOTHES DRYER EXHAUST.

The provisions of IFGC Section 614 are not adopted. The following is adopted as Section 614:

**"SECTION 614
CLOTHES DRYER EXHAUST**

614.1 Installation.

Clothes dryers shall be exhausted in accordance with the manufacturer's instructions and Chapter 5 of the Chicago Mechanical Code."

14G-6-615 SAUNA HEATERS.

The provisions of IFGC Section 615 are adopted by reference with the following modifications:

1. Delete Sections 615.1 through 615.3 and their subsections.
2. Revise Section 615.4 by resetting each "combustion air intake," "combustion air inlet," and "draft hood inlet" in roman type.
3. Revise Section 615.5 by resetting "combustion air inlet" in roman type.
4. Delete Sections 615.6 and 615.7 and their subsections.

14G-6-616 ENGINE AND GAS TURBINE-POWERED EQUIPMENT.

The provisions of IFGC Section 616 are adopted by reference with the following modification:

1. Delete Section 616.1.

14G-6-617 POOL AND SPA HEATERS.

The provisions of IFGC Section 617 are adopted by reference without modification.

14G-6-618 FORCED-AIR WARM-AIR FURNACES.

The provisions of IFGC Section 618 are adopted by reference with the following modification:

1. Delete Sections 618.2 through 618.6.

14G-6-619 IFGC SECTION 619.

The provisions of IFGC Section 619 are not adopted.

14G-6-620 UNIT HEATERS.

The provisions of IFGC Section 620 are adopted by reference with the following modification:

1. Delete Sections 620.2 through 620.5.

14G-6-621 UNVENTED ROOM HEATERS.

The provisions of IFGC Section 621 are adopted by reference with the following modifications:

1. Revise Section 621.1 by resetting "Unvented room heaters" in italic type and by deleting the second sentence.
2. Revise Section 621.2 by resetting "unvented room heaters" in italic type and by replacing "dwelling unit" with "dwelling unit or sleeping unit."
3. Revise Section 621.3 by resetting "Unvented room heaters" in italic type.
4. Revise Section 621.4 by resetting each "unvented room heaters" in italic type and by resetting "occupancies" in roman type.
5. Revise Section 621.5 by resetting "unvented" in italic type.
6. Revise Section 621.6 to read:

"621.6 Oxygen depletion safety shutoff system.

Unvented room heaters shall be equipped with an *oxygen depletion safety shutoff system*. The system shall shut off the gas supply to the *main burner* and pilot burners when the oxygen in the surrounding atmosphere is depleted to the percent concentration specified by the manufacturer, but not lower than 18 percent. The system shall not incorporate field adjustment means capable of changing the set point at which the system acts to shut off the gas supply to the room heater."

7. Revise Section 621.7 and its subsection to read:

“621.7 Unvented room heaters.

An *unvented room heater* shall not be installed in a *factory-built fireplace* unless the *fireplace system* has been specifically tested, *listed* and *labeled* for such use in accordance with UL 127.

621.7.1 Ventless firebox enclosures.

Ventless firebox enclosures used with *unvented room heaters* shall be *listed* as complying with ANSI Z21.91.”

14G-6-622 VENTED ROOM HEATERS.

The provisions of IFGC Section 622 are adopted by reference with the following modification:

1. Revise Section 622.1 by resetting “Vented room heaters” in italic type.

14G-6-623 COOKING APPLIANCES.

The provisions of IFGC Section 623 are adopted by reference with the following modifications:

1. Revise Section 623.1 to read:

“623.1 General.

Cooking *appliances* that are designed for permanent installation, including ranges, ovens, stoves, *broilers*, grills, fryers, griddles, hot plates and barbecues, shall be *listed* in accordance with ANSI Z21.1, ANSI Z21.58/CSA 1.6 or ANSI Z83.11/CSA 1.8 and shall be installed in accordance with the manufacturer’s instructions.”

2. Delete Sections 623.2 and 623.3.
3. Revise Section 623.5 and its subsection by resetting each “broiler” in italic type.

14G-6-624 WATER HEATERS.

The provisions of IFGC Section 624 are not adopted. The following is adopted as Section 624:

**“SECTION 624
WATER HEATERS**

624.1 General.

Water heaters shall be *listed* in accordance with ANSI Z21.10.1/CSA 4.1 or ANSI Z21.10.3/CSA 4.3 and shall be installed in accordance with the manufacturer’s instructions and the *Chicago Plumbing Code*.”

14G-6-625 IFGC SECTION 625.

The provisions of IFGC Section 625 are not adopted.

14G-6-626 IFGC SECTION 626.

The provisions of IFGC Section 626 are not adopted.

14G-6-627 AIR-CONDITIONING APPLIANCES.

The provisions of IFGC Section 627 are adopted by reference with the following modifications:

1. Revise Section 627.3 to read:

"627.3 Connection of internal combustion engines.

To protect against the effects of normal vibration in service, internal combustion engines shall not be rigidly connected to the gas supply *pip*ing."

2. Revise Section 627.4 to read:

"627.4 Clearances for indoor installation.

Air-conditioning *appliances* shall be installed with clearances not less than those specified in Sections 304 and 308 of the *Chicago Mechanical Code*."

3. Delete Section 627.5.

4. Revise Section 627.6 by replacing "an *approved*" with "a suitable."

5. Delete Section 627.7.

6. Revise Section 627.8 by replacing "central furnaces" with "*central-heating furnaces*" and by resetting each "condensate" in italic type.

7. Delete Section 627.9.

8. Revise Section 627.10 to read:

"627.10 Switches in electrical supply line.

Means for interrupting the electrical supply to the air-conditioning *appliance* and to its associated cooling tower (if supplied and installed in a location remote from the *appliance*) shall be provided within sight of and not over 50 feet (15 240 mm) from the *appliance* and cooling tower."

14G-6-628 ILLUMINATING APPLIANCES.

The provisions of IFGC Section 628 are adopted by reference with the following modification:

1. Add a new Section 628.1.1 to read:

"628.1.1 Prohibition.

Fuel gas-fired illuminating appliances shall not be installed where prohibited by the *Chicago Energy Transformation Code*."

14G-6-629 IFGC SECTION 629.

The provisions of IFGC Section 629 are not adopted.

14G-6-630 INFRARED RADIANT HEATERS.

The provisions of IFGC Section 630 are adopted by reference with the following modifications:

1. Revise Section 630.1 by resetting "Infrared radiant heaters" in italic type.
2. Revise Section 630.2 by resetting "Infrared radiant heaters" in italic type.

14G-6-631 BOILERS.

The provisions of IFGC Section 631 are not adopted. The following is adopted as Section 631:

**"SECTION 631
BOILERS**

631.1 Standards.

Boilers shall be *listed* in accordance with the requirements of ANSI Z21.13/CSA 4.9 or UL 795. If applicable, the boiler shall be designed and constructed in accordance with the requirements of ASME CSD-1 and as applicable, the ASME *Boiler and Pressure Vessel Code*, Sections I, II, IV, V and IX, NFPA 85, and Chapter 10 of the *Chicago Mechanical Code*."

14G-6-632 EQUIPMENT INSTALLED IN EXISTING UNLISTED BOILERS.

The provisions of IFGC Section 632 are adopted by reference with the following modification:

1. Revise Section 632.1 by resetting "unlisted boilers" in italic type.

14G-6-633 IFGC SECTION 633.

The provisions of IFGC Section 633 are not adopted.

14G-6-634 IFGC SECTION 634.

The provisions of IFGC Section 634 are not adopted.

14G-6-635 OUTDOOR DECORATIVE APPLIANCES.

The provisions of IFGC Section 635 are adopted by reference with the following modifications:

1. Revise Section 635.1 by resetting "appliances" in roman type.

2. Add a new Section 635.1.1 to read:

"635.1.1 Prohibition.

Fuel gas-fired outdoor decorative appliances shall not be installed where prohibited by the Chicago Energy Transformation Code."

CHAPTER 14G-7 GASEOUS HYDROGEN SYSTEMS

14G-7-701 GENERAL.

The provisions of IFGC Section 701 are adopted by reference with the following modifications:

1. Revise Section 701.1 by deleting "Chapters 53 and 58 of" and "with Chapter 50 of."
2. Delete Section 701.2.

14G-7-702 IFGC SECTION 702.

The provisions of IFGC Section 702 are not adopted.

14G-7-703 GENERAL REQUIREMENTS.

The provisions of IFGC Section 703 are adopted by reference with the following modifications:

1. Revise Section 703.1 to read:

"703.1 Hydrogen-generating and refueling operations.

Hydrogen-generating appliances and hydrogen-refueling appliances shall be installed and located in accordance with their listing and the manufacturer's instructions."

2. Revise Section 703.2 by deleting "Chapters 53 and 58 of."
3. Delete Sections 703.2.1 and 703.2.2.
4. Revise Section 703.3.8 by deleting "Section 2309 of."
5. Revise Section 703.4 to read:

"703.4 Venting.

Relief device vents shall be terminated in accordance with the Chicago Fire Prevention Code as determined by the fire code official."

(Remainder of page intentionally blank.)

6. Revise Section 703.5 to read:

"703.5 Security.

Compressed gas containers, cylinders, tanks and systems shall be secured against accidental dislodgement in accordance with the *Chicago Fire Prevention Code* as determined by the *fire code official*."

14G-7-704 PIPING, USE AND HANDLING.

The provisions of IFGC Section 704 are adopted by reference with the following modifications:

1. Revise Section 704.1 by deleting "or *approved*."
2. Revise Section 704.1.2 by deleting "tubing,".
3. Revise Section 704.1.2.1 by replacing "*approved*" with "accepted."
4. Revise Section 704.1.2.3 by deleting "or *approved*."
5. Revise Section 704.1.2.3.3 by replacing "*approved*" with "accepted."
6. Revise Section 704.1.2.4.2 by resetting "bonding jumper" in italic type.
7. Revise Section 704.1.2.5 by deleting "or *approved*."
8. Revise Section 704.3 to read:

"704.3 Material-specific regulations.

In addition to the requirements of this section, indoor and outdoor use of hydrogen compressed gas shall comply with the *Chicago Fire Prevention Code* as determined by the *fire code official*."

9. Revise Section 704.4 to read:

"704.4 Handling.

The handling of compressed gas containers, cylinders and tanks shall comply with the *Chicago Fire Prevention Code* as determined by the *fire code official*."

14G-7-705 TESTING OF HYDROGEN PIPING SYSTEMS.

The provisions of Section IFGC 705 are adopted by reference with the following modifications:

1. Revise Section 705.2 by resetting "pressure test" in italic type and by replacing "*approved*" with "accepted."
2. Revise the exception to Section 705.3.6 by replacing "*approved*" with "accepted."
3. Revise Section 705.3.7.2 by replacing "*outlet(s)*" with "*gas outlets*."
4. Revise Section 705.4 by replacing "*approved*" with "accepted."

14G-7-706 LOCATION OF GASEOUS HYDROGEN SYSTEMS.

The provisions of Section IFGC 706 are adopted by reference with the following modifications:

1. Revise the exception to Section 706.1 to read:

“Exception: *Stationary fuel cell power plants* located and installed in accordance with the *Chicago Mechanical Code*.”

2. Revise Section 706.3 to read:

“706.3 Outdoor gaseous hydrogen systems.

Gaseous hydrogen systems shall be located outdoors in accordance the *Chicago Fire Prevention Code* and as determined by the *fire code official*.”

14G-7-707 IFGC SECTION 707.

The provisions of Section IFGC 707 are not adopted.

14G-7-708 DESIGN OF LIQUIFIED HYDROGEN SYSTEMS ASSOCIATED WITH HYDROGEN VAPORIZATION OPERATIONS.

The provisions of Section IFGC 708 are adopted by reference with the following modification:

1. Revise Section 708.1 by deleting “Chapter 55 of.”

**CHAPTER 14G-8
REFERENCED STANDARDS**

14G-8-800 CHAPTER 8.

The provisions of IFGC Chapter 8 are adopted by reference with the following modifications:

1. Delete the cross-reference to provisions of the IFGC following each reference.
2. Delete the entire “ICC” section.
3. Delete the following under “NFPA”:
“70—23: National Electrical Code”
4. Delete each standard which is not referenced in any provision adopted in Chapters 14G-1 through 14G-7.

**CHAPTER 14G-9
APPENDICES**

14G-9-900 APPENDICES C AND D NOT ADOPTED.

The provisions of IFGC Appendices C and D are not adopted.

14G-9-901 APPENDIX A—GAS PIPING CAPACITIES AND SIZING.

The provisions of IFGC Appendix A are adopted by reference without modification as an informative resource.

**14G-9-902 APPENDIX B—SIZING OF VENTING SYSTEMS SERVING APPLIANCES
EQUIPPED WITH DRAFT HOODS, CATEGORY I APPLIANCES AND
APPLIANCES LISTED FOR USE WITH TYPE B VENTS.**

The provisions of IFGC Appendix B are adopted by reference without modification as an informative resource.

SECTION 3. The Municipal Code of Chicago is hereby amended by repealing Chapters 18-28 and 18-36 in their entirety.

(Remainder of page intentionally blank.)

ARTICLE II. ENERGY TRANSFORMATION CODE

SECTION 1. The Municipal Code of Chicago is hereby amended by repealing Title 14N (2022 Chicago Energy Transformation Code) in its entirety and replacing it as follows:

TITLE 14N 2026 ENERGY TRANSFORMATION CODE

PART I COMMERCIAL PROVISIONS

CHAPTER 14N-C1 SCOPE AND PURPOSE

14N-C1-C001 ADOPTION OF THE INTERNATIONAL ENERGY CONSERVATION CODE— COMMERCIAL PROVISIONS BY REFERENCE.

The commercial provisions of the *International Energy Conservation Code*, 2024 edition, first printing, and any erratum thereto identified by the publisher (hereinafter referred to as "IECC-CE"), excluding the appendices, are adopted by reference and shall be considered part of the requirements of this title except as modified by the specific provisions of this title.

14N-C1-C002 CITATIONS.

Provisions of IECC-CE which are incorporated into this title by reference may be cited as follows:

14N-C[IECC-CE chapter number]-[IECC-CE section number].

14N-C1-C002 GLOBAL MODIFICATIONS.

The following modifications shall apply to each provision of IECC-CE incorporated into this title:

1. Replace each occurrence of "*International Building Code*" with "*Chicago Building Code*."
2. Replace each occurrence of "NFPA 70" with "the *Chicago Electrical Code*."
3. Replace each occurrence of "*International Mechanical Code*" with "*Chicago Mechanical Code*."
4. Replace each occurrence of "*code official*" or "code official" with "*building official*."
5. Replace each occurrence of "permitted" with "allowed."

14N-C1-C100 CHAPTER C1.

The provisions of IECC-CE Chapter 1 are not adopted. The following is adopted as Chapter C1 entitled "Scope and Purpose":

"SECTION C101 GENERAL

101.1 Title.

This Part I of Title 14N of the Municipal Code of Chicago shall be known as the *Chicago Energy Transformation Code—Commercial Provisions*, hereinafter referred to as "this code."

101.2 Scope.

This code applies to *commercial buildings*, the *building site* and associated systems and equipment.

Exception: *Temporary* buildings other than conditioned construction trailers.

C101.3 Purpose.

The purpose of this code is to regulate the design, construction and rehabilitation of *commercial buildings* for the effective use and conservation of energy over the useful life of each *building* and for the reduction of carbon emissions caused by use and occupancy of *buildings* built or rehabilitated under this code. This code is intended to provide flexibility to allow the use of innovative and cost-effective approaches and techniques to achieve these objectives. This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

C101.4 Compliance.

Commercial buildings shall meet the requirements of this code. Residential buildings shall meet the requirements of the *Chicago Energy Transformation Code—Residential Provisions*.

C101.4.1 Mixed commercial and residential buildings.

Where a *building* includes both *commercial building* and *residential building* portions, each portion shall be separately considered and meet applicable requirements of this code and the *Chicago Energy Transformation Code – Residential Provisions*.

C101.4.2 Evidence of compliance.

The *building official* may designate specific computer software, worksheets, forms, compliance manuals and other similar materials as providing evidence of compliance with the requirements of this code.

SECTION C102 CONSTRUCTION DOCUMENTS

C102.1 General.

Construction documents shall comply with the *Chicago Construction Codes Administrative Provisions*, including specifically Section 14A-4-411.3.13."

CHAPTER 14N-C2 DEFINITIONS

14N-C2-C201 GENERAL.

The provisions of IECC-CE Section C201 are not adopted. The following is adopted as Section C201:

"SECTION C201 GENERAL

C201.1 Definitions.

The definitions in Section C202 shall apply to italicized words throughout this code, except where specifically limited to a particular chapter or section. Unless the context requires otherwise, the definitions in Section C202 shall also apply to non-italicized words throughout this code.

C201.2 Interchangeability.

Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural includes the singular.

C201.3 Words defined in other codes.

Where non-italicized words are not defined in this code and are defined in the *Chicago Construction Codes Administrative Provisions, Chicago Building Code, Chicago Conveyance Device Code, Chicago Electrical Code, Chicago Fire Prevention Code, Chicago Fuel Gas Code, Chicago Mechanical Code, Chicago Energy Transformation Code—Residential Provisions, Chicago Plumbing Code, Chicago Building Rehabilitation Code, or Chicago Minimum Requirements for Existing Buildings*, such words shall have the meanings ascribed to them in those codes unless the context requires otherwise.

C201.4 Words not defined.

Where italicized words are not defined in Section C202 or non-italicized words are not defined in Section C202 or any of the codes referenced in Section C201.3, such words shall have the meaning given in the latest edition of Merriam Webster's Collegiate Dictionary as the context implies."

14N-C2-C202 DEFINITIONS.

The provisions of IECC-CE Section C202 are adopted by reference with the following modifications:

1. Revise the title of Section C202 to read: "Definitions."
2. Revise the definition of "access (to)" to read:

"ACCESS (TO). As defined in Chapter 2 of the *Chicago Mechanical Code*."

3. Revise the definition of "addition" to read:
"ADDITION. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code*."
4. Revise the definition of "air curtain unit" by resetting "building entrance" and "conditioned spaces" in italic type.
5. Revise the definition of "alteration" to read:
"ALTERATION. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code*."
6. Revise the definition of "approved" to read:
"APPROVED. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
7. Revise the definition of "approved agency" to read:
"APPROVED AGENCY. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
8. Delete the definition of "approved source."
9. Revise the definition of "biomass waste" by resetting "biogases" in italic type.
10. Insert the following definition:
"BOILER. As defined in Chapter 2 of the *Chicago Mechanical Code*."
11. Revise the definition of "boiler, modulating" by resetting "boiler" in italic type.
12. Revise the definition of "boiler system" by resetting "boiler" and "boilers" in italic type.
13. Revise the definition of "building" to read:
"BUILDING. As defined in Chapter 2 of the *Chicago Building Code*."
14. Delete the definition of "building commissioning."
15. Insert the following definitions:
"BUILDING HEIGHT. As defined in Chapter 2 of the *Chicago Building Code*.
BUILDING OFFICIAL. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
16. Revise the definition of "building thermal envelope" to read:
"BUILDING THERMAL ENVELOPE. The *exterior walls*, floors, ceilings, roofs, *fenestration* and any other building element assemblies that enclose *conditioned space* or provide a boundary between *conditioned space* and exempt or unconditioned space."

17. Revise the definition of “change of occupancy” to read:

“CHANGE OF OCCUPANCY. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code.*”

18. Insert the following definitions:

“CHANGE OF USE. A change in the use of a building or a portion of a building for which there is a change in requirements under this code.

CHICAGO BUILDING CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*

CHICAGO BUILDING REHABILITATION CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*

CHICAGO CONSTRUCTION CODES. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*

CHICAGO CONSTRUCTION CODES ADMINISTRATIVE PROVISIONS. Title 14A of the Municipal Code of Chicago.

CHICAGO CONVEYANCE DEVICE CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*

CHICAGO ELECTRICAL CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*

CHICAGO ENERGY TRANSFORMATION CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*

Chicago Energy Transformation Code – Commercial Provisions. This code.

Chicago Energy Transformation Code – Residential Provisions. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*

CHICAGO FIRE PREVENTION CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*

CHICAGO FUEL GAS CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*

CHICAGO MECHANICAL CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*

CHICAGO MINIMUM REQUIREMENTS FOR EXISTING BUILDINGS. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*

CHICAGO PLUMBING CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*

CHICAGO ZONING ORDINANCE. Title 17 of the Municipal Code of Chicago.”

19. Delete the definition of "climate zone."
20. Delete the definition of "code official."
21. Revise the definition of "commercial building" to read:
"COMMERCIAL BUILDING (for this code only). *A building that is not a residential building.*"
22. Insert the following definition:
"COMMISSIONING. A process that verifies and documents that the selected building systems have been designed, installed and function according to the *owner's* project requirements and *construction documents*, and to minimum code requirements."
23. Revise the definition of "common areas" to read:
"COMMON AREAS. All *conditioned spaces* within Group R occupancies other than *dwelling units* and *sleeping units*."
24. Delete the definition of "community renewable energy facility."
25. Revise the definition of "computer room" by replacing "conditioned area" with "*conditioned floor area*" and "ITE equipment" with "*information technology equipment*."
26. Revise the definition of "condensing unit" to read:
"CONDENSING UNIT. As defined in Chapter 2 of the *Chicago Mechanical Code*."
27. Revise the definition of "congregate living facilities" to read:
"CONGREGATE LIVING FACILITIES. As defined in Chapter 2 of the *Chicago Building Code*."
28. Revise the definition of "construction documents" to read:
"CONSTRUCTION DOCUMENTS. As defined in the *Chicago Construction Codes Administrative Provisions*."
29. Revise the definition of "data center" by deleting "that share *data center systems*," and replacing "conditioned area" with "*conditioned floor area*" and "ITE equipment" with "*information technology equipment*."
30. Revise the definition of "curtain wall" by resetting "Fenestration" in italic type.
31. Revise the definition of "dedicated outdoor air system (DOAS)" by replacing "ventilation system" with "mechanical system."
32. Revise the definition of "dehumidifier" by resetting "dehumidifier" in italic type.
33. Revise the definition of "duct" to read:
"DUCT. As defined in Chapter 2 of the *Chicago Mechanical Code*."

34. Revise the definition of "duct system" to read:
"DUCT SYSTEM. As defined in Chapter 2 of the *Chicago Mechanical Code*."
35. Revise the definition of "dwelling unit" to read:
"DWELLING UNIT. As defined in Chapter 2 of the *Chicago Building Code*."
36. Delete the definition of "east-oriented."
37. Revise the definition of "energy recovery ventilation system" to read:
"ENERGY RECOVERY VENTILATION SYSTEM. As defined in Chapter 2 of the *Chicago Mechanical Code*."
38. Delete the definition of "energy simulation tool."
39. Revise the definition of "entrance door" by resetting "vertical" in italic type.
40. Insert the following definition:
"EXISTING BUILDING. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code*."
41. Revise the definition of "exterior wall" to read:
"EXTERIOR WALL (for this code only). A wall that is either an *above-grade wall* or *below-grade wall*."
42. Revise the definition of "exterior wall envelope" to read:
"EXTERIOR WALL ENVELOPE. As defined in Chapter 2 of the *Chicago Building Code*."
43. Revise the definition of "fan array" by resetting "plenum" in italic type.
44. Revise the definition of "fan system" by resetting "plenum" in italic type.
45. Revise the definition of "fenestration" to read:
"FENESTRATION. As defined in Chapter 2 of the *Chicago Building Code*."
46. Insert the following definitions:
"FENESTRATION, VERTICAL. As defined in Chapter 2 of the *Chicago Building Code*.
FENESTRATION AREA. The total area of the *fenestration* measured using the rough opening and including the glazing, sash and frame. For doors where the glazed vision area is less than 50% of the door area, the *fenestration area* is the glazed vision area. For all other doors, the *fenestration area* is measured using the rough opening and including the slab and the frame."

47. Revise the last sentence of the definition of “fenestration product, field-fabricated” to read:

“Field-fabricated fenestration products do not include site-built fenestration products.”

48. Revise the definition of “fenestration product, site-built” to read:

FENESTRATION PRODUCT, SITE-BUILT. A fenestration product designed to be made up of field-glazed or field-assembled units using specific factory cut or otherwise factory-formed framing and glazing units. Examples of *site-built fenestration products* include *storefront, curtain walls* and atrium roof systems.”

49. Delete the definition of “financial renewable energy power purchase agreement.”

50. Revise the definition of “floor area, net” to read:

FLOOR AREA, NET. As defined in Chapter 2 of the *Chicago Building Code.*”

51. Insert the following definition:

FUEL GAS. As defined in Chapter 2 of the *Chicago Fuel Gas Code.*”

52. Delete the definition of “green retail tariff.”

53. Revise the definition of “greenhouse” to read:

GREENHOUSE. As defined in Chapter 2 of the *Chicago Building Code.*”

54. Delete the definition of “Group R.”

55. Revise the definition of “historic building” to read:

HISTORIC BUILDING. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code.*”

56. Insert the following definition:

INSULATED SIDING. A type of *continuous insulation* with manufacturer-installed insulating material having an *R-value* of not less than R-2 as an integral part of the cladding product.”

57. Revise the definition of “integrated HVAC system” by resetting “dedicated outdoor air systems” in italic type.

58. Revise the definition of “labelled” to read:

LABELED. As defined in Chapter 2 of the *Chicago Building Code.*”

59. Revise the definition of “large-diameter ceiling fan” to read:

LARGE-DIAMETER CEILING FAN. As defined in Chapter 2 of the *Chicago Mechanical Code.*”

60. Revise the definition of “liner system (Ls)” by replacing “Ls” with “LS.”

61. Revise the definition of "listed" to read:
"LISTED. As defined in Chapter 2 of the *Chicago Building Code*."
62. Revise the definition of "low slope" to read:
"LOW-SLOPED ROOF. As defined in Chapter 2 of the *Chicago Building Code*."
63. Delete the definition of "luminaire-level lighting controls."
64. Revise the definition of "networked guestroom control system" to read:
"NETWORKED GUESTROOM CONTROL SYSTEM. A control system, with access from the front desk or other central location associated with a Group R-1 occupancy, that is capable of identifying the rented and unrented status of each *sleeping unit* according to a timed schedule, and is capable of controlling HVAC in each *sleeping unit* separately."
65. Delete the definition of "north-oriented."
66. Revise the definition of "on-site renewable energy" by replacing "building project site" with "*building site*."
67. Revise the definition of "owner" to read:
"OWNER. As defined in the *Chicago Construction Codes Administrative Provisions*."
68. Delete the definition of "physical renewable energy power purchase agreement."
69. Insert the following definition:
"PLENUM. As defined in Chapter 2 of the *Chicago Building Code*."
70. Insert the following definition:
"PROFESSIONAL ENGINEER. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
71. Revise the definition of "purchased energy" by resetting "building site" in italic type.
72. Revise the definition of "ready access (to)" to read:
"READY ACCESS (TO). As defined in Chapter 2 of the *Chicago Mechanical Code*."
73. Revise the definition of "registered design professional" to read:
"REGISTERED DESIGN PROFESSIONAL. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
74. Delete the definition of "renewable energy certificate (REC)."
75. Delete the definition of "renewable energy investment fund (REIF)."
76. Revise the definition of "renewable energy resources" by inserting "*biogas*," after "tides."

77. Revise the definition of "repair" to read:
"REPAIR. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code*."
78. Revise the definition of "reroofing" to read:
"REROOFING. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code*."
79. Revise the definition of "residential building" to read:
"RESIDENTIAL BUILDING (for this code only). Group R-2, R-3, R-4 and R-5 occupancies in *buildings* with no more than four *stories above grade plane*."
80. Revise the definition of "roof assembly" to read:
"ROOF ASSEMBLY. As defined in Chapter 2 of the *Chicago Building Code*."
81. Revise the definition of "roof recover" to read:
"ROOF RECOVER. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code*."
82. Revise the definition of "roof repair" to read:
"ROOF REPAIR. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code*."
83. Revise the definition of "roof replacement" to read:
"ROOF REPLACEMENT. As defined in Chapter 2 of the *Chicago Building Code*."
84. Revise the definition of "sleeping unit" to read:
"SLEEPING UNIT. As defined in Chapter 2 of the *Chicago Building Code*."
85. Insert the following definition:
"SOLAR-READY ZONE. A section of the roof deck designated and reserved for the future installation of a solar photovoltaic or solar thermal system."
86. Delete the definition of "south-oriented."
87. Revise the second sentence of the definition of "storefront" to read:
"*Storefront* includes, but is not limited to, exterior fenestration systems that span from the floor level or above to the ceiling of the same story on *commercial buildings*, with or without mulled windows and doors."
88. Insert the following definition:
"STORY ABOVE GRADE PLANE. As defined in Chapter 2 of the *Chicago Building Code*."
89. Delete the definition of "substantial improvement."

90. Insert the following definition:
“**TEMPORARY.** As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*”
91. Revise the definition of “testing unit enclosure area” to read:
“**TESTING UNIT ENCLOSURE AREA.** The area sum of all the boundary surfaces that define the *dwelling unit, sleeping unit* or other *conditioned space*, including top/ceiling, bottom/floor and all side walls. This does not include interior partition walls within the *dwelling unit, sleeping unit* or other *conditioned space*. Wall height shall be measured from the finished floor of the *conditioned space* to the finished floor or roof/ceiling *air barrier* above.”
92. Insert the following definition:
“**THERMAL CONDUCTANCE.** See “C-factor (thermal conductance).””
93. Insert the following definitions:
“**THERMAL RESISTANCE.** See “R-value (thermal resistance).”
THERMAL TRANSMITTANCE. See “U-factor (thermal transmittance).””
94. Revise the definition of “variable refrigerant flow system” by inserting “(VRF SYSTEM)” at the end of the defined term and before the definition.
95. Revise the definition of “vegetative roof” to read:
“**VEGETATIVE ROOF.** As defined in Chapter 2 of the *Chicago Building Code.*”
96. Revise the definition of “ventilation” to read:
“**VENTILATION.** As defined in Chapter 2 of the *Chicago Building Code.*”
97. Revise the definition of “ventilation air” to read:
“**VENTILATION AIR.** As defined in Chapter 2 of the *Chicago Mechanical Code.*”
98. Insert the following definition:
“**VERTICAL FENESTRATION.** See “Fenestration, vertical.””
99. Revise the definition of “water heater” to read:
“**WATER HEATER.** As defined in Chapter 2 (Article 2) of the *Chicago Plumbing Code.*”
100. Delete the definition of “west-oriented.”
101. Delete the definition of “work area.”
102. Revise the definition of “zone” by inserting “(for this code only)” at the end of the defined term and before the definition.

CHAPTER 14N-C3 GENERAL REQUIREMENTS

14N-C3-C301 CLIMATE ZONE.

The provisions of IECC-CE Section C301 are not adopted. The following is adopted as Section C301:

"SECTION C301 CLIMATE ZONE

C301.1 General.

Climate Zone 5A shall be used to determine the applicable requirements in Chapter 4."

14N-C3-C302 DESIGN CONDITIONS.

The provisions of IECC-CE Section C302 are adopted by reference without modification.

14N-C3-C303 MATERIALS, SYSTEMS AND EQUIPMENT.

The provisions of IECC-CE Section C303 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in italic type: "insulated siding."
2. Revise Section C303.2.1 by replacing "basement walls" with "*below-grade walls*."

CHAPTER 14N-C4 COMMERCIAL ENERGY EFFICIENCY

14N-C4-C401 GENERAL.

The provisions of IECC-CE Section C401 are not adopted. The following is adopted as Section C401:

"SECTION C401 GENERAL

C401.1 Scope.

The provisions in this chapter are applicable to *commercial buildings* and their *building sites*.

C401.2 Application.

Commercial buildings shall comply with Chapter C6 and either Section C401.2.1, C401.2.2, C401.2.3 or C401.2.4.

C401.2.1 This code.

Commercial buildings shall comply with one of the following:

1. **Prescriptive Compliance.** The Prescriptive Compliance option requires compliance with Sections C402 through C406 and Section C408. *Dwelling units* and *sleeping units* in Group R-2, R-3 and R-4 occupancies without systems serving multiple units shall be deemed to be in compliance with this chapter, provided that they comply with Section R406 of the *Chicago Energy Transformation Code—Residential Provisions*.
2. **Simulated Building Performance.** The Simulated Building Performance option requires compliance with Section C407.

Exception: Work to *existing buildings* complying with Chapter C5.

C401.2.2 ASHRAE 90.1.

Commercial buildings shall comply with the requirements of ANSI/ASHRAE/IES 90.1.

C401.2.3 Phius certification.

Commercial buildings shall obtain certification in accordance with Sections C401.2.3.1 and C401.2.3.2.

C401.2.3.1 Construction documents.

The *construction documents* submitted to the *building official* shall establish that the project is eligible for certification in accordance with the *PHIUS Passive Building Standard Certification Guidebook*, including all co-requisite programs applicable to the project type. Such documentation shall include:

1. A design certification letter issued by a recognized third-party certification organization.
2. A list of compliance features.

C401.2.3.2 Certification.

Within 180 days of project completion, as evidenced by passing the last required final inspection or issuance of a certificate of occupancy, as applicable in accordance with the *Chicago Construction Codes Administrative Provisions*, the *owner* shall submit to the *building official* a written certification establishing that the project has been certified in accordance with the *PHIUS Passive Building Standard Certification Guidebook*, including all corequisite programs applicable to the project type.

C401.2.4 National Green Building Standard certification.

Eligible *commercial buildings* shall obtain certification in accordance with Sections C401.2.4.1 and C401.2.4.2.

C401.2.3.1 Construction documents.

The *construction documents* submitted to the *building official* shall establish that the project is eligible for certification at the gold or emerald level in accordance with ICC 700. Such documentation shall include:

1. Evidence that the project has been registered with a recognized third-party certification organization that certifies compliance with ICC 700.
2. Evidence that the project, as designed, is eligible for certification at the gold or emerald level.
3. A list of compliance features.

C401.2.3.2 Certification.

Within 180 days of project completion, as evidenced by passing the last required final inspection or issuance of a certificate of occupancy, as applicable in accordance with the *Chicago Construction Codes Administrative Provisions*, the *owner* shall submit to the *building official* a written certification that the project has achieved certification at the gold or emerald level under ICC 700. The written certification shall be issued by the recognized third-party certification organization.

C401.3 Building thermal envelope certificate.

A permanent building thermal envelope certificate shall be completed by the builder. Such certificate shall be posted on or adjacent to the main electrical panel. If located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label or other required labels. The certificate shall include the following:

1. *R-values* of insulation installed in or on ceilings, roofs, walls, foundations and slabs, *below-grade walls*, *crawl space walls* and floors and ducts outside *conditioned spaces*.
2. *U-factors* and *solar heat gain coefficients (SHGC)* of *fenestration* products.
3. Results from any building thermal envelope air leakage testing performed on the building.

Where there is more than one value for any component of the *building thermal envelope*, the certificate shall indicate the area-weighted average value where available. If the area-weighted average is not available, the certificate shall list each value that applies to 10 percent or more of the total component area."

14N-C4-C402 BUILDING THERMAL ENVELOPE.

The provisions of IECC-CE Section C402 are adopted by reference with the following modifications:

1. Revise the title of the section to read: "Building Thermal Envelope."

2. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "above-grade wall," "air curtain unit," "building entrance," "building thermal envelope," "C-factor," "commercial building," "daylight responsive controls," "daylight zone," "enclosed space," "F-factor," "fenestration area," "opaque door," "plenum," "refrigerated warehouse cooler," "refrigerated warehouse freezer," "rooftop monitor," "thermal bridge," "U-factor," "vertical fenestration," "walk-in cooler," and "walk-in freezer."
3. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in roman type: "Group R."
4. Revise Items 4 and 5 in Section C402.1 to read:
 4. *Fenestration* in the *building thermal envelope* shall comply with Section C402.5. Where the *fenestration area* for *vertical fenestration* or skylights is greater than that allowed in Section C402.5, the *building* and *building thermal envelope* shall comply with Item 2 of Section C401.2.1, C401.2.2 or C402.1.4.
 5. *Air leakage* of the *building thermal envelope* shall comply with Section C402.6."
5. Revise Section C402.1.1 by deleting "low-energy" and by resetting "buildings" and "building" in italic type.
6. Revise Section C402.1.1.2 by replacing "Greenhouse structures or areas" with "Greenhouses."
7. Revise the exception to Item 1 in Section C402.1.1.2 to read:

Exception: Low-energy *greenhouses* that comply with Section C402.1.1.1."
8. Delete the exception to Item 3 in Section C402.1.1.2.
9. Revise Item 4 in Section C402.1.1.3 to read:

4. Have an average wall and roof *U-factor* less than 0.2."
10. Delete Item 5 in Section C402.1.1.3.
11. Revise Section C402.1.2 to read:

C402.1.2 Assembly *U-factor*, *C-factor* or *F-factor* method.
Building thermal envelope opaque assemblies shall have a *U-factor*, *C-factor* or *F-factor* not greater than that specified in Table C402.1.2. *Commercial buildings* or portions of *commercial buildings* enclosing Group R occupancies shall use the *U-factor*, *C-factor* or *F-factor* from the "Group R" column of Table C402.1.2. *Commercial buildings* or portions of *commercial buildings* enclosing occupancies other than Group R shall use the *U-factor*, *C-factor* or *F-factor* from the "All other" column of Table C402.1.2."
12. Revise Table C402.1.2 by deleting all columns except those for Climate Zones "5 and Marine 4," deleting the Climate Zone heading row, deleting footnote e, and revising footnote h by deleting "in Climate Zones 0 through 6 and less than or equal to 0.36 in Climate Zones 7 and 8."

13. Revise Section C402.1.2.1.1 to read:
"C402.1.2.1.1 Tapered, above-deck insulation based on thickness.
 For tapered, above-deck roof insulation, area-weighted *U-factors* of non-uniform insulation thickness shall be determined using an accepted industry standard method to calculate an average thickness."
14. Revise Section C402.1.2.1.5 by replacing "by an *approved* method" with "using an accepted industry standard method."
15. Revise Section C402.1.2.1.8 by deleting "and *approved*."
16. Revise Table C402.1.3 by deleting all columns except those for Climate Zones "5 and Marine 4," deleting the Climate Zones heading row, replacing "LS = Liner System" with "LS = Liner system as defined in Section C202" and deleting footnote c.
17. Revise Equation 4-1 by deleting the last sentences from the descriptions of T_P and T_T and by replacing "other approved sources" with "other sources consistent with accepted engineering practices."
18. Revise Section C402.1.5 by deleting "In Climate Zones 3 through 8."
19. Revise Section C402.2 by deleting "or an *approved* design."
20. Revise Section C402.2.1 by deleting "*approved*."
21. Revise Section C402.2.5 by replacing "Below-grade wall insulation" with "Insulation for *below-grade walls*."
22. Revise the exception to C402.2.7 by deleting "continuous."
23. Delete Section C402.3.
24. Revise Section C402.4 and its subsections to read:
"C402.4 Roof solar reflectance.
 See Section 1515 of the *Chicago Building Code*."
25. Delete Table C402.4.
26. Revise Table C402.5 by deleting all columns except "5 and Marine 4," deleting the Climate Zone heading row, and deleting "NR = No Requirement."
27. Revise Section C402.5.1 to read:
"C402.5.1 Maximum area.
 The *fenestration area* for *vertical fenestration*, not including *opaque doors* and *opaque spandrel panels*, shall be not greater than 30 percent of the gross *above-grade wall* area. The *fenestration area* for skylights shall be not greater than 3 percent of the gross roof area."

28. Revise Section C402.5.1.1 by deleting "In Climate Zones 0 through 6," and by replacing each "stories above grade" with "*stories above grade plane.*"
29. Delete Exception 1 to Section C402.5.2.
30. Revise Exception 3 to Section C402.5.2 by replacing "natural objects" with "existing vegetation."
31. Revise Section C402.5.3.1 by deleting "In Climate Zones 0 through 6."
32. Revise Section C402.5.3.2 to read:

"C402.5.3.2 Increased skylight U-factor.
Where skylights are installed above *daylight zones* provided with *daylight responsive controls*, a maximum *U-factor* of 0.75 shall be allowed."
33. Revise Section C402.5.5.2 by deleting "in Climate Zones 0 through 6 and less than or equal to 0.360 in Climate Zones 7 and 8."
34. Revise Section C402.6.1 by replacing "A continuous" with "An" and by deleting the exception.
35. Revise Section C402.6.1.1 by deleting each "continuous" and by replacing "*approved*" with "suitable."
36. Revise Section C402.6.1.2 by deleting "continuous" and replacing "in places and changes in" with "at joints between dissimilar."
37. Revise Section C402.6.2 by deleting "by an *approved* third party."
38. Revise Exception 1 to Section C402.6.2 by replacing "*approved* third party" with "tester" and "*building owner*" with "owner."
39. Delete Exceptions 2 and 3 to Section C402.6.2.
40. Revise Exception 4 to Section C402.6.2 by deleting "by an *approved* third party."
41. Revise Section C402.6.2.1 by deleting "by an *approved* third party," "*approved*," and "building" and by replacing "stories above grade" with "*stories above grade plane.*"
42. Revise Exception 1 to Section C402.6.2.1 by deleting "*approved.*"
43. Revise Section C402.6.2.2 by deleting "*approved*" and by replacing each "dwelling" with "*dwelling units.*"
44. Revise Section C402.6.2.3 by deleting each "continuous" and "the *code official*" and replacing each "*registered design professional or approved agency*" with "*registered design professional, professional engineer or approved agency*" and "*building owner or owner's authorized agent*" with "owner."
45. Delete Exception 1 to Section C402.6.6.
46. Revise Section C402.7 by deleting "or an *approved* design" and Exception 1.

47. Revise the exceptions to Section C402.7.1 by replacing each "An *approved*" with "A."
48. Revise Exception 1 to Section C402.7.2 by replacing "An *approved*" with "A."
49. Revise the exceptions to Section C402.7.3 by replacing each "an *approved*" with "a."
50. Revise Exception 1 to Section C402.7.4 by replacing "an *approved*" with "a."
51. Revise the exception to Section C402.7.5 by replacing "an *approved*" with "a."

14N-C4-C403 MECHANICAL SYSTEMS.

The provisions of IECC-CE Section C403 are adopted by reference with the following modifications:

1. Revise the title of the section to read: "Mechanical Systems."
2. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "air economizer," "automatic," "best efficiency point (BEP)," "boiler," "boiler system," "building entrance," "condensing unit," "dedicated outdoor air system," "demand control ventilation," "desiccant dehumidification system," "direct digital control," "dwelling unit," "enclosed space," "energy recovery ventilation system," "exterior wall," "integrated HVAC system," "on-site renewable energy," "plenum," "ready access," "thermostat," "water economizer," and "zone."
3. Revise Section C403.1 by replacing "Data Centers" with "*Data centers*."
4. Revise Section C403.2 by deleting each "*approved*."
5. Revise the exception to Section C403.2.3 by replacing "R-1 and R-2" with "Group R."
6. Revise the third sentence of Section C403.3.2 to read:
"The efficiency shall be verified through certification under an accredited certification program or, where an accredited certification program does not exist, the equipment efficiency ratings shall be supported by data furnished by the manufacturer."
7. Revise Tables C403.3.2(1) and (2) by deleting each "and applications outside US single phase."
8. Revise Table C403.3.2(4) by deleting rows applicable to "outside US" and footnote d.
9. Revise Table C403.3.2(5) by deleting rows applicable to "outside US."
10. Revise Table C403.3.2(6) by deleting rows applicable to "outside US."
11. Revise the exception to Section C403.3.4.1 by replacing "Group R-2" with "Group R."
12. Revise Section C403.4.3.3.2 by deleting "in Climate Zones 3 through 8."

13. Revise Item 3.2 in Section C403.4.4 to read:
 - “3.2. Where pumps have *automatic direct digital control* configured to operate pumps only when zone heating or cooling is required, a variable speed drive shall be provided for pumps with motors having nominal output power greater than or equal to 7.5 hp (5.52 kW).”
14. Delete Table C403.4.4.
15. Revise the exceptions to Section C403.4.7 by deleting “where *approved* by the *code official*” and “and where *approved*” and by replacing “air curtains” with “*air curtain units*.”
16. Revise the exceptions to Section C403.4.8.1 by deleting “Where *approved*” and “or as *approved* by the authority having jurisdiction.”
17. Revise the exceptions to Section C403.4.8.2 by deleting “Where *approved*” and “or as *approved* by the authority having jurisdiction.”
18. Revise the exception to Section C403.4.8.3 by deleting “or as *approved* by the authority having jurisdiction.”
19. Revise Section C403.5 by replacing “air or water economizer” with “*air economizer or water economizer*” and by changing Item 1 to read:
 - “1. Chilled water systems with a total cooling capacity, less cooling capacity provided with *air economizers*, of:
 - 1.1. 1,320,000 Btu/h (386.85 kW) for local water-cooled chilled-water systems.
 - 1.2. 1,720,000 Btu/h (504.08 kW) for air-cooled chilled-water systems or district chilled-water systems.”
20. Delete Exceptions 1 and 5 to Section C403.5.
21. Delete Tables C403.5(1) and (2).
22. Revise Table C403.5.3.3 by deleting all rows except for Climate Zone 5A, deleting the Climate Zone column, and deleting footnote a.
23. Revise Section C403.5.4 by replacing “water-side economizers” with “*water economizers*.”
24. Revise Section C403.6.1 by deleting “as *approved* by the *code official*.”
25. Revise Section C403.6.5 by deleting “in Climate Zones 0B, 1B, 2B, 3B, 3C and 4 through 8.”
26. Delete Exceptions 3 through 5 to Section C403.6.5.
27. Delete Section C403.6.5.1.

28. Revise Section C403.7.1 by deleting "in Climate Zones 5A, 6, 7 and 8 and spaces larger than 500 square feet (46.5 m²) in other *climate zones*" and by replacing "air-side economizer" with "*air economizer*."
29. Revise Exception 1 to Section C403.7.1, including subparts, to read:
- "1. Spaces served by systems with energy recovery in accordance with Section C403.7.4.2 and that have a floor area less than 1,000 square feet (93 m²)."
30. Revise Exception 6 to Section C403.7.1 by replacing "*registered design professional*" with "*registered design professional or professional engineer*."
31. Delete the exception to Section C403.7.3.
32. Revise Section C403.7.4 by changing the title to read: "Energy recovery ventilation systems."
33. Revise Section C403.7.4.1, including the exceptions, to read:
- "C403.7.4.1 Nontransient dwelling units.**
Nontransient *dwelling units* shall be provided with outdoor air *energy recovery ventilation systems* that shall have an *enthalpy recovery ratio* of not less than 60 percent at heating design condition."
34. Revise Section C403.7.4.2, excluding the exception, to read:
- "C403.7.4.2 Spaces other than nontransient dwelling units.**
Where the supply airflow rate of a fan system serving a space other than a nontransient *dwelling unit* exceeds the values specified in Tables C403.7.4.2(1) and C403.7.4.2(2), the system shall include an *energy recovery ventilation system*. The *energy recovery ventilation system* shall provide an *enthalpy recovery ratio* of not less than 50 percent at design conditions. Where an *air economizer* is required, the *energy recovery ventilation system* shall include a bypass or controls that allows operation of the economizer as required by Section C403.5."
35. Revise Exception 1 to Section C403.7.4.2 by replacing "energy recovery systems" with "*energy recovery ventilation systems*."
36. Revise Exception 4 to Section C403.7.4.2 by deleting "in Climate Zones 5 through 8."
37. Delete Exceptions 5 through 7 to Section C403.7.4.2.
38. Revise Tables C403.7.4.2(1) and (2) by deleting all rows except for Climate Zone 5A and by deleting "NR = Not Required."
39. Revise Section C403.7.6 by replacing "*buildings*" with "occupancies."
40. Revise the exception to Section C403.7.7 to read:
- "Exception:** Nonmotorized gravity dampers shall be an alternative to motorized dampers for exhaust and relief openings as follows:

1. In buildings with fewer than three *stories above grade plane*.
2. Where the design exhaust capacity is not greater than 300 cfm (142 L/s)."
41. Revise Section C403.7.8.1.1 by replacing "*approved*" with "accepted industry standard."
42. Revise Section C403.8.3 by replacing each "*approved independent testing laboratory*" with "*approved agency*."
43. Revise Section C403.8.6.1 by replacing "air-side economizer" with "*air economizer*."
44. Revise the exception to Section C403.8.6.2 by replacing "Group R-2, R-3 and R-4 *occupancies*" with "*dwelling units and sleeping units*."
45. Revise Table C403.9 by deleting the first row and by replacing "Chapter 6" with "Chapter C7."
46. Revise Exception 2 to Section C403.10 by replacing "*dwelling units*" with "*dwelling units or sleeping units*."
47. Revise the exceptions to Section C403.11.6 to read:

Exception: Buildings that provide 60 percent or more of their reheat energy from *on-site renewable energy* or other site-recovered energy. *On-site renewable energy* used to meet Section C405.15.1 or C406.3.1 shall not be used to meet this exception."
48. Revise the second sentence of Section C403.12 to read:

"The energy use shall be verified through certification under an accredited certification program or, where an accredited certification program does not exist, the energy use shall be supported by data furnished by the equipment manufacturer."
49. Revise Section C403.13.1, excluding the exceptions, to read:

C403.13.1 Duct and plenum insulation and sealing.
Supply and return air *ducts* and *plenums* shall be insulated with not less than R-6 insulation where located in unconditioned spaces and where located outside the *building* with not less than R-12 insulation. *Ducts* located underground beneath *buildings* shall be insulated as required in this section or have an equivalent *thermal distribution efficiency*. Underground *ducts* utilizing the *thermal distribution efficiency* method shall be *listed and labeled* to indicate the *R-value* equivalency. Where located within a *building thermal envelope* assembly, the *duct* or *plenum* shall be separated from the *building* exterior or unconditioned or exempt spaces by not less than R-12 insulation."

14N-C4-C404 SERVICE WATER HEATING.

The provisions of IECC-CE Section C404 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "demand recirculation water system," "dwelling unit,"

"existing buildings," "high-capacity gas-fired water heater," "on-site renewable energy," "ready access," "service water heating," "thermostat."

2. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in roman type: "Group R."
3. Throughout the body of each provision of this section, replace "service water-heating" with "service water heating" and set in italic type as appropriate.
4. Revise Section C404.2 by replacing "*approved*" with "accredited."
5. Revise Section C404.5.2 by replacing "circulating water systems" with "*circulating hot water systems*."
6. Revise Section C404.8.3 by deleting "*approved*."

14N-C4-C405 ELECTRICAL POWER AND LIGHTING SYSTEMS.

The provisions of IECC-CE Section C405 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "captive key override," "conditioned floor area," "daylight zone," "dwelling unit," "exterior parking area," "general lighting," "high-end trim," "interior parking area," "occupant sensor control," "on-site renewable energy," "ready access," "sleeping unit," "temporary," and "vertical fenestration."
2. Revise Section C405.1 by deleting "and generation."
3. Revise the second sentence of Section C405.2 to read:

"All other lighting systems powered through the energy service for the *building* and building site lighting for which the *owner* is responsible shall be provided with controls that comply with Sections C405.2.1 through C405.2.7."
4. Revise Section C405.2.2.1 by replacing "permit" with "allow."
5. Revise Section C405.2.4.1 by resetting "toplit" and "sidelit" in roman type.
6. Revise Section C405.2.4.3 by resetting each "toplit" in roman type.
7. Revise Section C405.2.9 by replacing "*occupant sensor*" with "*occupant sensor control*."
8. Revise Equation 4-9 by replacing "approved" with "reliable."
9. Revise Section C405.3.1 by changing the sentence following Equation 4-9 to read:

"The connected power associated with the following lighting equipment and applications is not included in calculating total connected lighting power:"

10. Revise Item 14 in Section C405.3.1 to read:

“14. Lighting provided because of safety or security considerations.”
11. Revise the exception to Equation 4-10 by replacing “approved by the *code official*” with “included in the *construction documents*.”
12. Revise Section C405.4 by adding a new exception to read:

“**Exception:** Cannabis facilities subject to the Cannabis Regulation and Tax Act, 410 ILCS 705.”
13. Revise the first two lines of the exception to Section C405.5.1 to read:

“**Exception:** Lighting used for the following applications shall not be included:

 1. Lighting provided because of safety or security considerations.”
14. Revise Item 2 in Section C405.5.2 by replacing “building *owner*” with “*owner*.”
15. Revise Section C405.5.3 to read:

“**C405.5.3 Gas lighting.**
See Section C606.”
16. Revise Section C405.6 to read:

“**C405.6 Dwelling unit electrical meter.**
Each *dwelling unit* shall have a separate electrical meter.”
17. Revise Section C405.7, excluding the exception, to read:

“**C405.7 Electrical transformers.**
Low-voltage dry-type distribution transformers shall meet the minimum efficiency requirements of Table C405.7 as tested and rated in accordance with the test procedure listed in DOE 10 CFR 431. The efficiency shall be verified through certification under an accredited certification program or, where an accredited certification program does not exist, the equipment efficiency ratings shall be supported by data furnished by the transformer manufacturer.”
18. Revise the second sentence of Section C405.8 to read:

“The efficiency shall be verified through certification under an accredited certification program or, where an accredited certification program does not exist, the equipment efficiency ratings shall be supported by data furnished by the motor manufacturer.”
19. Revise Section C405.10.2, excluding the exception, to read:

“**C405.10.2 Escalators and moving walks.**
Escalators and moving walks shall be provided with *automatic* controls that reduce speed in accordance with the *Chicago Conveyance Device Code*.”

20. Revise Exception 1 to Section C405.13 by deleting "in R-2 occupancies."
21. Revise Section C405.13.2 by deleting "or other *approved* measurement devices."
22. Revise Section C405.13.8 by deleting "or other *approved* measurement devices."
23. Revise Section C405.13.11 by replacing "natural gas" with "*fossil gas*."
24. Revise Section C405.15 and its subsections to read:

"C405.15 State of Illinois requirements for renewable energy.
Nothing in this code shall supersede any requirement for *on-site renewable energy* or renewable electrical energy procurement enforced by the State of Illinois."
25. Delete Section C405.16.

14N-C4-C406 ADDITIONAL EFFICIENCY, RENEWABLE AND LOAD MANAGEMENT CREDITS.

The provisions of IECC-CE Section C406 are adopted by reference with the following modifications:

1. Revise the title of the section to read: "Additional Efficiency, Renewable and Load Management Credits."
2. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "air economizer," "boiler," "conditioned floor area," "conditioned space," "dwelling unit," "enthalpy recovery ratio," "general lighting," "high-end trim," "net floor area," "occupant sensor controls," "on-site renewable energy," "ready access," "sensible energy recovery ratio," "service water heating," "sleeping unit," and "vertical fenestration."
3. Throughout the body of each provision of this section, replace "service water-heating" with "service water heating" and set in italic type as appropriate.
4. Revise Section C406.1.1 by deleting "and *climate zone*."
5. Revise Tables C406.1.1(1) and (2) by deleting all columns except for Climate Zone "5A" and the headers for Climate Zone.
6. Revise Item 3.3 in Section C406.1.1.2 to read:

"3.3. Where the core and shell *building* was permitted in accordance with Section C407 under the 2022 Chicago Energy Transformation Code or later."
7. Revise Section C406.1.2 by deleting "and *climate zone*."
8. Revise Table C406.1.2 by deleting all columns except for Climate Zone "5A" and the headers for Climate Zone.
9. Revise Tables C406.2(1) through (9) by deleting all columns except for Climate Zone "5A" and the headers for Climate Zone.

10. Revise Table C406.2.1.6 by deleting all rows except for "4-5" and deleting the "Applicable Climate Zone" column.
11. Revise Equation 4-15 by deleting "climate zone and."
12. Revise Section C406.2.2.4 by replacing "dwelling" with "*dwelling unit*."
13. Revise Item 3 in Section C406.2.2.5 to read:
 - "3. The ventilation system shall have energy recovery with an *enthalpy recovery ratio* of 65 percent or more at heating design conditions and an *enthalpy recovery ratio* of 65 percent or more at cooling design conditions. Energy recovery shall include latent recovery. Where no humidification is provided, heating energy recovery effectiveness is allowed to be based on *sensible energy recovery ratio*. Where energy recovery effectiveness is less than the 65 percent required for full credit, adjust the credits from Section C406.2 by the factors in Table C406.2.2.5."
14. Revise Equation 4-18 by deleting "where required for the climate zone."
15. Revise Section C406.2.3 by replacing "a *building addition*" with "an *addition*."
16. Revise Section C406.2.3.1.1 by deleting the first "*building*."
17. Revise Section C406.2.5.2 by replacing each "*dwelling*" with "*dwelling units*."
18. Revise the first sentence of Section C406.2.6.2 to read:

"For facilities whose primary business activity involves the regular use of a commercial kitchen where at least one gas or electric fryer is installed, all fryers, dishwashers, steam cookers and ovens shall comply with all of the following:"
19. Revise Item 2 in Section C406.2.6.3 to read:
 - "2. Be installed before the final inspection."
20. Revise Section C406.3 by deleting "and *climate zone*."
21. Revise Tables C406.3(1) through (9) by deleting all columns except for Climate Zone "5A" and the headers for Climate Zone.
22. Revise Section C406.3.2 by deleting "not required to comply with Section C405.2.8."
23. Revise Section C406.3.3 by deleting "approved."
24. Revise Equation 4-32 by deleting "and climate zone."
25. Revise Item 3 in Section C406.3.8 to read:
 - "3. Night flush controls shall be configured with the following sequence or another night flush strategy shall be allowed where demonstrated to be effective and avoids added morning heating."
26. Delete Item 3.2.4 in Section C406.3.8.

14N-C4-C407 SIMULATED BUILDING PERFORMANCE.

The provisions of IECC-CE Section C407 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "conditioned floor area," and "energy cost."
2. Revise Item 2 in Section C407.2 to read:
 - "2. An annual *energy cost* that is less than or equal to the percentage of the annual *energy cost* (PAEC) of the *standard reference design* calculated in Equation 4-34. Energy prices shall be taken from the Department of Energy, Energy Information Administration's *State Energy Data System Prices and Expenditures* reports or an equivalent reliable source. The reduction in *energy cost* of the *proposed design* associated with *on-site renewable energy* shall be not more than 5 percent of the total *energy cost*. The amount of renewable energy purchased from off-site sources shall be the same in the *standard reference design* and the *proposed design*."
3. Revise Exception 2 to Section C407.2 by deleting the last two sentences.
4. Revise Table C407.2(2) by deleting all rows under "Electricity" other than "RFCE-RFC East."
5. Revise Section C407.4.2.3 by deleting "buildings" from the title.
6. Revise Section C407.5 by deleting "an *approved* version of" and "*approved*."
7. Revise Section C407.5.1 to read:

"C407.5.1 Software tool requirements.
Any version of a performance analysis tool meeting the requirements of Sections C407.5.1.1 and C407.5.1.2 shall be acceptable."
8. Revise Section C407.5.1.1 by deleting "*Approved*."
9. Revise Section C407.5.1.2 by deleting "Prior to approval."
10. Revise Section C407.5.3 by replacing "an *approved*" with "a reputable."
11. Revise Section C407.5.4 by deleting "where *approved* by the *code official*" and by replacing "Applications for approval of" with "Documentation of use of."

14N-C4-C408 MAINTENANCE INFORMATION AND SYSTEM COMMISSIONING.

The provisions of IECC-CE Section C408 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "air economizers," "commissioning," "demand responsive controls," and "general lighting."

2. Revise Section C408.1 by resetting "building systems" in roman type.
3. Revise Section C408.1.1 by resetting "building operations" in roman type.
4. Revise Section C408.2 by replacing "*registered design professional*" with "*registered design professional, professional engineer*" and by deleting "or owner's authorized agent."
5. Revise Exception 2.1 to Section C408.2 by deleting "installed in the dwelling."
6. Revise Section C408.2.1 by resetting "commissioning plan" in roman type and by replacing "*registered design professional*" with "*registered design professional, professional engineer*."
7. Revise Section C408.2.3.1 by replacing "approved plans and specifications" with "the *construction documents*."
8. Revise Section C408.2.3.2 by replacing "service water-heating" with "*service water heating*" and "approved plans and specifications" with "the *construction documents*."
9. Revise Section C408.2.4 by replacing "*registered design professional*" with "*registered design professional, professional engineer*" and "*building owner* or owner's authorized agent" with "*owner*."
10. Delete Section C408.2.4.1.
11. Revise Section C408.2.5 to read:

"C408.2.5 Documentation requirements.
The *construction documents* shall specify that the documents described in this section be provided by the builder to the *owner* within 90 days of the date of the *certificate of occupancy* or final inspection."
12. Revise Section C408.2.5.2 by replacing "*building owner* or owner's authorized agent" with "*owner*."
13. Revise Section C408.3.1 by replacing "passing" with "requesting" and "*registered design professional*" with "*registered design professional, professional engineer*."
14. Revise Section C408.3.1.1 by resetting each "occupant sensor" and "occupant sensors" not part of the term "occupant sensor controls" in roman type.
15. Revise Section C408.3.2 to read:

"C408.3.2 Documentation requirements.
The *construction documents* shall specify that the documents described in this section be provided to the *owner* within 90 days of the date of the *certificate of occupancy* or final inspection."
16. Delete Section C408.3.2.1.

14N-C4-C409 CALCULATION OF THE HVAC TOTAL SYSTEM PERFORMANCE RATIO.

The provisions of IECC-CE Section C409 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "air economizer," "boiler," "condensing unit," "conditioned floor area," "demand control ventilation," "on-site renewable energy," "proposed design," "service water heating, and "vertical fenestration."
2. Revise Equation 4-35 by deleting "climate zone and."
3. Revise Table C409.4 by deleting all columns except for Climate Zone "5A" and deleting the header rows for "Climate Zone."
4. Revise Section C409.5.2 by deleting "approved."
5. Delete the exception to Section C409.6.1.4.1.
6. Revise the exceptions to Section C409.6.1.6 to read:
 - "1. *Dwelling units* shall have a miscellaneous load density of 0.42 watts per square foot.
 2. *Common areas* shall have a miscellaneous load density of 0 watts per square foot."
7. Revise Item 2 in Section C409.6.1.10.2 by replacing "coefficient of performance (COP)" with "*coefficient of performance (COP) – cooling.*"
8. Revise Item 3 in Section C409.6.1.10.2 by replacing "heating COP" with "*coefficient of performance (COP) – heating.*"
9. Revise Section C409.6.2.11 by deleting the last sentence.
10. Revise Tables C409.6.2.11(1) though (3) by deleting the columns for "warm" climates.
11. Revise Tables C409.7(1) though (3) by deleting the columns for "warm" climates.

CHAPTER 14N-C5 EXISTING BUILDINGS—COMMERCIAL

14N-C5-C500 CHAPTER C5.

The provisions of IECC-CE Chapter 5 are not adopted. The following is adopted as Chapter C5 entitled "Existing Buildings—Commercial":

"SECTION C501 GENERAL

C501.1 Scope.

Repairs, changes of use, alterations and additions to existing buildings and conversions of unconditioned or low-energy space to conditioned space shall comply with this chapter.

Exception: *Repairs, changes of use, alterations and additions complying with ANSI/ASHRAE/IES 90.1.*

C501.2 Existing conditions.

Except as specified in this chapter, this code shall not be used to require the removal, *alteration* or abandonment of, nor prevent the continued use and maintenance of, an *existing building* or building system lawfully in existence at the time of adoption of this code.

C501.3 Conformance.

Existing buildings and existing building systems shall not be repaired or altered such that the building becomes less safe, sanitary or energy efficient than its condition before such work.

Exceptions:

1. Where the current level of safety or sanitation is proposed to be reduced, the portion affected shall conform to the requirements of the *International Building Code*.
2. Where the current level of energy efficiency is proposed to be reduced, the portion affected shall conform to the requirements of Chapters C3 and C4 of this code.

C501.4 Existing materials and equipment.

Materials and equipment already in use in a building in compliance with requirements or approvals in effect at the time of their installation shall be allowed to remain in use unless determined by the *building official* to be unsafe.

C501.5 New and replacement materials.

Except as otherwise required or allowed by this code, materials allowed by the applicable code for new construction shall be used. Like materials shall be allowed for *repairs*, provided that hazards to life, health or property are not created.

C501.5.1 New and replacement insulation.

New and replacement insulation shall have a minimum *R-value* of R-3 per inch (25.4 mm). New insulation provided as part of an alternative design due to existing conditions in accordance with the exceptions to Sections C504.2.1, C504.2.4 and C504.2.5 shall have a minimum *R-value* of R-5 per inch (25.4 mm).

C501.6 Historic buildings.

Provisions of this chapter shall not be mandatory for *historic buildings* where the *construction documents* include a report or statement signed by a *registered design professional* demonstrating that compliance with that provision would threaten, degrade or destroy the historic form, fabric or function of the *historic building*.

SECTION C502 REPAIRS

C502.1 General.

Repairs shall comply with Sections C501.2 through C501.5.

C502.1.1 Associated work.

Work on nondamaged components that is reasonably necessary to *repair* damaged components shall be considered to be part of the *repair* and shall not be subject to the requirements for *alterations* in this chapter.

SECTION C503 CHANGES OF USE

C503.1 General.

Buildings or portions of *buildings* undergoing a *change of use*, with or without intended *alterations*, shall comply with this section.

Exceptions:

1. Where it is demonstrated by an analysis prepared by a *registered design professional* or *professional engineer* that the *change of use* will not increase *energy use intensity (EUI)*.
2. Where the *change of use* affects less than 5,000 square feet (465 m²) of *conditioned floor area*.

C503.1.1 Simulated building performance.

Where the *simulated building performance* option in Section C407 is used to comply with this section, the annual *energy cost* of the *proposed design* shall be not greater than 110 percent of the annual *energy cost* otherwise allowed by Section C407.3.

C503.2 Compliance.

Mechanical systems, *service water heating* systems and lighting systems serving the area undergoing the *change of use* shall comply with Sections C503.2.1 through C503.2.3.

C503.2.1 Mechanical systems.

Where a *change of use* results in an increased energy use intensity rank as specified in Table C503.2.1, the existing mechanical heating, cooling and ventilation systems serving the area undergoing the *change of use* shall be made to comply with Section C403.

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TABLE C503.2.1—MECHANICAL SYSTEMS	
ENERGY USE INTENSITY RANK	CHICAGO BUILDING CODE OCCUPANCY CLASSIFICATION AND USE
High	A-2, B (laboratories), H-5, I-2
Medium	A-1, A-3, A-4, A-5, B ^a , E, I-1, I-3, I-4, M
Low	F, H-1, H-2, H-3, H-4, R, S, U
a. Excluding laboratories.	

C503.2.2 Service water heating.

Where a *change of use* results in an increased energy use intensity rank as specified in Table C503.2.2, the existing *service water heating* equipment and service hot water piping serving the area undergoing the *change of use* shall be made to comply with Section C404.

TABLE C503.2.2—SERVICE WATER HEATING SYSTEMS	
ENERGY USE INTENSITY RANK	CHICAGO BUILDING CODE OCCUPANCY CLASSIFICATION
High	A-2, I-1, I-2, R-1
Low	All others

C503.2.3 Lighting systems.

Where a *change of use* results in an increased energy use intensity rank as specified in Table C503.2.3, the lighting systems serving the area undergoing the *change of use* shall be made to comply with Sections C405.1 through C405.5.

TABLE C503.2.3—LIGHTING SYSTEMS	
ENERGY USE INTENSITY RANK	CHICAGO BUILDING CODE OCCUPANCY CLASSIFICATION AND USE
High	B (laboratories), B (outpatient healthcare), F, H-5, I-2, M, U (indoor horticulture)
Medium	A-2 B ^a , H-1, H-2, H-3, H-4, I-1, I-3, I-4, R, S
Low	A-1, A-3, A-4, A-5, E, U ^b
a. Excluding laboratories and outpatient healthcare.	
b. Excluding indoor horticulture.	

SECTION C504 ALTERATIONS

C504.1 General.

Alterations shall comply with this section. *Alterations* shall be such that the *existing building* is not less conforming to the provisions of this code than the *existing building* was prior to the *alteration*. *Alterations* to an *existing building*, existing building system or portion thereof shall conform to the provisions of this code as those provisions relate to new construction without requiring the unaltered portions of the *existing building* or

existing building system to comply with this code. *Alterations* shall not create unsafe conditions or overload existing building systems.

Exception: The following *alterations* need not comply with the requirements for new construction:

1. Storm windows installed over existing *fenestration*.
2. Temporary vestibules installed for a period not exceeding six months.
3. Surface-applied window film installed on existing single-pane fenestration assemblies reducing solar heat gain.
4. *Roof recover*.
5. *Roof replacement* where roof assembly insulation is integral to or located below the structural roof deck.
6. *Air barriers* shall not be required for *roof recover* and *roof replacement* where the scope of work does not include *alterations* or *repairs* to any other part of the *building thermal envelope*.
7. An *existing building* undergoing *alterations* that complies with Section C407.
8. *Alterations* of mechanical, electrical or plumbing systems where an analysis prepared by a *registered design professional* or *professional engineer* demonstrates that the work will not increase the *energy use intensity (EUI)* of the area or system affected.

C504.2 Building thermal envelope.

Alterations of existing *building thermal envelope* assemblies shall comply with this section. New *building thermal envelope* assemblies that are part of the *alteration* shall comply with Section C402. An area-weighted average *U-factor* for new and altered portions of the *building thermal envelope* shall be allowed to satisfy the *U-factor* requirements in Table C402.1.4. The existing *R-value* of insulation shall not be reduced or the *U-factor* of a *building thermal envelope* assembly be increased as part of a *building thermal envelope alteration* except where complying with Section C407.

Exceptions:

1. Where the *existing building* exceeds the *fenestration area* limitations of Section C402.5.1 prior to *alteration*, the *building* is exempt from Section C402.5.1 provided that there is no increase in *fenestration area*.
2. Existing ceiling, wall or floor cavities exposed during construction, provided that these cavities are filled with *cavity insulation* with an *R-value* of at least R-3 per inch. Insulation shall not be required to be added to wall cavities for masonry *above-grade walls* where a written report prepared by a *registered design professional* or *professional engineer* establishes that adding insulation to the specific wall assembly would block air circulation in the cavity in a manner likely to create moisture issues or cause differential expansion and contraction or deterioration of the masonry.

C504.2.1 Roof and ceiling assemblies.

Insulation complying with Sections C402.1 and C402.2.1 shall be provided for the following *alterations*:

1. An *alteration* of roof/ceiling construction other than *reroofing* where existing insulation located below the roof deck or on an attic floor above *conditioned space* does not comply with Table C402.1.2.
2. *Roof replacement* or a roof *alteration* that includes removing and replacing the roof covering, where the roof assembly includes insulation entirely above the roof deck.
3. Replacement of ceiling finishes exposing cavities or surfaces of the roof/ceiling construction.

Exception: Where compliance with Section C402.1 cannot be met due to existing conditions, a design that minimizes deviation from the insulation requirements shall be used. The alternative design shall be substantiated by a written report from a *registered design professional* or *professional engineer* documenting the existing conditions that prevent full compliance with the insulation requirements.

C504.2.2 Vertical fenestration.

New *vertical fenestration* that results in a total building *vertical fenestration fenestration area* less than or equal to that specified in Section C402.5.1 shall comply with Section C402.1.4, C402.5.3 or C407. The addition of *vertical fenestration* that results in a total building *vertical fenestration fenestration area* greater than that specified in Section C402.5.1 shall comply with Section C402.5.1.1 for the space adjacent to the new *fenestration* only. *Alterations* that result in a total building *vertical fenestration fenestration area* exceeding that specified in Section C402.5.1.1 shall comply with Section C402.1.4 or C407. Provided that the *vertical fenestration fenestration area* is not changed, using the same *vertical fenestration fenestration area* in the *standard reference design* as the *building* prior to *alteration* shall be an alternative to using the *vertical fenestration fenestration area* specified in Table C407.4.1(1).

C504.2.2.1 Application to replacement fenestration products.

Where some or all of an existing fenestration product is replaced with a new fenestration product, including sash and glazing, the replacement fenestration product shall meet the applicable requirements for *U-factor* and *solar heat gain coefficient (SHGC)* in Table C402.5.

Exception: An area-weighted average of the *U-factor* of replacement fenestration products being installed in the *building* for each fenestration product category listed in Table C402.5 shall be allowed to satisfy the *U-factor* requirements for each fenestration product category listed in Table C402.5. Individual fenestration products from different product categories listed in Table C402.5 shall not be combined in calculating the area-weighted average *U-factor*.

C504.2.3 Skylight area.

New skylights or sloped glazing that results in a total building skylight *fenestration area* less than or equal to that specified in Section C402.5.1 shall comply with Section C402.1.4, C402.5 or C407. The addition of skylights or sloped glazing that results in a total building skylight *fenestration area* greater than Section C402.5.1 shall comply with Section C402.5.1.2 for the space adjacent to the new skylights only. *Alterations* that result in a total building skylight *fenestration area* exceeding that specified in Section C402.5.1.2 shall comply with Section C402.1.4 or C407. Provided that the skylight *fenestration area* is not changed, using the same skylight *fenestration area* in the *standard reference design* as the *building* prior to *alteration* shall be an alternative to using the skylight *fenestration area* specified in Table C407.4.1(1).

C504.2.4 Above-grade wall alterations.

Above-grade wall alterations shall comply with the following:

1. Where wall cavities are exposed during construction, the cavity shall be filled with *cavity insulation* complying with Section C504.2, exception 2. New cavities created shall be insulated in accordance with Section C402.1.
2. Where exterior wall coverings and *fenestration* are added or replaced for the full extent of any exterior wall assembly on one or more elevations of the *building*, insulation shall be provided where required in accordance with one of the following:
 - 2.1. An *R-value* of *continuous insulation* not less than that designated in Table C402.1.3 for the applicable *above-grade wall* type and existing cavity insulation *R-value*, if any; or
 - 2.2. An *R-value* of not less than that required to bring the *above-grade wall* into compliance with Table C402.1.2.
3. Where Items 1 and 2 apply, the insulation shall be provided in accordance with Section C402.1.

Exception: Where compliance with Section C402.1 cannot be met due to existing conditions, a design that minimizes deviation from the insulation requirements shall be used. The alternative design shall be substantiated by a written report from a *registered design professional* or *professional engineer* documenting the existing conditions that prevent full compliance with the insulation requirements.

C504.2.5 Floor alterations.

Where an *alteration* to a floor or floor overhang exposes cavities or surfaces to which insulation can be applied, and the floor or floor overhang is part of the *building thermal envelope*, the floor or floor overhang shall be brought into compliance with Section C402.1. This requirement applies to floor *alterations* where the floor cavities or surfaces are exposed during construction.

Exception: Where compliance with Section C402.1 cannot be met due to existing conditions, a design that minimizes deviation from the insulation requirements shall be used. The alternative design shall be substantiated by a written report from a *registered design professional* or *professional engineer* documenting the existing conditions that prevent full compliance with the insulation requirements.

C503.2.6 Below-grade wall alterations.

Where walls enclosing below-grade *conditioned space* are altered, they shall be insulated in accordance with Section C402.1.

C504.2.7 Air barrier.

Altered *building thermal envelope* assemblies shall be provided with an *air barrier* in accordance with Section C402.6.1. Such *air barrier* need not be continuous with unaltered portions of the *building thermal envelope*. Testing described in Section C402.6.1.2 shall not be required.

C504.3 Heating and cooling systems.

New heating and cooling equipment and associated *duct systems* that are part of the *alteration* shall comply with Section C403.

C504.3.1 Economizers.

New cooling systems that are part of *alteration* shall comply with Section C403.5.

C504.3.2 Mechanical system acceptance testing.

Where an *alteration* requires compliance with Section C403 or any of its subsections, mechanical systems that serve the *alteration* shall comply with Sections C408.2.2, C408.2.3 and C408.2.5.

Exceptions:

1. Buildings with less than 10,000 square feet (929 m²) and a combined heating, cooling and service water-heating capacity of less than 960,000 Btu/h (281 kW).
2. Systems included in Section C403.5 that serve individual *dwelling units* or *sleeping units*.

C504.3.3 Duct testing.

Ducts and *plenums* designed to operate at static pressures not less than 3 inches water gauge (747 Pa) that serve an *alteration* shall be tested in accordance with this section where the *alteration* includes any of the following:

1. Twenty-five percent or more of the total length of the *ducts* in the system are relocated.
2. The total length of all *ducts* in the system is increased by 25 percent or more.

Ducts and *plenums* shall be leak tested in accordance with the SMACNA HVAC *Air Duct Leakage Test Manual* and shown to have a rate of *air leakage* (CL) less than or equal to 12.0 as determined in accordance with Equation 4-7 of Section C403.13.2.3. Documentation shall be prepared demonstrating that representative sections totaling not less than 25 percent of the *duct* area have been tested and that all tested sections comply with the requirements of this section.

C504.3.4 Controls.

New heating and cooling equipment that is part of the *alteration* shall be provided with controls that comply with the control requirements in Sections C403.4 and C403.5 other than the requirements of Sections C403.4.3.3 and C403.4.4.

Exceptions:

1. Systems with *direct digital control* of individual zones reporting to a central control panel.
2. The replacement of individual components of multiple-zone VAV systems.

C504.3.5 System sizing.

New heating and cooling equipment that is part of an *alteration* shall be sized in accordance with Section C403.3.1 based on the existing building attributes as modified by the *alteration*.

Exceptions:

1. Where substantiated by a written report from a *registered design professional* or *professional engineer* that compliance with this section would result in heating or cooling equipment that is incompatible with the rest of the heating or cooling system.
2. Where substantiated by a written report from a *registered design professional* or *professional engineer* that the additional capacity will be needed in the future.

C504.3.6 Replacement or added roof-mounted mechanical equipment.

For roofs with insulation entirely above the roof deck and where existing roof-mounted mechanical equipment is replaced or new equipment is added, and the existing roof does not comply with the insulation requirements for new construction in accordance with Sections C402.1 and C402.2.1, curbs for added or replaced equipment shall be of a height necessary to accommodate the future addition of above-deck roof insulation to be installed in accordance with Section C504.2.1, Item 2. Alternatively, the curb height shall be not less than 17 inches (431.8 mm). Curb height shall be the distance measured from the top of the curb to the top of the roof deck.

C504.4 Service water heating systems and equipment.

New *service water heating* systems and equipment that are part of the *alteration* shall comply with Section C404.

C504.4.1 Service water heating system acceptance testing.

Where an *alteration* requires compliance with Section C404 or any of its subsections, *service water heating* systems that serve the *alteration* shall comply with Sections C408.2.3 and C408.2.5.

Exceptions:

1. *Buildings* with less than 10,000 square feet (929 m²) and a combined heating, cooling and *service water heating* capacity of less than 960,000 Btu/h (281 kW).
2. Systems included in Section C403.5 that serve individual *dwelling units* or *sleeping units*.

C504.5 Lighting systems.

New lighting systems that are part of the *alteration* shall comply with Sections C504.5.1 and C504.5.2.

C504.5.1 Interior lighting and controls.

Alterations to interior spaces, lighting or controls shall comply with the following:

1. Where *alteration* of an interior space includes adding or relocating full height partitions, the space shall comply with Sections C405.2, C405.3 and C408.3.
2. Where the lighting within interior spaces is altered, those spaces shall comply with Sections C405.2, C405.3 and C408.3.
3. Where the lighting controls within interior spaces are altered, those spaces shall comply with Sections C405.2 and C408.3.

C504.5.2 Exterior lighting and controls.

Alterations to exterior lighting and controls shall comply with the following:

1. Where the connected exterior lighting power is increased by more than 400 watts, all exterior lighting, including lighting that is not proposed to be altered, shall be made to comply with Section C405.5.
2. Where the combined power of added and replacement luminaires is more than 400 watts, all lighting that is added or altered shall be controlled in accordance with Sections C405.2 and C408.3.

Exception: Individual luminaires less than 50 watts provided they pass functional tests verifying *automatic* shut off where daylight is present.

3. Where portions of exterior lighting controls are added or altered, those portions shall comply with Sections C405.2 and C408.3.

C504.6 Major alterations.

Alteration work that affects more than 5,000 square feet (465 m²) of *conditioned floor area* and includes adding or replacing two or more of the following shall be classified as a major alteration:

1. 50 percent or more of the interior surfaces of wall and ceiling assemblies that are part of the *building thermal envelope* for the entire *building*. This condition shall be evaluated by comparing the total surface area of new and replacement interior surfaces, such as gypsum board, to the total interior surface area of the *building thermal envelope* for the entire *building*.
2. 50 percent or more of the full-depth *building thermal envelope* adjoining the area of work, including *fenestration*. This condition shall be evaluated by comparing the total interior surface area of new and replacement *exterior wall envelopes*, *roof assemblies* and *fenestration* to the total interior surface area of the *building thermal envelope* bounding the area of work.
3. 50 percent or more of HVAC unitary systems or central heating or central cooling equipment serving the area of work. This condition shall be evaluated based on the heating or cooling capacity of the equipment.
4. 50 percent or more of *service water heating* equipment serving the area of work. This condition shall be evaluated based on the capacity of the equipment.
5. 50 percent or more of the lighting fixtures in the area of work.

C504.6.1 Compliance.

Major alterations shall comply with measures from Sections C406.2, C406.3 or both to achieve not less than 50 percent of required credits specified in Table C406.1.1(1) based on building occupancy group. For the purpose of this requirement, credit for measures from Section C406.3 shall not be subject to the limitation of Equation 4-12. Where the area of work contains multiple occupancies, credits specified in Table C406.1.1(1) for each occupancy shall be weighted by the *conditioned floor area* to determine the weighted average credits required. Accessory occupancies shall be included with the main occupancy group for the purposes of this section.

Exceptions:

1. Portions of buildings devoted to manufacturing or industrial use.
2. *Alterations* to buildings where the building after the alteration complies with Section C407.
3. *Alterations* that are part of the same project as an *addition* complying with Section C505.2.7.

SECTION C505 ADDITIONS

C505.1 General.

Additions shall conform to the provisions of this code as those provisions relate to new construction without requiring the unaltered portion of the *existing building* or existing building systems to comply with this code. *Additions* shall not create an unsafe condition or overload an existing building system. An *addition* shall be deemed to comply with this code if the *addition* alone complies or if the *existing building* and *addition* comply with this code as a single *building*.

C505.2 Compliance.

Additions shall comply with Sections C505.2.1 through C505.2.7.

C505.2.1 Vertical fenestration area.

Vertical fenestration shall comply with the following:

1. Where an *addition* has a new *vertical fenestration fenestration area* that results in a total building *vertical fenestration fenestration area* less than or equal to that allowed by Section C402.5.1, the *addition* shall comply with Section C402.1.4, C402.5.3 or C407.
2. Where an *addition* with *vertical fenestration* that results in a total building *vertical fenestration fenestration area* greater than Section C402.5.1 or an *addition* that exceeds the *vertical fenestration fenestration area* allowed by Section C402.5.1, the *vertical fenestration* shall comply with Section C402.5.1.1 for the *addition* only.
3. Where an *addition* has *vertical fenestration* that results in a total building *vertical fenestration fenestration area* exceeding that allowed by Section C402.5.1.1, the *addition* shall comply with Section C402.1.4 or C407.

C505.2.2 Skylight area.

Skylights and sloped glazing shall comply with the following:

1. Where an *addition* has new skylight *fenestration area* that results in a total building skylight *fenestration area* less than or equal to that allowed by Section C402.5.1, the *addition* shall comply with Section C402.1.4 or C407.
2. Where an *addition* has new skylight *fenestration area* that results in a total building skylight *fenestration area* greater than allowed by Section C402.5.1 or where *additions* have skylight *fenestration area* greater than that allowed by Section C402.5.1, the skylight *fenestration area* shall comply with Section C402.5.1.2 for the *addition* only.
3. Where an *addition* has skylight *fenestration area* that results in a total building skylight *fenestration area* exceeding that allowed by Section C402.5.1.2, the *addition* shall comply with Section C402.1.4 or C407.

C505.2.3 Building mechanical systems.

New mechanical systems and equipment that are part of the *addition* or *fenestration* serve the *addition's* heating, cooling or *ventilation* needs shall comply with Sections C403 and C408.

C505.2.4 Service water heating systems.

New *service water heating* equipment, controls and piping shall comply with Section C404.

C505.2.5 Pools and inground permanently installed spas.

New pools and inground permanently installed spas shall comply with Section C404.8.

C505.2.6 Lighting and power systems.

New lighting and power systems that are installed as part of the *addition* shall comply with Sections C405 and C408.

C505.2.6.1 Interior lighting power.

The total interior lighting power for the *addition* shall comply with Section C405.3.2 for the *addition* alone, or the *existing building* and the *addition* shall comply as a single *building*.

C505.2.6.2 Exterior lighting power.

The total exterior lighting power for the *addition* shall comply with Section C405.5.2 for the *addition* alone, or the *existing building* and the *addition* shall comply as a single *building*.

C505.2.7 Additional energy efficiency credit requirements.

Additions shall comply with measures from Sections C406.2 and C406.3 to achieve not less than 50 percent of the number of required credits from Table C406.1.1(1) based on building occupancy group. For the purpose of this requirement, credit for measures from Section C406.3 shall not be subject to the limitation of Equation 4-12. Where a project contains multiple occupancies, credits from Table C406.1.1(1) for each building occupancy shall be weighted by the *conditioned floor area* to determine the project weighted average energy credits required. Accessory occupancies shall be included with the main occupancy group for purposes of this section. *Alterations* to the *existing building* that are not part of the *addition*, but are permitted with an *addition*, shall be allowed to be used to achieve the required credits.

Exceptions:

1. *Additions* classified as Group F, H, S or U occupancies in accordance with the *Chicago Building Code*.
2. *Additions* with less than 1,000 square feet (93 m²) of *conditioned floor area*.
3. *Additions* with less than 1,000 square feet (93 m²) of habitable space.

4. *Additions* that do not increase conditioned volume.
5. *Additions* that do not include adding or replacing equipment covered by Tables C403.3.2(1) through C403.3.2(16) or Section C404.2.
6. Where the *addition* alone or the *existing building* and *addition* together complies with Section C407.

SECTION C506 CONVERSION OF UNCONDITIONED OR LOW-ENERGY SPACE

C506.1 General.

Any unconditioned or low-energy space that is converted to become *conditioned space* shall comply with Section C505 and this section. For purposes of applying Section C505 to the conversion of unconditioned or low-energy space to *conditioned space*, existing building systems and *building thermal envelope* components, including *fenestration*, serving or adjoining the affected area shall be treated as new elements.

Exceptions:

1. Where the component performance alternative in Section C402.1.4 is used to comply with this section, the proposed UA shall be not greater than 110 percent of the target UA.
2. Where the *simulated building performance* option in Section C407 is used to comply with this section, the annual *energy cost* of the *proposed design* shall be not greater than 110 percent of the annual *energy cost* otherwise allowed by Section C407.2.

C506.2 Below-grade walls.

Where unconditioned or low-energy below-grade space is changed to *conditioned space*, walls enclosing such *conditioned space* shall be insulated in accordance with Section C402.1.

C506.3 Above-grade walls.

Where unconditioned or low-energy above-grade space is changed to *conditioned space*, walls enclosing such *conditioned space* shall be insulated in accordance with Section C402.1.

C506.4 Roof and ceiling assemblies.

Insulation complying with Sections C402.1 and C402.2.1 shall be provided for conversion of unconditioned attic space into *conditioned space*."

**CHAPTER 14N-C6
CHICAGO-SPECIFIC REQUIREMENTS—COMMERCIAL**

14N-C6-C600 CHAPTER C6.

The following is adopted as Chapter C6 of this code entitled "Chicago-Specific Requirements—Commercial":

**"SECTION C601
SCOPE**

C601.1 General.

The provisions of this chapter shall apply to *commercial buildings*.

**SECTION C602
RESERVED**

**SECTION C603
SOLAR-READY ROOFS**

C603.1 Scope.

This section shall be applicable for new construction *buildings and additions*.

Exception: A new construction *building or addition* with a ground-level footprint of 7,500 square feet (697 m²) or less.

C603.2 General.

Solar-ready zones shall be provided on *low-sloped roofs* of *buildings* with a *building height* of 60 feet (18.3 m) or less. *Solar-ready zones* shall comply with Sections C603.3 through C603.10.

Exceptions:

1. A *building* with a permanently installed, *on-site renewable energy system*.
2. A roof that will be shaded by existing structures or existing vegetation for more than 50 percent of daylight hours annually, as certified by a *registered design professional or professional engineer* based on calculations.
3. A roof where the incident solar radiation available is not feasible for a solar photovoltaic or solar thermal system, as certified by a *registered design professional or professional engineer* based on analysis.
4. A roof where a *registered design professional* certifies that the *solar-ready zone* area required by Section C603.4 cannot be met because of extensive rooftop equipment, skylights, occupiable rooftop areas, *vegetative roof* areas or similar obstructions.
5. Group H occupancies.

C603.3 Construction document requirements for a solar-ready zone.

Construction documents shall indicate the *solar-ready zone*.

C603.4 Solar-ready zone area.

The total *solar-ready zone* surface area shall be not less than 40 percent of the available roof area. The available roof area is the horizontally projected gross roof area less areas covered by skylights, rooftop parking or helipads, occupiable rooftops, *vegetative roof* areas and mandatory *access* or set back areas as required by Section 1204 of the *Chicago Fire Prevention Code*. The *solar-ready zone* shall be either a single area or smaller, separated sub-zone areas. Each sub-zone shall be not less than 5 feet (1524 mm) in width in the narrowest dimension.

Exception: A *solar-ready zone* shall not be required if the available roof area is less than 2,000 square feet (186 m²).

C603.5 Obstructions.

Solar ready zones shall be free from obstructions, including pipes, vents, ducts, HVAC equipment, skylights and roof-mounted equipment.

C603.6 Roof loads and documentation.

A collateral dead load of not less than 5 pounds per square foot (5 psf) (24.41 kg/m²) shall be included in the gravity and lateral design calculations for the *solar-ready zone*. The structural design loads for roof dead load and roof live load shall be indicated in the *construction documents*.

C603.7 Interconnection pathway.

Construction documents shall indicate pathways for future routing of conduit or piping from the *solar-ready zone* to the electrical service panel and *energy storage system-ready* area or *service water heating* system.

C603.8 Energy storage system-ready area.

The floor area of the *energy storage system-ready* area shall be not less than 2 feet (610 mm) in one dimension and 4 feet (1219 mm) in the perpendicular dimension and located in accordance with the *Chicago Fire Prevention Code*. The location and layout diagram of the *energy storage system-ready* area shall be indicated in the *construction documents*.

C603.9 Electrical service reserved space.

The main electrical service panel shall have a reserved space to allow installation of a dual-pole circuit breaker for future solar electric and a dual-pole circuit breaker for future *energy storage system* installation. These spaces shall be labeled: FOR FUTURE SOLAR ELECTRIC AND STORAGE. The reserved spaces shall be positioned at the end of the panel that is opposite from the panel supply conductor connection.

C603.10 Permanent certificate.

A permanent certificate, indicating the location and dimensions of the *solar-ready zone* and other requirements of this section, shall be posted near the electrical distribution panel, *water heater* or other conspicuous location by the builder.

SECTION C604 ELECTRIFICATION-READY RESIDENCES

C604.1 Scope.

This section shall apply to equipment within *dwelling units* and *sleeping units* and rooms and spaces provided with domestic cooking appliances shared by the occupants of more than one *dwelling unit* or *sleeping unit* that are created through:

1. New construction.
2. *Change of occupancy.*

Exception: *Change of occupancy* within Group R.

This section shall not apply to *repairs, alterations or additions* to existing Group R or I occupancies.

C604.2 Indoor cooking appliances.

A receptacle outlet served by a dedicated branch circuit with a minimum rating of 40 amperes shall be installed within 3 feet (914 mm) of each *fuel gas*-fired range, cooktop, oven or other permanently installed indoor cooking appliance. A minimum of 9,600 VA for 240-volt systems or 8,000 VA for 208-volt systems shall be included in feeder and service load calculations.

C604.3 Domestic clothes dryers.

A receptacle outlet served by a dedicated branch circuit with a minimum rating of 30 amperes shall be installed within 3 feet (914 mm) of each *fuel gas*-fired domestic clothes dryer. A minimum of 5,000 VA shall be included in feeder and service load calculations.

C604.4 Water heaters.

A receptacle outlet served by a dedicated branch circuit with a minimum rating of 30 amperes shall be installed within 3 feet (914 mm) of each *fuel gas*-fired *water heater* serving a single *dwelling unit*. A minimum of 4,500 VA shall be included in feeder and service load calculations.

C604.4.1 Clear space.

A clear space that is at least 3 feet (914 mm) by 3 feet (914 mm) by 7 feet (2134 mm) high shall be provided within 3 feet (914 mm) of the installed *fuel gas*-fired *water heater*.

Exception: Clear space is not required adjacent to heat pump *water heaters* or tankless *water heaters*.

C604.5 Electrification-ready circuits.

Both ends of the unused conductors required by Sections C604.2, C604.3 and C604.4 shall be labeled SPARE and shall be electrically isolated. Space shall be reserved in the electrical panel in which the branch circuit originates for the installation of an overcurrent device. Capacity for the circuits required by Sections C604.2, C604.3 and C604.4 shall be included in the electrical load calculations of the original installation and indicated in the *construction documents*.

**SECTION C605
RESERVED**

**SECTION C606
GAS LIGHTING PROHIBITED**

C606.1 General.

New permanently installed *fuel gas*-fired lighting appliances shall be prohibited.

**SECTION C607
ROOF SOLAR REFLECTANCE**

C607.1 General.

Roof coverings shall comply with Section 1515 of the *Chicago Building Code*.

**SECTION C608
ELECTRIC VEHICLE SUPPLY EQUIPMENT**

C608.1 General.

Electric vehicle supply equipment or electric vehicle supply equipment-ready parking spaces shall be provided in accordance with Section 17-10-1011 of the *Chicago Zoning Ordinance*."

**CHAPTER 14N-C7
REFERENCED STANDARDS**

14N-C7-C700 CHAPTER C7.

The provisions of IECC-CE Chapter 6 are adopted by reference as Chapter C7 of this code with the following modifications:

1. Delete the cross-reference to provisions of the IECC-CE following each reference.
2. Delete the entire ASME section.
3. Delete the following ICC references: IBC-24, IFC-24, IFCG-24, IMC-24, IPC-24, IPMC-24, and IPSDC-24.
4. Insert the following ICC reference: "ICC 700—2020: National Green Building Standard."
5. Delete IEEE 1547-2018.
6. Delete the entire NFPA section.
7. Insert a new section to read:

"PHIUS

Phius
53 West Jackson Boulevard, Suite 1462
Chicago, IL 60604-3606

8. Delete each standard which is not referenced in any provision adopted in Chapters 14N-C1 through 14N-C6.

PART II RESIDENTIAL PROVISIONS

CHAPTER 14N-R1 SCOPE AND PURPOSE

14N-R1-R001 ADOPTION OF THE INTERNATIONAL ENERGY CONSERVATION CODE— RESIDENTIAL PROVISIONS BY REFERENCE.

The residential provisions of the *International Energy Conservation Code*, 2024 edition, first printing, and any erratum thereto identified by the publisher (hereinafter referred to as "IECC-RE"), including appendix RF, are adopted by reference and shall be considered part of the requirements of this title except as modified by the specific provisions of this title.

If a conflict exists between a provision modified by this title and a provision adopted without modification, the modified provision shall control.

14N-R1-R002 CITATIONS.

Provisions of IECC-RE which are incorporated into this title by reference may be cited as follows:

14N-R[IECC-RE chapter number]-[IECC-RE section number]

provided the appendices shall be deemed to be part of a new Chapter 8.

14N-R1-R002 GLOBAL MODIFICATIONS.

The following modifications shall apply to each provision of IECC-RE incorporated into this title:

1. Replace each occurrence of "*International Building Code*" with "*Chicago Building Code*."
2. Replace each occurrence of "NFPA 70" with "the *Chicago Electrical Code*."
3. Replace each occurrence of "*International Mechanical Code*" with "*Chicago Mechanical Code*."
4. Replace each occurrence of "*code official*" or "code official" with "*building official*."
5. Replace each occurrence of "permitted" with "allowed."

14N-R1-R100 CHAPTER R1:

The provisions of IECC-RE Chapter 1 are not adopted. The following is adopted as Chapter R1 entitled "Scope and Purpose":

"SECTION R101 GENERAL

R101.1 Title.

This Part II of Title 14N of the Municipal Code of Chicago shall be known as the *Chicago Energy Transformation Code—Residential Provisions*, hereinafter referred to as "this code."

R101.2 Scope.

This code applies to *residential buildings*, the *building site* and associated systems and equipment.

R101.3 Purpose.

The purpose of this code is to regulate the design, construction and rehabilitation of *commercial buildings* for the effective use and conservation of energy over the useful life of each *building* and for the reduction of carbon emissions caused by use and occupancy of *buildings* built or rehabilitated under this code. This code is intended to provide flexibility to allow the use of innovative and cost-effective approaches and techniques to achieve these objectives. This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

R101.4 Compliance.

Residential buildings shall meet the requirements of this code. *Commercial buildings* shall meet the requirements of the *Chicago Energy Transformation Code—Commercial Provisions*.

R101.4.1 Mixed residential and commercial buildings.

Where a *building* includes both *residential building* and *commercial building* portions, each portion shall be separately considered and meet applicable requirements of this code and the *Chicago Energy Transformation Code – Commercial Provisions*.

R101.4.2 Evidence of compliance.

The *building official* may designate specific computer software, worksheets, forms, compliance manuals and other similar materials as providing evidence of compliance with the requirements of this code.

SECTION R102 CONSTRUCTION DOCUMENTS

R102.1 General.

Construction documents shall comply with the *Chicago Construction Codes Administrative Provisions*, including specifically Section 14A-4-411.3.13."

CHAPTER 14N-R2 DEFINITIONS

14N-R2-R201 GENERAL.

The provisions of Section IECC-RE R201 are not adopted. The following is adopted as Section R201:

"SECTION R201 GENERAL

R201.1 Definitions.

The definitions in Section R202 shall apply to italicized words throughout this code, except where specifically limited to a particular chapter or section. Unless the context requires otherwise, the definitions in Section R202 shall also apply to non-italicized words throughout this code.

R201.2 Interchangeability.

Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural includes the singular.

R201.3 Words defined in other codes.

Where non-italicized words are not defined in this code and are defined in the *Chicago Construction Codes Administrative Provisions, Chicago Building Code, Chicago Conveyance Device Code, Chicago Electrical Code, Chicago Fire Prevention Code, Chicago Fuel Gas Code, Chicago Mechanical Code, Chicago Energy Transformation Code—Commercial Provisions, Chicago Plumbing Code, Chicago Building Rehabilitation Code, or Chicago Minimum Requirements for Existing Buildings*, such words shall have the meanings ascribed to them in those codes unless the context requires otherwise.

R201.4 Words not defined.

Where italicized words are not defined in Section R202 or non-italicized words are not defined in Section R202 or any of the codes referenced in Section R201.3, such words shall have the meaning given in the latest edition of Merriam Webster's Collegiate Dictionary as the context implies."

14N-R2-R202 DEFINITIONS.

The provisions of IECC-RE Section R202 are adopted by reference with the following modifications:

1. Revise the section title to read: "Definitions."
2. Revise the definition of "above-grade wall" by resetting "skylight" in roman type.

3. Revise the definition of "access (to)" to read:
"ACCESS (TO). As defined in Chapter 2 of the *Chicago Mechanical Code*."
4. Revise the definition of "addition" to read:
"ADDITION. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code*."
5. Revise the definition of "air-handling unit" to read:
"AIR-HANDLING UNIT. As defined in Chapter 2 of the *Chicago Mechanical Code*."
6. Revise the definition of "alteration" to read:
"ALTERATION. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code*."
7. Revise the definition of "approved" to read:
"APPROVED. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
8. Revise the definition of "approved agency" to read:
"APPROVED AGENCY. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
9. Delete the definition of "approved source."
10. Revise the definition of "balanced ventilation system" to read:
"BALANCED VENTILATION SYSTEM. As defined in Chapter 2 of the *Chicago Mechanical Code*."
11. Delete the definition of "biodiesel blend."
12. Revise the definition of "building" to read:
"BUILDING. As defined in Chapter 2 of the *Chicago Building Code*."
13. Insert the following definition:
"BUILDING OFFICIAL. As defined in Chapter 2 of the *Chicago Building Code*."
14. Revise the definition of "building thermal envelope" by deleting "*basement walls*."
15. Insert the following definitions:
"CHANGE OF OCCUPANCY. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code*.

CHANGE OF USE. A change in the use of a building or a portion of a building for which there is a change in requirements under this code.

CHICAGO BUILDING CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO BUILDING REHABILITATION CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO CONSTRUCTION CODES. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO CONSTRUCTION CODES ADMINISTRATIVE PROVISIONS. Title 14A of the Municipal Code of Chicago.

CHICAGO CONVEYANCE DEVICE CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO ELECTRICAL CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO ENERGY TRANSFORMATION CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

Chicago Energy Transformation Code – Commercial Provisions. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

Chicago Energy Transformation Code – Residential Provisions. This code.

CHICAGO FUEL GAS CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO MECHANICAL CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO MINIMUM REQUIREMENTS FOR EXISTING BUILDINGS. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO PLUMBING CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO ZONING ORDINANCE. Title 17 of the Municipal Code of Chicago.”

16. Delete the definition of “climate zone.”
17. Delete the definition of “code official.”
18. Revise the definition of “commercial building” to read:
“**COMMERCIAL BUILDING (for this code only).** A *building* that is not a *residential building*.”
19. Delete the definition of “common areas.”

20. Revise the definition of “conditioned space” to read:
“**CONDITIONED SPACE.** As defined in Chapter C2 of the *Chicago Energy Transformation Code—Commercial Provisions.*”
21. Revise the definition of “construction documents” to read:
“**CONSTRUCTION DOCUMENTS.** As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*”
22. Delete the definition of “continuous air barrier.”
23. Revise the definition of “damper” to read:
“**DAMPER.** As defined in Chapter 2 of the *Chicago Mechanical Code.*”
24. Delete the definition of “distribution system efficiency (DSE).”
25. Revise the definition of “duct” to read:
“**DUCT.** As defined in Chapter 2 of the *Chicago Mechanical Code.*”
26. Revise the definition of “duct system” by inserting “(for this code only)” following the defined term and before the definition.
27. Revise the definition of “ductwork” by inserting “(for this code only)” following the defined term and before the definition.
28. Revise the definition of “dwelling unit” to read:
“**DWELLING UNIT.** As defined in Chapter 2 of the *Chicago Building Code.*”
29. Delete the definition of “energy simulation tool.”
30. Revise the definition of “existing building” to read:
“**EXISTING BUILDING.** As defined in Chapter 2 of the *Chicago Building Rehabilitation Code.*”
31. Revise the definition of “exterior wall” by inserting “(for this code only)” at the end of the defined term and before the definition.
32. Revise the definition of “fenestration” including its subsections to read:
“**FENESTRATION.** As defined in Chapter 2 of the *Chicago Building Code.*”
33. Insert the following definition:
“**FENESTRATION, VERTICAL.** As defined in Chapter 2 of the *Chicago Building Code.*”
34. Revise the definition of “F-Factor (thermal transmittance)” by deleting “(thermal transmittance).”

35. Insert the following definition:
 "FOSSIL GAS. As defined in Chapter 2 of the *Chicago Fuel Gas Code.*"
36. Revise the definition of "fuel gas" to read:
 "FUEL GAS. As defined in Chapter 2 of the *Chicago Fuel Gas Code.*"
37. Revise the definition of "fuel oil" to read:
 "FUEL OIL. As defined in Chapter 2 of the *Chicago Mechanical Code.*"
38. Delete the definition of "grade plane."
39. Revise the definition of "heat exchanger" to read:
 "HEAT EXCHANGER. As defined in Chapter 2 of the *Chicago Mechanical Code.*"
40. Revise the definition of "historic building" to read:
 "HISTORIC BUILDING. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code.*"
41. Revise the definition of "labelled" to read:
 "LABELED. As defined in Chapter 2 of the *Chicago Building Code.*"
42. Delete the definition of "liquid fuel."
43. Revise the definition of "listed" to read:
 "LISTED. As defined in Chapter 2 of the *Chicago Building Code.*"
44. Delete the definition of "living space."
45. Revise the definition of "low slope" to read:
 "LOW-SLOPED ROOF. As defined in Chapter 2 of the *Chicago Building Code.*"
46. Delete the definition of "occupiable space."
47. Revise the definition of "plenum" to read:
 "PLENUM. As defined in Chapter 2 of the *Chicago Building Code.*"
48. Insert the following definition:
 "PROFESSIONAL ENGINEER. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*"
49. Revise the definition of "ready access (to)" to read:
 "READY ACCESS (TO). As defined in Chapter 2 of the *Chicago Mechanical Code.*"

50. Delete the definition of “renewable energy certificate (REC).”
51. Revise the definition of “repair” to read:
“**REPAIR.** As defined in Chapter 2 of the *Chicago Building Rehabilitation Code.*”
52. Revise the definition of “reroofing” to read:
“**REROOFING.** As defined in Chapter 2 of the *Chicago Building Rehabilitation Code.*”
53. Revise the definition of “residential building” to read:
“**RESIDENTIAL BUILDING (for this code only).** Group R-2, R-3, R-4 and R-5 occupancies in buildings with no more than four *stories above grade plane.*”
54. Revise the definition of “roof assembly” to read:
“**ROOF ASSEMBLY.** As defined in Chapter 2 of the *Chicago Building Code.*”
55. Revise the definition of “roof recover” to read:
“**ROOF RECOVER.** As defined in Chapter 2 of the *Chicago Building Rehabilitation Code.*”
56. Revise the definition of “roof repair” to read:
“**ROOF REPAIR.** As defined in Chapter 2 of the *Chicago Building Rehabilitation Code.*”
57. Revise the definition of “roof replacement” to read:
“**ROOF REPLACEMENT.** As defined in Chapter 2 of the *Chicago Building Rehabilitation Code.*”
58. Revise the definition of “sleeping unit” to read:
“**SLEEPING UNIT.** As defined in Chapter 2 of the *Chicago Building Code.*”
59. Delete the definition of “steep slope.”
60. Insert the following definition:
“**STORY ABOVE GRADE PLANE.** As defined in Chapter 2 of the *Chicago Building Code.*”
61. Delete the definition of “substantial improvement.”
62. Revise the definition of “sunroom” by replacing “dwelling” with “*dwelling unit.*”
63. Insert the following definitions:
“**THERMAL RESISTANCE.** See “*R-value (thermal resistance).*”
THERMAL TRANSMITTANCE. See “*U-factor (thermal transmittance).*””

64. Revise the definition of “ventilation” to read:
“**VENTILATION.** As defined in Chapter 2 of the *Chicago Building Code.*”
65. Revise the definition of “ventilation air” to read:
“**VENTILATION AIR.** As defined in Chapter 2 of the *Chicago Mechanical Code.*”
66. Delete the definition of “work area.”
67. Revise the definition of “zone” by inserting “(for this code only)” at the end of the defined term and before the definition.

CHAPTER 14N-R3 GENERAL REQUIREMENTS

14N-R3-R301 CLIMATE ZONE.

The provisions of IECC-RE Section R301 are not adopted. The following is adopted as Section R301:

“SECTION R301 CLIMATE ZONE

R301.1 General.

Climate Zone 5A shall be used to determine the applicable requirements in Chapter 4.”

14N-R3-R302 DESIGN CONDITIONS.

The provisions of IECC-RE Section R302 are adopted by reference without modification.

14N-R3-R303 MATERIALS, SYSTEMS AND EQUIPMENT.

The provisions of IECC-RE Section R303 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: “enclosed reflective airspace” and “R-value.”
2. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in roman type: “skylight.”
3. Revise the exception to Section R303.1.1 by deleting everything after “*Building Code.*”
4. Revise the exception to Section R303.1.2 by deleting everything after “*Building Code.*”
5. Revise the last sentence of Section R303.1.6 to read:
“Airflow shall be deemed minimized where the enclosed airspace is unventilated.”

6. Revise the exception to Section R303.1.6 by deleting "continuous."
7. Revise Section R303.2 by deleting everything after "*Building Code*."
8. Delete Section R303.3.

CHAPTER 14N-R4 RESIDENTIAL ENERGY EFFICIENCY

14N-R4-R401 GENERAL.

The provisions of IECC-RE Section R401 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "basement wall," "building thermal envelope," "conditioned space," "crawl space wall," "residential building," and "solar-ready zone."
2. Revise Section R401.2, including its exception, to read:

"R401.2 Application.

Residential buildings shall comply with Chapter R6 and either Section R401.2.1, R401.2.2, R401.2.3 or R401.2.5.

Exception: *Work to existing buildings* complying with Chapters R5 and R6."

3. Delete Section R401.2.4.
4. Add a new Section R401.2.5 to read:

"R401.2.5 Above-Code Certification Option.

The Above-Code Certification Option requires compliance with either Section R401.2.5.1 or R401.2.5.2.

R401.2.4.1 Phius Certification Option.

The Phius Certification Option requires compliance with Section R409.

R401.2.4.2 National Green Building Standard Certification Option.

The National Green Building Standard Certification Option requires compliance with Section R410."

5. Revise the first sentence of Section R401.3 to read:

"A permanent certificate shall be completed by the builder and posted on a wall in the space where the furnace is located or in a utility room."

14N-R4-R402 BUILDING THERMAL ENVELOPE.

The provisions of IECC-RE Section R402 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "access," "building thermal envelope," "conditioned space," "dwelling unit," "proposed design," "sleeping unit" and "testing unit enclosure area."
2. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in roman type: "skylight."
3. Revise Section R402.1.1 to read:

"R402.1.1 Vapor retarder.
Wall assemblies in the *building thermal envelope* shall comply with the vapor retarder requirements of Section 1404.3 of the *Chicago Building Code*."
4. Revise Section R402.1.2 by deleting "based on the *climate zone* specified in Chapter 3."
5. Revise Table R402.1.2 by deleting the climate zone heading row, deleting all columns except for "5 and marine 4," revising footnote a to read: "Nonfenestration *U*-factors and *F*-factors shall be obtained from measurement, calculation or Appendix RF.", revising footnote b to read: "Mass walls shall be in accordance with Section R402.2.6. Where more than half the insulation is on the interior, the mass wall *U*-factors shall not exceed 0.065.", and deleting footnotes c and d.
6. Revise Table R402.1.3 by deleting the climate zone heading row, deleting all columns except for "5 and marine 4," deleting "g" in the row for "Vertical fenestration *U*-factor," inserting a designation for note i after "20&5ci" in the row for "Wood-framed wall *R*-value," deleting footnote g, and inserting a footnote i to read: "To reduce the possibility of condensation within walls during cold weather, the ratio of the *R*-values of continuous insulation to cavity insulation should not be less than 0.30 without hygrothermal analysis."
7. Revise Equation 4-1 by deleting the exception.
8. Revise Section R402.1.6 by deleting "In Climate Zones 3 through 8."
9. Revise the exceptions to Section R402.1.6 to read:

"Exception: Direct vent appliances with both intake and exhaust pipes installed continuous to the outside."
10. Revise Section R402.2.1 by deleting the first sentence.
11. Revise the exceptions to Section R402.2.5 to read:

"Exception: Vertical doors providing *access* from *conditioned spaces* to unconditioned spaces that comply with the *fenestration* requirements of Table R402.1.3."

12. Revise Section R402.2.5.1 by replacing "*living space*" with "occupiable spaces."
13. Revise Section R402.2.8 by resetting "insulation" in roman type.
14. Revise Section R402.2.10 by deleting the exception.
15. Revise the second sentence of Section R402.2.10.1 to read:

"Insulation located below grade shall extend the vertical distance provided in Table R402.1.3, but need not exceed the footing depth."
16. Revise the first sentence of the second paragraph of Section R402.2.11.1 by deleting everything after "*Building Code*." Revise the second and third sentences by replacing "6 inches (153 mm)" with "12 inches (305 mm)."
17. Revise the numbered items in Section R402.2.13 to read:
 1. The minimum ceiling insulation *R*-values shall be R-24.
 2. The minimum wall insulation *R*-value shall be R-13. Walls separating a *sunroom* or heated garage with *thermal isolation* from *conditioned space* shall comply with the *building thermal envelope* requirements of this code."
18. Add a new Section R402.2.14 to read:

"R402.2.14 Balconies and parapet walls.
See Section R605."
19. Revise the exception to Section R402.4.5 by deleting "In Climate Zones 2 through 8."
20. Revise Section R402.5.1.1 by deleting the last sentence.
21. Revise Table R402.5.1.1 by, in the row for "Basement, crawl space, and slab foundations," deleting everything after "below-grade walls," and deleting the entire row for "Common walls or double walls separating attached single-family dwellings or townhouses."
22. Revise Section R402.5.1.2 by deleting the third sentence and replacing "provided" with "made available."
23. Revise Exception 1 to Section R402.5.1.2 to read:
 1. For heated, attached private garages and heated, detached private garages accessory to Group R-5 occupancies, *building thermal envelope* tightness and insulation installation shall be considered acceptable where the items in Table R402.5.1.1, applicable to the method of construction, are field verified. Heated, attached private garage space and heated, detached private garage space shall be thermally isolated from all other habitable, conditioned spaces in accordance with Sections R402.2.13 and R402.4.5, as applicable."
24. Revise Section R402.5.1.2.1 by replacing each "*dwelling units or sleeping units*" with "*dwelling units and sleeping units*."

25. Revise Item 1 in Section R402.5.1.3 to read:

"Where complying with Section R401.2.1, the *building* or the *dwelling units* or *sleeping units* in the building shall have an air leakage rate not greater than 3.0 air changes per hour."

26. Revise Item 2 in Section R402.5.1.3 by deleting "dwelling."
27. Revise Exception 1 to Section R402.5.1.3 by deleting "or located in an R-2 occupancy."
28. Revise Section R402.6, excluding the exception, to read:

"R402.6 Maximum fenestration U-factor and SHGC.

The area-weighted average maximum *fenestration U-factor* allowed using tradeoffs from Section R402.1.5 or R405 shall be 0.48 for *vertical fenestration*, and 0.75 for skylights."

14N-R4-R403 SYSTEMS.

The provisions of IECC-RE Section R403 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "access," "balanced ventilation system," "circulating hot water system," "conditioned floor area," "conditioned space," "demand recirculation water system," "duct system," "ductwork," "plenum," and "whole-house mechanical ventilation system."
2. Revise Section R403.1.2 by replacing "*liquid fuel*" with "*fuel oil*."
3. Revise Section R403.2 by replacing "*gas, liquid fuel*" with "*fuel gas, fuel oil*."
4. Revise Section R403.3.2 to read:

"R403.3.2 Framing cavities.

Framing cavities shall not be used as *ductwork* or *plenums*.

Exception: Where allowed by Section 602.2 of the *Chicago Mechanical Code*."

5. Revise Section R403.3.5 by deleting Items 3, 4, and 4.1 and the corresponding exceptions.
6. Revise Section R403.3.6 by deleting "or the *International Residential Code*, as applicable."
7. Revise Section R403.3.7 by replacing "provided" with "made available."
8. Revise Table R403.3.8 by deleting footnote d.

9. Revise Section R403.5 to read:
"R403.5 Service water heating systems.
 Energy conservation measures for *service water heating* systems shall be in accordance with Sections R403.5.1 through R403.5.3."
10. Revise Section R403.6 by deleting "Section M1505 of the *International Residential Code* or" and "as applicable, or with other *approved* means of *ventilation*."
11. Delete Section R403.6.1.
12. Revise Section R403.6.2 by replacing "whole-dwelling" with "whole-house."
13. Revise Section R403.6.3 by deleting the second sentence, by replacing "provided" with "made available," and by deleting Exception 2.
14. Revise Section R403.7 by replacing "*approved*" with "industry standard."
15. Revise Section R403.7.1 by replacing "Detached-one and two-family dwellings and townhouses in Climate Zones 4 through 8" with "*Dwelling units*."
16. Revise Section R403.10.3 by deleting "*approved*."

14N-R4-R404 ELECTRICAL POWER AND LIGHTING SYSTEMS.

The provisions of IECC-RE Section R404 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "above-grade wall," "residential building," "shutoff control," and "temporary."
2. Revise the section title to read: "Electrical Power and Lighting Systems."
3. Revise Section R404.1.1 by deleting "Group R-2, R-3 and R-4."
4. Revise Exception 1 to Section R404.1.1 to read:
 "1. Group R-5 occupancies."
5. Delete Exceptions 2 and 3 to Section R404.1.1.
6. Revise Exception 1 to Section R404.1.2 to read:
 "1. Lighting provided for safety or security reasons."
7. Revise Section R404.1.5 to read:
"R404.1.5 Gas lighting.
 See Section R606."
8. Delete Section R404.4.

14N-R4-R405 SIMULATED BUILDING PERFORMANCE.

The provisions of IECC-RE Section R405 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "conditioned floor area," "dwelling unit," "energy cost," "fuel oil," "proposed design," "simulated building performance," and "standard reference design."
2. Revise Section R405.1 by replacing "service-water heating" with "*service water heating*" and "Group R-2, R-3 and R-4 buildings" with "*residential buildings*."
3. Revise Item 2 in Section R405.2 to read:
 - "2. The proposed total building thermal envelope thermal conductance (TC) shall be less than or equal to the required total building thermal envelope TC using the prescriptive U-factors and F-factors from Table R402.1.2 multiplied by 1.15 in accordance with Equation 4-2 and Section R402.1.5."
4. Revise Equation 4-2 to read:

$TC_{\text{Proposed design}} \leq 1.15 \times TC_{\text{Prescriptive reference design}}$ **Equation 4-2"**
5. Revise Item 3 in Section R405.2 by changing everything after the second sentence to read:

"For each *dwelling unit* with greater than 5,000 square feet (465 m²) of occupiable space located above grade, the annual *energy cost* of the *dwelling unit* shall be reduced by an additional 5 percent of annual *energy cost* of the *standard reference design*. Energy prices shall be taken from the US Energy Information Administration's State Energy Data System Prices and Expenditures Reports."
6. Revise the third sentence of Exception 1 to Section R405.2 to read:

"The source energy multipliers shall be 1.09 for *fossil gas*, 1.15 for propane, and 1.19 for *fuel oil*."
7. Revise Item 2 in Section R405.3 to read:
 - "2. Within 180 days of project completion as evidenced by passing the last required final inspection or issuance of a certificate of occupancy, as applicable in accordance with the *Chicago Construction Codes Administrative Provisions*, a compliance report in accordance with Section R405.5.4.2 shall be submitted to the *building official*."
8. Revise Section R405.4.1 by deleting "*approved* in accordance with Section R405.5."
9. Revise Section R405.4.3 by replacing "*approved source*" with "*reputable source*."

10. Revise Section R405.5 to read:
"R405.5 Calculation software tools.
Performance analysis tools meeting the applicable provisions of Sections R405.5.1 through R405.5.4 shall be used to comply with this section."
11. Revise Section R405.5.1 by replacing "Approved software" with "Software."
12. Revise Section R405.5.2 by replacing "Prior to approval, software" with "Software."
13. Revise Section R405.5.4 by replacing "Approved software" with "Software."
14. Revise Section R405.5.4.1 by replacing "service water-heating" with "*service water heating*."
15. Revise Section R405.5.4.2 above the numbered items to read:
"R405.5.4.2 Confirmed compliance report.
A confirmed compliance report shall include the following:"
16. Revise Item 6 in Section R405.5.4.2 by replacing "service water-heating" with "*service water heating*."

14N-R4-R406 ENERGY RATING INDEX COMPLIANCE ALTERNATIVE.

The provisions of IECC-RE Section R406 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following term in italic type: "proposed design."
2. Revise Section R406.1 by replacing "Group R-2, R-3 or R-4 buildings" with "*residential buildings*."
3. Revise Section R406.3 to read:
"R406.3 Building thermal envelope.
The proposed total *building thermal envelope* thermal conductance (TC) shall be less than or equal to the required total *building thermal envelope* TC using the prescriptive *U*-factors and *F*-factors from Table R402.1.2 multiplied by 1.15 in accordance with Equation 4-2 and Section R402.1.5."
4. Revise Section R406.5 to read:
"R406.5 ERI-based compliance.
Compliance based on an *ERI* analysis requires that the *rated design* and each confirmed as-built *dwelling unit* be shown to have an *ERI* less than or equal to:
 1. 54 where *on-site renewable energy* sources are not installed.
 2. 43 where *on-site renewable energy* sources are installed.

Exceptions:

1. Where the *ERI* analysis excludes on-site power production (OPP), the ERI shall be less than or equal to 54.
2. For buildings with 20 or more *dwelling units*, compliance shall be allowed using the Average Dwelling Unit *Energy Rating Index*, as calculated in accordance with ANSI/RESNET/ICC 301."
5. Delete Table R406.5.
6. Revise Section R406.6 to read:
"R406.6 Verification by qualified third party.
Verification of compliance with Section R406 as outlined in Sections R406.5 and R406.7 shall be completed by a qualified and independent third party."
7. Revise Section R406.7.1 by deleting "*approved.*"
8. Revise Section R406.7.2 by deleting the third sentence.
9. Revise Section R406.7.2.1 by replacing "service-water heating" with "*service water heating.*"
10. Revise Section R406.7.2.2 above the numbered items to read:
"R406.7.2.2 Confirmed compliance report.
Within 180 days of project completion as evidenced by passing the last required final inspection or issuance of a certificate of occupancy, as applicable in accordance with the *Chicago Construction Codes Administrative Provisions*, a confirmed compliance report shall be submitted to the *building official*. A confirmed compliance report shall be made site and address specific and include the following:"
11. Revise Item 6 in Section R406.7.2.2 by replacing "service-water heating" with "*service water heating.*"
12. Delete Section R406.7.3.
13. Delete Section R406.7.5.

14N-R4-R407 IECC SECTION R407.

The provisions of IECC-RE Section R407 are not adopted.

14N-R4-R408 ADDITIONAL EFFICIENCY REQUIREMENTS.

The provisions of IECC-RE Section R408 are adopted by reference with the following modifications:

1. Throughout the body of each provision of this section, reset the singular and plural forms of the following terms in italic type: "*conditioned space,*" "*dwelling unit,*" and "*thermostat.*"

2. Revise the second and third sentences of Section R408.2 to read:

“Five additional credits shall be required for *dwelling units* with more than 5,000 square feet (465 m²) of occupiable space above grade. To earn credit as specified in Table R408.2, each measure selected for compliance shall comply with the applicable subsections of Section R408. Each *dwelling unit* or *sleeping unit* shall comply with the selected measure to earn credit. Interpolation of credits between measures shall not be allowed.”
3. Revise Section R408.2.1.2 to read:

“R408.2.1.2 Improved fenestration.
The area weighted average *U-factor* of all *vertical fenestration* shall be equal to or less than 0.25.”
4. Delete Table R408.2.1.2.
5. Delete Section R408.2.1.3.
6. Revise Section R408.2.2 by deleting “as applicable for the climate zone,” “applicable to all climate zones,” “HVAC options applicable to Climate Zones 0, 1, 2 and 3:”, Items 6 through 10, and “HVAC options applicable to Climate Zones 4, 5, 6, 7 and 8:”.
7. Delete Section R408.2.2.1.
8. Revise Section R408.2.3.1.1 by replacing “circulating water systems” with “*circulating hot water systems*.”
9. Revise Section 408.2.5 by deleting the last sentence.
10. Revise the exception to Section R408.2.6 by deleting “of Group R-2 occupancies.”
11. Revise Section R408.2.7 by deleting the second sentence.
12. Revise Section R408.2.9 by deleting “For *buildings* in Climate Zones 4 and 5.”

14N-R4-R409 PHIUS CERTIFICATION COMPLIANCE ALTERNATIVE.

The following is adopted as a new Section R409:

**“SECTION R409
PHIUS CERTIFICATION COMPLIANCE ALTERNATIVE**

R409.1 Scope.

This section establishes criteria for compliance using Phius certification.

R409.2 Construction documents.

The construction documents submitted to the *building official* shall establish that the project is eligible for certification in accordance with the *PHIUS Passive Building Standard Certification Guidebook*, including all co-requisite programs applicable to the project type. Such documentation shall include:

1. A design certification letter issued by an *approved* third-party certification organization.
2. A list of compliance features.

R409.3 Occupancy.

Within 180 days of project completion, as evidenced by passing the last required final inspection or issuance of a certificate of occupancy, as applicable, in accordance with the *Chicago Construction Codes Administrative Provisions*, the owner shall submit to the *building official* a written certification establishing that the project has been certified in accordance with the *PHIUS Passive Building Standard Certification Guidebook*, including all co-requisite programs applicable to the project type. The written certification shall be issued by a qualified third-party certification organization.”

14N-R4-R410 NATIONAL GREEN BUILDING STANDARD COMPLIANCE ALTERNATIVE.

The following is adopted as a new Section R410:

“SECTION R410

NATIONAL GREEN BUILDING STANDARD COMPLIANCE ALTERNATIVE

R410.1 National Green Building Standard certification.

This section establishes criteria for compliance using National Green Building Standard certification.

R410.2 Construction documents.

The construction documents submitted to the *building official* shall establish that the project is eligible for certification at the gold or emerald level in accordance with ICC 700. Such documentation shall include:

1. Evidence that the project has been registered with an *approved* third-party certification organization that certifies compliance with ICC 700.
2. Evidence that the project, as designed, is eligible for certification at the gold or emerald level.
3. A list of compliance features.

R410.3 Certification.

Within 180 days of project completion, as evidenced by passing the last required final inspection or issuance of a certificate of occupancy, as applicable, in accordance with the *Chicago Construction Codes Administrative Provisions*, the owner shall submit to the *building official* a written certification that the project has achieved certification at the gold or emerald level under ICC 700. The written certification shall be issued by a qualified third-party certification organization.”

CHAPTER 14N-R5 EXISTING BUILDINGS—RESIDENTIAL

14N-R5-R500 CHAPTER R5.

The provisions of IECC-RE Chapter 5 are not adopted. The following is adopted as Chapter R5 entitled "Existing Buildings—Residential":

"SECTION R501 GENERAL

R501.1 Scope.

Repairs, changes of use, alterations and additions to existing buildings and conversion of unconditioned or low-energy space to conditioned space shall comply with this chapter.

R501.2 Existing conditions.

Except as specified in this chapter, this code shall not be used to require the removal, *alteration* or abandonment of, nor prevent the continued use and maintenance of, an *existing building* or building system lawfully in existence at the time of adoption of this code.

R501.3 Conformance.

Existing buildings and existing building systems shall not be repaired or altered such that the building becomes less safe, sanitary or energy efficient than its condition before such work.

Exceptions:

1. Where the current level of safety or sanitation is proposed to be reduced, the portion affected shall conform to the requirements of the *International Building Code*.
2. Where the current level of energy efficiency is proposed to be reduced, the portion affected shall conform to the requirements of Chapters R3 and R4 of this code.

R501.4 Existing materials and equipment.

Materials and equipment already in use in a building in compliance with requirements or approvals in effect at the time of their installation shall be allowed to remain in use unless determined by the *building official* to be unsafe.

R501.5 New and replacement materials.

Except as otherwise required or allowed by this code, materials allowed by the applicable code for new construction shall be used. Like materials shall be allowed for *repairs*, provided that hazards to life, health or property are not created.

R501.5.1 New and replacement insulation.

New and replacement insulation shall have a minimum *R-value* of R-3 per inch (25.4 mm). New insulation provided as part of an alternative design due to existing conditions in accordance with the exceptions to Sections R504.1.1.2, R504.1.1.3 and R504.1.1.4 shall have a minimum *R-value* of R-5 per inch (25.4 mm).

R501.6 Historic buildings.

Provisions of this chapter shall not be mandatory for *historic buildings* where the *construction documents* include a report or statement signed by a *registered design professional* demonstrating that compliance with that provision would threaten, degrade or destroy the historic form, fabric or function of the *building*.

SECTION R502 REPAIRS

R502.1 General.

Repairs shall comply with Sections R501.2 through R501.5.

R502.1.1 Associated work.

Work on nondamaged components that is reasonably necessary to *repair* damaged components shall be considered to be part of the *repair* and shall not be subject to the requirements for *alterations* in this chapter.

SECTION R503 CHANGES OF USE

R503.1 General.

Any space in a *residential building* that undergoes a *change of use* to a *dwelling unit* or portion of a *dwelling unit* from another use shall comply with Sections R504 and R506, as applicable.

Exception: Where the *simulated building performance* option in Section R405 is used to comply with this section, the annual *energy cost* of the *proposed design* is allowed to be 110 percent of the annual *energy cost* allowed by Section R405.2.

SECTION R504 ALTERATIONS

R504.1 General.

Alterations shall comply with this section. *Alterations* shall be such that the *existing building* is not less conforming to the provisions of this code than the *existing building* was prior to the *alteration*. *Alterations* to an *existing building*, existing building system or portion thereof shall conform to the provisions of this code as those provisions relate to new construction without requiring the unaltered portions of the *existing building* or existing building system to comply with this code. *Alterations* shall not create unsafe conditions or overload existing building systems.

R504.1.1 Building thermal envelope.

Alterations of existing *building thermal envelope* assemblies shall comply with this section. New *building thermal envelope* assemblies that are part of the *alteration* shall comply with Section R402. The *R-value* of existing insulation shall not be reduced, nor the *U-factor* of a *building thermal envelope* assembly increased as part of a *building thermal envelope alteration* except where the *building* after the *alteration* complies with Section R405 or R406.

Exception: The following *alterations* shall not be required to comply with the requirements for new construction:

1. Storm windows installed over existing *fenestration*.
2. Surface-applied window film installed on existing *fenestration* assemblies to reduce solar heat gain.
3. Roof recover.
4. Roof replacement where roof assembly insulation is integral to or located below the structural roof deck.

R504.1.1.1 Fenestration alterations.

Where new *fenestration* area is added to an *existing building*, the new *fenestration* shall comply with Section R402.4. Where some or all of an existing *fenestration* product is replaced with a new *fenestration* product, including sash and glazing, the replacement *fenestration* product shall meet the applicable requirements for *U-factor* and *solar heat gain coefficient (SHGC)* as specified in Table R402.1.3. Where more than one replacement *fenestration* product is to be installed, an area-weighted average of the *U-factor*, SHGC or both of all replacement *fenestration* products shall be allowed to show compliance.

R504.1.1.2 Roof and ceiling assemblies.

Insulation complying with Section R402.1 shall be provided for the following *alterations*:

1. An *alteration* to roof/ceiling construction other than *reroofing* where existing insulation located below the roof deck or an attic floor above *conditioned space* does not comply with Table R402.1.3.
2. *Roof replacements* or a roof *alteration* that includes removing and replacing the roof covering where the *roof assembly* includes insulation entirely above the roof deck.
3. Conversion of an unconditioned space into *conditioned space*.
4. Replacement of ceiling finishes exposing cavities or surfaces of the roof/ceiling.

Exception: Where compliance with Section R402.1 cannot be met due to existing conditions, a design that minimizes deviation from the insulation requirements shall be used. The alternative design shall be substantiated by a written report from a *registered design professional* or *professional engineer* documenting the existing conditions that prevent full compliance with the insulation requirements.

R504.1.1.3 Above-grade wall alterations.

Above-grade wall alterations shall comply with the following as applicable:

1. Where wall cavities are exposed during construction, the exposed cavities shall be filled with insulation complying with Section R501.5.1. New cavities created shall be insulated in accordance with Section R402.1. An interior vapor retarder shall be provided where required in accordance with Section 1404.3 of the *Chicago Building Code*.
2. Where exterior wall coverings and *fenestration* are added or replaced for the full extent of any exterior facade of one or more elevations of the *building*, *continuous insulation* shall be provided where required in accordance with Section R402.1.
3. Where new interior finishes or exterior wall coverings are applied to the full extent of any exterior wall assembly of mass construction, insulation shall be provided in accordance with Section R402.1.

Exception: Where compliance with Section R402.1 cannot be met due to existing conditions, a design that minimizes deviation from the insulation requirements shall be used. The alternative design shall be substantiated by a written report from a *registered design professional* or *professional engineer* documenting the existing conditions that prevent full compliance with the insulation requirements.

R504.1.1.4 Floor alterations.

Where cavities in a floor or floor overhang are exposed during construction and the floor or floor overhang is part of the *building thermal envelope*, the floor or floor overhang shall comply with Section R402.1.

Exception: Where compliance with Section R402.1 cannot be met due to existing conditions, a design that minimizes deviation from the insulation requirements shall be used. The alternative design shall be substantiated by a written report from a *registered design professional* or *professional engineer* documenting the existing conditions that prevent full compliance with the insulation requirements.

R504.1.1.5 Below-grade wall alterations.

Where an unconditioned below-grade space is changed to *conditioned space*, the *building thermal envelope* walls enclosing such space shall be insulated in accordance with Section R402.1. Where the below-grade space is *conditioned space* and where *building thermal envelope* walls

enclosing such space are altered, they shall be insulated in accordance with Section R402.1.

R504.1.1.6 Air barrier.

Altered *building thermal envelope* assemblies shall be provided with an *air barrier* in accordance with Section R402.5. Such an *air barrier* need not be continuous with unaltered portions of the *building thermal envelope*. Testing requirements of Section R402.5.1.2 shall not be required.

R504.1.2 Heating and cooling systems.

New heating and cooling equipment and associated *ductwork* that are part of the *alteration* shall comply with Section R403 and this section. *Alterations* to existing heating and cooling equipment and *ductwork* shall comply with this section.

R504.1.2.1 Ductwork.

HVAC *ductwork* newly installed as part of an *alteration* shall comply with Section R403.

Exception: Where *ductwork* from an existing heating and cooling system is extended.

R504.1.2.2 System sizing.

New heating and cooling equipment that is part of an *alteration* shall be sized in accordance with Section R403.7 based on the existing building attributes as modified by the *alteration*.

Exception: Where substantiated by a written report from a *registered design professional* or *professional engineer* that compliance with this section would result in heating or cooling equipment that is incompatible with the rest of the heating or cooling system.

R504.1.2.3 Duct system leakage.

Where an *alteration* includes any of the following, *duct systems* shall be tested in accordance with Section R403.3.7 and shall have a total leakage less than or equal to 12.0 cubic feet per minute (339.9 L/min) per 100 square feet (9.29 m²) of *conditioned floor area*:

1. Twenty-five percent or more of the registers that are part of the *duct system* are relocated.
2. Twenty-five percent or more of the total length of all *ductwork* in the *duct system* is relocated.
3. The total length of all *ductwork* in the *duct system* is increased by 25 percent or more.

Exception: *Duct systems* located entirely inside a *conditioned space* in accordance with Section R403.3.4.

R504.1.2.4 Controls.

New heating and cooling equipment that is part of the *alteration* shall comply with Sections R403.1 and R403.2.

R504.1.3 Service water heating systems.

New *service water heating* systems that are part of the *alteration* shall comply with Section R403.5.

R504.1.4 Lighting systems.

New lighting systems that are part of the *alteration* shall comply with Section R404.

Exception: *Alterations* that replace less than 10 percent of the luminaires in a space, provided that such *alterations* do not increase the installed interior lighting power.

SECTION R505 ADDITIONS

R505.1 General.

Additions shall conform to the provisions of this code as those provisions relate to new construction without requiring the unaltered portion of the *existing building* or existing building systems to comply with this code. *Additions* shall not create an unsafe condition or overload an existing building system.

R505.2 Prescriptive compliance.

Additions shall comply with Sections R505.2.1 through R505.2.5.

R505.2.1 Building thermal envelope.

New *building thermal envelope* assemblies that are part of the *addition* shall comply with Sections R402.1, R402.2, R402.4.1 through R402.4.5, and R402.5.

Exceptions:

1. New *building thermal envelope* assemblies are exempt from the requirements of Section R402.5.1.2.
2. The maximum *U-factor* of 0.060 shall be allowed to be used for wood-framed wall assemblies for compliance with Table R402.1.2 where the *addition* also complies with one or more of the following:
 - 2.1. Primary space heating serving the *addition* is provided by a heat pump that meets one of the efficiencies listed in Section R408.2.2.
 - 2.2. All installed water heaters serving the *addition* are heat pumps that meet one of the efficiencies listed in Section R408.2.3.
 - 2.3. In addition to the number of credits required by Section R505.2.5, two additional credits from Table R408.2 are achieved.

- 2.4. *Renewable energy resources* are permanently installed and have the rated capacity to produce at least 1.0 watt of *on-site renewable energy* per square foot (0.092 m²) of the *addition's conditioned floor area*.

R505.2.2 Heating and cooling systems.

HVAC ductwork newly installed as part of an *addition* shall comply with Section R403.

Exception: Where *ductwork* from an existing heating and cooling system is extended to an *addition*, Sections R403.3.7 and R403.3.8 shall not be required.

R505.2.3 Service water heating systems.

New *service water heating* systems that are part of the *addition* shall comply with Section R403.5.

R505.2.4 Lighting.

New lighting systems that are part of the *addition* shall comply with Section R404.

R505.2.5 Additional energy efficiency credit requirements for additions.

Additions shall comply with sufficient measures from Table R408.2 to achieve not less than five credits. *Alterations* to the *existing building* that are not part of the *addition* but are permitted with an *addition* shall be allowed to be used to achieve this requirement.

Exceptions:

1. *Additions* with less than 1,000 square feet (93 m²) of *conditioned floor area*.
2. *Additions* that increase the *building's total conditioned floor area* by less than 25 percent.
3. *Additions* that do not include adding or replacing *service water heating* or *mechanical ventilation* equipment.
4. *Additions* that do not increase *conditioned space*.
5. Where the *addition* alone or the *existing building* and *addition* together comply with Section R405 or R406.

SECTION R506

CONVERSION OF UNCONDITIONED OR LOW-ENERGY SPACE

R506.1 Change in space conditioning.

Any unconditioned or low-energy space that is altered to become *conditioned space* shall comply with Section R505. For purposes of applying Section R505, existing building systems and *building thermal envelope* components, including *fenestration*, serving or adjoining the affected area shall be treated as new elements.

Exception: Where the *simulated building performance* option in Section R405 is used to comply with this section, the *annual energy cost* of the *proposed design* is allowed to be 110 percent of the *annual energy cost* otherwise allowed by Section R405.2.”

CHAPTER 14N-R6 CHICAGO-SPECIFIC REQUIREMENTS—RESIDENTIAL

14N-R6-R600 CHAPTER R6.

The following is adopted as Chapter R6 of this code entitled “Chicago-Specific Requirements—Residential”:

“SECTION R601 SCOPE

R601.1 General.

The provisions of this appendix shall be applicable to *residential buildings*.

SECTION R602 RESERVED

SECTION R603 SOLAR-READY ROOFS

R603.1 General.

New construction *residential buildings* with more than three *stories above grade plane* and *low-sloped roofs* shall comply with Section C603 of the *Chicago Energy Conservation Code—Commercial Provisions*.

Exception: *Buildings* with a ground-level footprint of 7,500 square feet (697 m²) or less.

SECTION R604 ELECTRIFICATION-READINESS

R604.1 Scope.

This section shall apply to equipment within *dwelling units* and rooms and spaces provided with domestic cooking appliances shared by the occupants of more than one *dwelling unit* in Group R-2, R-3, R-4 and R-5 occupancies that are created through:

1. New construction.
2. *Change of occupancy*.

Exception: *Change of occupancy* within Group R.

This section shall not apply to *repairs, alterations* or *additions* to existing Group R occupancies.

R604.2 Indoor cooking appliances.

A receptacle outlet served by a dedicated branch circuit with a minimum rating of 40 amperes shall be installed within 3 feet (914 mm) of each *fuel gas*-fired range, cooktop, oven or other permanently installed indoor cooking appliance. A minimum of 9,600 VA for 240-volt systems or 8,000 VA for 208-volt systems shall be included in feeder and service load calculations.

R604.3 Domestic clothes dryers.

A receptacle outlet served by a dedicated branch circuit with a minimum rating of 30 amperes shall be installed within 3 feet (914 mm) of each *fuel gas*-fired domestic clothes dryer. A minimum of 5,000 VA shall be included in feeder and service load calculations.

R604.4 Water heaters.

A receptacle outlet served by a dedicated branch circuit with a minimum rating of 30 amperes shall be installed within 3 feet (914 mm) of each *fuel gas*-fired *water heater* serving a single *dwelling unit*. A minimum of 4,500 VA shall be included in feeder and service load calculations.

R604.4.1 Clear space.

A clear space that is at least 3 feet (914 mm) by 3 feet (914 mm) by 7 feet (2134 mm) high shall be provided within 3 feet (914 mm) of the installed *fuel gas*-fired *water heater*.

Exception: Clear space is not required adjacent to heat pump *water heaters* or tankless *water heaters*.

R604.5 Electrification-ready circuits.

Both ends of the unused conductors required by Sections R604.2, R604.3 and R604.4 shall be labeled SPARE and shall be electrically isolated. Space shall be reserved in the electrical panel in which the branch circuit originates for the installation of an overcurrent device. Capacity for the circuits required by Sections R604.2, R604.3 and R604.4 shall be included in the electrical load calculations of the original installation and indicated in the *construction documents*.

SECTION R605 BALCONIES AND PARAPETS

R605.1 Continuous insulation.

In new construction and *additions*, exterior balconies and parapets that interrupt the *building thermal envelope* shall comply with one of the following:

1. Insulated with *continuous insulation* having a minimum *thermal resistance* (*R*-value) equivalent to the continuous insulation component required in the adjacent wall assembly as listed in Table R402.1.3. Where more than one wall assembly is interrupted by an adjacent balcony, the higher *thermal resistance* (*R*-value) shall be used.
2. Incorporate a minimum R-3 thermal break at the location where the element penetrates the *building thermal envelope*.

Exceptions:

1. Group R-5 occupancies.
2. Penetrations in the *building thermal envelope* that do not exceed 1 square foot (0.09 m²).
3. Where the *building thermal envelope* complies with Section C402.7 of the *Chicago Energy Transformation Code—Commercial Provisions*.

**SECTION R606
GAS LIGHTING PROHIBITED**

R606.1 General.

New permanently installed *fuel gas*-fired lighting appliances shall be prohibited.

**SECTION R607
ROOF SOLAR REFLECTANCE**

R607.1 General.

Roof coverings shall comply with Section 1515 of the *Chicago Building Code*.

**SECTION R608
ELECTRIC VEHICLE SUPPLY EQUIPMENT**

R608.1 General.

Electric vehicle supply equipment or electric vehicle supply equipment-ready parking spaces shall be provided in accordance with Section 17-10-1011 of the *Chicago Zoning Ordinance*."

**CHAPTER 14N-R7
REFERENCED STANDARDS**

14N-R7-R700 CHAPTER R7.

The provisions of IECC-RE Chapter 6 are adopted by reference as Chapter R7 of this code with the following modifications:

1. Delete the cross-reference to provisions of the IECC-RE following each reference.
2. Delete the following ICC references: IBC-24, IEBC-24, IECC-06, IFC-24, IFCG-24, IMC-24, IPC-24, IPMC-24, IPSDC-24, and IRC-24.
3. Insert the following ICC reference: "ICC 700—2020: National Green Building Standard."
4. Delete the entire NFPA section.

5. Insert a new section to read:

"PHIUS

Phius
53 West Jackson Boulevard, Suite 1462
Chicago, IL 60604-3606

PHIUS—2024: Passive Building Standards Certification Guidebook
(Version 25.1.0, September 2025)"

6. Delete each standard which is not referenced in any provision adopted in Chapters 14N-R1 through 14N-R6.

CHAPTER 14N-R8

14N-R8-R800 APPENDICES AND RESOURCES NOT ADOPTED.

The provisions of IECC-RE Appendices RA, RB, RC, RD, RE, RG, RH, RI, RJ, RK, and RL are not adopted. The provisions of the resources to IECC-RE are not adopted.

14N-R8-R806 APPENDIX RF—ALTERNATIVE BUILDING THERMAL ENVELOPE INSULATION R-VALUE OPTIONS.

The provisions of IECC-RE Appendix RF are adopted by reference with the following modifications:

1. Revise Section RF101.1 by deleting the second sentence.
2. Revise the second and third sentences of Section RF102.1 to read:

"For assemblies not addressed by the conditions of Table RF102.1, *U-factors* shall be determined by using accepted engineering practice or by testing in accordance with ASTM C1363. Use of a lesser framing fraction than the indicated maximums in Table RF102.1 shall require wall framing layout details on *construction documents* for each *above-grade wall* elevation."
3. Revise Section RF105.1 by replacing "basement" with "*basement walls*."

(Remainder of page intentionally blank.)

ARTICLE III. INTERIM FIRE PREVENTION CODE

SECTION 1. The title of Title 14F of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

TITLE 14F 2026 INTERIM FIRE PREVENTION CODE

SECTION 2. Section 14F-1-001 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14F-1-001 Partial adoption of the International Fire Code by reference.

The *International Fire Code*, ~~2018 edition, second printing,~~ 2024 edition, second printing, and all erratum thereto identified by the publisher, excluding the appendices (hereinafter referred to as "IFC") is adopted by reference to the extent specified in this title and shall be considered part of the requirements of this title except as modified by the specific provisions of this title.

(Omitted text is not affected by this ordinance.)

SECTION 3. Section 14F-1-001 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

14F-1-003 Global modifications.

(Omitted text is not affected by this ordinance.)

13. Replace each occurrence of "permitted" with "allowed."

SECTION 4. The Municipal Code of Chicago is hereby amended by repealing Chapter 14F-2 in its entirety and replacing it as follows:

CHAPTER 14F-2 DEFINITIONS

14F-2-201 GENERAL.

The provisions of IFC Section 201 are not adopted. The following is adopted as Section 201:

"SECTION 201 GENERAL

201.1 Definitions.

The definitions in Section 202 shall apply to italicized words throughout this code, except where specifically limited to a particular chapter or section. Unless the context requires

otherwise, the definitions in Section 202 shall also apply to non-italicized words throughout this code.

201.2 Interchangeability.

Words used in the present tense include the future; words stated in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural includes the singular.

201.3 Words defined in other codes.

Where non-italicized words are not defined in this code and are defined in the *Chicago Construction Codes Administrative Provisions, Chicago Building Code, Chicago Conveyance Device Code, Chicago Electrical Code, Chicago Fuel Gas Code, Chicago Mechanical Code, Chicago Energy Transformation Code, Chicago Plumbing Code, Chicago Building Rehabilitation Code, or Chicago Minimum Requirements for Existing Buildings*, such words shall have the meanings ascribed to them in those codes unless the context requires otherwise.

201.4 Words not defined.

Where italicized words are not defined in Section 202 or non-italicized words are not defined in Section 202 or any of the codes referenced in Section 201.3, such words shall have the meaning given in the latest edition of Merriam Webster's Collegiate Dictionary as the context implies."

14F-2-202 DEFINITIONS.

The provisions of IFC Section 202 are adopted by reference with the following modifications:

1. Revise the title of Section 202 to read: "Definitions."
2. Delete the definition of "24-hour basis."
3. Delete the definition of "3D printer."
4. Revise the definition of "access (to)" to read:
"ACCESS (TO). As defined in Chapter 2 of the *Chicago Mechanical Code*."
5. Delete the definition of "accessible means of egress."
6. Delete the definition of "accessible route."
7. Delete the definition of "active RF emitting device."
8. Delete the definition of "additive manufacturing" and its subsections.
9. Delete the definition of "agency."
10. Delete the definition of "agent."
11. Delete the definition of "agricultural building."

12. Delete the definition of "air-inflated structure."
13. Revise the definition of "aisle" to read:
"AISLE. As defined in Chapter 2 of the *Chicago Building Code*."
14. Delete the definition of "aisle accessway."
15. Delete the definition of "alarm, nuisance."
16. Delete the definition of "alarm device, multiple station."
17. Delete the definition of "alarm notification appliance."
18. Revise the definition of "alarm signal" to read:
"ALARM SIGNAL. As defined in Chapter 2 of the *Chicago Building Code*."
19. Delete the definition of "alarm verification feature."
20. Revise the definition of "alteration" to read:
"ALTERATION. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code*."
21. Revise the definition of "ambulatory care facility" to read:
"AMBULATORY CARE FACILITY. As defined in Chapter 2 of the *Chicago Building Code*."
22. Revise the definition of "annunciator" to read:
"ANNUNCIATOR. As defined in Chapter 2 of the *Chicago Building Code*."
23. Revise the definition of "approved" to read:
"APPROVED. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
24. Revise the definition of "area, building" to read:
"AREA, BUILDING. As defined in Chapter 2 of the *Chicago Building Code*."
25. Revise the definition of "area of refuge" to read:
"AREA OF REFUGE. As defined in Chapter 2 of the *Chicago Building Code*."
26. Revise the definition of "atrium" to read:
"ATRIUM. As defined in Chapter 2 of the *Chicago Building Code*."
27. Revise the definition of "attic" to read:
"ATTIC. As defined in Chapter 2 of the *Chicago Building Code*."

28. Delete the definition of “audible alarm notification appliance.”
29. Revise the definition of “automatic” to read:
“**AUTOMATIC.** As defined in Chapter 2 of the *Chicago Building Code.*”
30. Revise the definition of “automatic fire-extinguishing system” to read:
“**AUTOMATIC FIRE-EXTINGUISHING SYSTEM.** As defined in Chapter 2 of the *Chicago Building Code.*”
31. Delete the definition of “automatic flush bolt.”
32. Revise the definition of “automatic smoke detection system” to read:
“**AUTOMATIC SMOKE DETECTION SYSTEM.** As defined in Chapter 2 of the *Chicago Building Code.*”
33. Revise the definition of “automatic sprinkler system” to read:
“**AUTOMATIC SPRINKLER SYSTEM.** As defined in Chapter 2 of the *Chicago Building Code.*”
34. Revise the definition of “automatic water mist system” to read:
“**AUTOMATIC WATER MIST SYSTEM.** As defined in Chapter 2 of the *Chicago Building Code.*”
35. Delete the definition of “average ambient sound level.”
36. Delete the definition of “awning.”
37. Delete the definition of “balanced door.”
38. Revise the definition of “barricade” and its subsections to read:
“**BARRICADE.** As defined in Chapter 2 of the *Chicago Building Code.*”
39. Revise the definition of “basement” to read:
“**BASEMENT.** As defined in Chapter 2 of the *Chicago Building Code.*”
40. Delete the definition of “bleachers.”
41. Delete the definition of “boarding house.”
42. Delete the definition of “breakout.”
43. Delete the definition of “British thermal unit (Btu).”
44. Revise the definition of “building” to read:
“**BUILDING.** As defined in Chapter 2 of the *Chicago Building Code.*”

45. Revise the definition of "building area" to read:
"BUILDING AREA. As defined in Chapter 2 of the *Chicago Building Code*."
46. Revise the definition of "building height" to read:
"BUILDING HEIGHT. As defined in Chapter 2 of the *Chicago Building Code*."
47. Revise the definition of "building official" to read:
"BUILDING OFFICIAL. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
48. Delete the definition of "canopy."
49. Revise the definition of "carbon dioxide extinguishing system" to read:
"CARBON DIOXIDE EXTINGUISHING SYSTEM. As defined in Chapter 2 of the *Chicago Building Code*."
50. Revise the definition of "carbon monoxide alarm" to read:
"CARBON MONOXIDE ALARM. As defined in Chapter 2 of the *Chicago Building Code*."
51. Revise the definition of "carbon monoxide detector" to read:
"CARBON MONOXIDE DETECTOR. As defined in Chapter 2 of the *Chicago Building Code*."
52. Delete the definition of "care suite."
53. Revise the definition of "change of occupancy" to read:
"CHANGE OF OCCUPANCY. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code*."
54. Insert the following definitions:
"CHICAGO BUILDING CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.
CHICAGO BUILDING REHABILITATION CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.
CHICAGO CONSTRUCTION CODES. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.
CHICAGO CONSTRUCTION CODES ADMINISTRATIVE PROVISIONS. Title 14A of the Municipal Code of Chicago.
CHICAGO CONVEYANCE DEVICE CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."

CHICAGO ELECTRICAL CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO ENERGY TRANSFORMATION CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO FUEL GAS CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO MECHANICAL CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO MINIMUM REQUIREMENTS FOR EXISTING BUILDINGS. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*.

CHICAGO PLUMBING CODE. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."

55. Delete the definition of "chimney" and its subsections.

56. Delete the definition of "circulation path."

57. Revise the definition of "clean agent" to read:

"CLEAN AGENT. As defined in Chapter 2 of the *Chicago Building Code*."

58. Delete the definition of "clinic, outpatient."

59. Revise the definition of "commercial cooking appliances" to read:

"COMMERCIAL COOKING APPLIANCES. As defined in Chapter 2 of the *Chicago Mechanical Code*."

60. Revise the definition of "commercial motor vehicle" to read:

"COMMERCIAL MOTOR VEHICLE. As defined in Chapter 2 of the *Chicago Building Code*."

61. Delete the definition of "common path of egress travel."

62. Delete the definition of "common use."

63. Delete the definition of "computer room."

64. Revise the definition of "congregate living facilities" to read:

"CONGREGATE LIVING FACILITIES. As defined in Chapter 2 of the *Chicago Building Code*."

65. Delete the definition of "constant latching bolt."

66. Revise the definition of “constantly attended location” to read:
“**CONSTANTLY ATTENDED LOCATION.** As defined in Chapter 2 of the *Chicago Building Code.*”
67. Revise the definition of “construction documents” to read:
“**CONSTRUCTION DOCUMENTS.** As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions.*”
68. Revise the definition of “control area” to read:
“**CONTROL AREA.** As defined in Chapter 2 of the *Chicago Building Code.*”
69. Revise the definition of “corridor” to read:
“**CORRIDOR.** As defined in Chapter 2 of the *Chicago Building Code.*”
70. Delete the definition of “corridor, open-ended.”
71. Revise the definition of “court” to read:
“**COURT.** As defined in Chapter 2 of the *Chicago Building Code.*”
72. Delete the definition of “cover mall building” and its subsections.
73. Delete the definition of “critical areas.”
74. Revise the definition of “critical circuit” to read:
“**CRITICAL CIRCUIT.** As defined in Chapter 2 of the *Chicago Building Code.*”
75. Delete the definition of “current tap.”
76. Delete the definition of “custodial care.”
77. Delete the definition of “data center.”
78. Delete the definition of “dead bolt.”
79. Revise the definition of “decorative materials” to read:
“**DECORATIVE MATERIALS.** As defined in Chapter 2 of the *Chicago Building Code.*”
80. Delete the definition of “defend-in-place.”
81. Delete the definition of “delivered audio quality (DAQ)” and its subsections.
82. Revise the definition of “deluge system” to read:
“**DELUGE SYSTEM.** As defined in Chapter 2 of the *Chicago Building Code.*”

83. Revise the definition of “detached building” to read:
“**DETACHED BUILDING.** As defined in Chapter 2 of the *Chicago Building Code.*”
84. Revise the definition of “detector, heat” to read:
“**DETECTOR, HEAT.** As defined in Chapter 2 of the *Chicago Building Code.*”
85. Delete the definition of “detoxification facilities.”
86. Revise the definition of “dispensing” to read:
“**DISPENSING.** As defined in Chapter 2 of the *Chicago Building Code.*”
87. Revise the definition of “dormitory” to read:
“**DORMITORY.** As defined in Chapter 2 of the *Chicago Building Code.*”
88. Delete the definition of “downlink.”
89. Revise the definition of “draft curtain” to read:
“**DRAFT CURTAIN.** As defined in Chapter 2 of the *Chicago Building Code.*”
90. Revise the definition of “draftstop” to read:
“**DRAFTSTOP.** As defined in Chapter 2 of the *Chicago Building Code.*”
91. Revise the definition of “dry-chemical extinguishing agent” to read:
“**DRY-CHEMICAL EXTINGUISHING AGENT.** As defined in Chapter 2 of the *Chicago Building Code.*”
92. Delete the definition of “Dutch door.”
93. Delete the definition of “dwelling.”
94. Revise the definition of “dwelling unit” to read:
“**DWELLING UNIT.** As defined in Chapter 2 of the *Chicago Building Code.*”
95. Delete the definition of “egress court.”
96. Delete the definition of “elevator group.”
97. Revise the definition of “emergency alarm system” to read:
“**EMERGENCY ALARM SYSTEM.** As defined in Chapter 2 of the *Chicago Building Code.*”
98. Revise the definition of “emergency control station” to read:
“**EMERGENCY CONTROL STATION.** As defined in Chapter 2 of the *Chicago Building Code.*”

99. Delete the definition of "emergency escape and rescue opening."
100. Revise the definition of "emergency power system" to read:
"EMERGENCY POWER SYSTEM. As defined in Chapter 2 of the *Chicago Building Code.*"
101. Delete the definition of "emergency responder communications enhancement system (ERCES)."
102. Revise the definition of "emergency voice/alarm communications" to read:
"EMERGENCY VOICE/ALARM COMMUNICATIONS. As defined in Chapter 2 of the *Chicago Building Code.*"
103. Delete the definition of "employee work area."
104. Delete the definition of "equipment platform."
105. Delete the definition of "existing."
106. Revise the definition of "exit" to read:
"EXIT. As defined in Chapter 2 of the *Chicago Building Code.*"
107. Revise the definition of "exit access" to read:
"EXIT ACCESS. As defined in Chapter 2 of the *Chicago Building Code.*"
108. Revise the definition of "exit discharge" to read:
"EXIT DISCHARGE. As defined in Chapter 2 of the *Chicago Building Code.*"
109. Revise the definition of "exit discharge, level of" to read:
"EXIT DISCHARGE, LEVEL OF. As defined in Chapter 2 of the *Chicago Building Code.*"
110. Revise the definition of "exit passageway" to read:
"EXIT PASSAGEWAY. As defined in Chapter 2 of the *Chicago Building Code.*"
111. Revise the definition of "exterior wall" to read:
"EXTERIOR WALL. As defined in Chapter 2 of the *Chicago Building Code.*"
112. Revise the definition of "fabrication area" to read:
"FABRICATION AREA. As defined in Chapter 2 of the *Chicago Building Code.*"
113. Revise the definition of "facility" to read:
"FACILITY. As defined in Chapter 2 of the *Chicago Building Code.*"
114. Delete the definition of "fire alarm box, manual."

115. Revise the definition of "fire alarm control unit" to read:
"FIRE ALARM CONTROL UNIT. As defined in Chapter 2 of the *Chicago Building Code*."
116. Revise the definition of "fire alarm signal" to read:
"FIRE ALARM SIGNAL. As defined in Chapter 2 of the *Chicago Building Code*."
117. Revise the definition of "fire alarm system" to read:
"FIRE ALARM SYSTEM. As defined in Chapter 2 of the *Chicago Building Code*."
118. Delete the definition of "fire apparatus access road."
119. Revise the definition of "fire area" to read:
"FIRE AREA. As defined in Chapter 2 of the *Chicago Building Code*."
120. Revise the definition of "fire barrier" to read:
"FIRE BARRIER. As defined in Chapter 2 of the *Chicago Building Code*."
121. Delete the definition of "fire chief."
122. Revise the definition of "fire code official" to read:
"FIRE CODE OFFICIAL. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
123. Revise the definition of "fire command center" to read:
"FIRE COMMAND CENTER. As defined in Chapter 2 of the *Chicago Building Code*."
124. Revise the definition of "fire damper" to read:
"FIRE DAMPER. As defined in Chapter 2 of the *Chicago Building Code*."
125. Revise the definition of "fire detector, automatic" to read:
"FIRE DETECTOR, AUTOMATIC. As defined in Chapter 2 of the *Chicago Building Code*."
126. Revise the definition of "fire door" to read:
"FIRE DOOR. As defined in Chapter 2 of the *Chicago Building Code*."
127. Revise the definition of "fire door assembly" to read:
"FIRE DOOR ASSEMBLY. As defined in Chapter 2 of the *Chicago Building Code*."
128. Revise the definition of "fire exit hardware" to read:
"FIRE EXIT HARDWARE. As defined in Chapter 2 of the *Chicago Building Code*."

129. Delete the definition of "fire lane."
130. Revise the definition of "fire partition" to read:
"FIRE PARTITION. As defined in Chapter 2 of the *Chicago Building Code*."
131. Revise the definition of "fire protection rating" to read:
"FIRE PROTECTION RATING. As defined in Chapter 2 of the *Chicago Building Code*."
132. Revise the definition of "fire protection system" to read:
"FIRE PROTECTION SYSTEM. As defined in Chapter 2 of the *Chicago Building Code*."
133. Revise the definition of "fire resistance" to read:
"FIRE RESISTANCE. As defined in Chapter 2 of the *Chicago Building Code*."
134. Revise the definition of "fire safety functions" to read:
"FIRE SAFETY FUNCTIONS. As defined in Chapter 2 of the *Chicago Building Code*."
135. Revise the definition of "fire separation distance" to read:
"FIRE SEPARATION DISTANCE. As defined in Chapter 2 of the *Chicago Building Code*."
136. Revise the definition of "fire wall" to read:
"FIRE WALL. As defined in Chapter 2 of the *Chicago Building Code*."
137. Revise the definition of "fireblocking" to read:
"FIREBLOCKING. As defined in Chapter 2 of the *Chicago Building Code*."
138. Revise the definition of "fire-resistance rating" to read:
"FIRE-RESISTANCE RATING. As defined in Chapter 2 of the *Chicago Building Code*."
139. Revise the definition of "fire-resistant joint system" to read:
"FIRE-RESISTANT JOINT SYSTEM. As defined in Chapter 2 of the *Chicago Building Code*."
140. Revise the definition of "fixed base operator (FBO) to read:
"FIXED BASE OPERATOR (FBO). As defined in Chapter 2 of the *Chicago Building Code*."
141. Revise the definition of "flame spread" to read:
"FLAME SPREAD. As defined in Chapter 2 of the *Chicago Building Code*."

142. Revise the definition of "flame spread index" to read:
"FLAME SPREAD INDEX. As defined in Chapter 2 of the *Chicago Building Code*."
143. Revise the definition of "flight" to read:
"FLIGHT. As defined in Chapter 2 of the *Chicago Building Code*."
144. Revise the definition of "floor area, gross" to read:
"FLOOR AREA, GROSS. As defined in Chapter 2 of the *Chicago Building Code*."
145. Revise the definition of "floor area, net" to read:
"FLOOR AREA, NET. As defined in Chapter 2 of the *Chicago Building Code*."
146. Revise the definition of "foam-extinguishing system" to read:
"FOAM-EXTINGUISHING SYSTEM. As defined in Chapter 2 of the *Chicago Building Code*."
147. Delete the definition of "folding and telescopic seating."
148. Delete the definition of "foster care facilities."
149. Delete the definition of "frequency."
150. Delete the definition of "frequency license holder(s)."
151. Delete the definition of "frequency licensing authority."
152. Revise the definition of "fuel cell power system, stationary," excluding its subsections, to read:
"FUEL CELL POWER SYSTEM, STATIONARY. As defined in Chapter 2 of the *Chicago Building Code*."
153. Revise the definition of "gas detection system" to read:
"GAS DETECTION SYSTEM. As defined in Chapter 2 of the *Chicago Building Code*."
154. Revise the definition of "gas room" to read:
"GAS ROOM. As defined in Chapter 2 of the *Chicago Building Code*."
155. Delete the definition of "grade floor emergency escape and rescue opening."
156. Revise the definition of "grade plane" to read:
"GRADE PLANE. As defined in Chapter 2 of the *Chicago Building Code*."
157. Revise the definition of "guard" to read:
"GUARD. As defined in Chapter 2 of the *Chicago Building Code*."

158. Delete the definition of "guest room."
159. Revise the definition of "gypsum board" to read:
"GYPSUM BOARD. As defined in Chapter 2 of the *Chicago Building Code*."
160. Delete the definition of "gypsum wallboard."
161. Revise the definition of "habitable space" to read:
"HABITABLE SPACE. As defined in Chapter 2 of the *Chicago Building Code*."
162. Revise the definition of "halogenated extinguishing system" to read:
"HALOGENATED EXTINGUISHING SYSTEM. As defined in Chapter 2 of the *Chicago Building Code*."
163. Revise the definition of "handrail" to read:
"HANDRAIL. As defined in Chapter 2 of the *Chicago Building Code*."
164. Revise the definition of "heat detector" to read:
"HEAT DETECTOR. As defined in Chapter 2 of the *Chicago Building Code*."
165. Revise the definition of "height, building" to read:
"HEIGHT, BUILDING. As defined in Chapter 2 of the *Chicago Building Code*."
166. Revise the definition of "heliport" to read:
"HELIPORT. As defined in Chapter 2 of the *Chicago Building Code*."
167. Revise the definition of "helistop" to read:
"HELISTOP. As defined in Chapter 2 of the *Chicago Building Code*."
168. Revise the definition of "higher education laboratory" to read:
"HIGHER EDUCATION LABORATORY. As defined in Chapter 2 of the *Chicago Building Code*."
169. Revise the definition of "high-rise building" to read:
"HIGH-RISE BUILDING. As defined in Chapter 2 of the *Chicago Building Code*."
170. Delete the definition of "highway."
171. Revise the definition of "historic buildings" to read:
"HISTORIC BUILDING. As defined in Chapter 2 of the *Chicago Building Rehabilitation Code*."

172. Revise the definition of "hood" and its subsections to read:
"HOOD. As defined in Chapter 2 of the *Chicago Mechanical Code*."
173. Revise the definition of "horizontal assembly" to read:
"HORIZONTAL ASSEMBLY. As defined in Chapter 2 of the *Chicago Building Code*."
174. Revise the definition of "horizontal exit" to read:
"HORIZONTAL EXIT. As defined in Chapter 2 of the *Chicago Building Code*."
175. Delete the definition of "hospitals and psychiatric hospitals."
176. Delete the definition of "hot work permits."
177. Revise the definition of "HPM room" to read:
"HPM ROOM. As defined in Chapter 2 of the *Chicago Building Code*."
178. Delete the definition of "incapable of self-preservation."
179. Delete the definition of "inflatable amusement device."
180. Revise the definition of "initiating device" to read:
"INITIATING DEVICE. As defined in Chapter 2 of the *Chicago Building Code*."
181. Delete the definition of "interior exit ramp."
182. Delete the definition of "interior exit stairway."
183. Delete the definition of "interior finish."
184. Delete the definition of "interior floor-wall base."
185. Delete the definition of "interior wall and ceiling finish."
186. Insert the following definition:
"INTERLOCKING INTERIOR EXIT STAIRWAY GROUP. As defined in Chapter 2 of the *Chicago Building Code*."
187. Revise the definition of "jurisdiction" to read:
"JURISDICTION. The City of Chicago."
188. Revise the definition of "labeled" to read:
"LABELED. As defined in Chapter 2 of the *Chicago Building Code*."
189. Revise the definition of "laboratory suite" to read:
"LABORATORY SUITE. As defined in Chapter 2 of the *Chicago Building Code*."

190. Delete the definition of "landscaped roof."
191. Revise the definition of "level of exit discharge" to read:
"LEVEL OF EXIT DISCHARGE. As defined in Chapter 2 of the *Chicago Building Code*."
192. Revise the definition of "liquefied petroleum gas (LP-gas)" to read:
"LIQUEFIED PETROLEUM GAS (LP-gas). As defined in Chapter 2 of the *Chicago Fuel Gas Code*."
193. Revise the definition of "liquid storage room" to read:
"LIQUID STORAGE ROOM. As defined in Chapter 2 of the *Chicago Building Code*."
194. Revise the definition of "listed" to read:
"LISTED. As defined in Chapter 2 of the *Chicago Building Code*."
195. Delete the definition of "lodging house."
196. Revise the definition of "lot" to read:
"LOT. As defined in Chapter 2 of the *Chicago Building Code*."
197. Revise the definition of "lot line" to read:
"LOT LINE. As defined in Chapter 2 of the *Chicago Building Code*."
198. Delete the definition of "low-energy power-operated door."
199. Delete the definition of "mall."
200. Delete the definition of "manual bolt."
201. Revise the definition of "manual fire alarm box" to read:
"MANUAL FIRE ALARM BOX. As defined in Chapter 2 of the *Chicago Building Code*."
202. Revise the definition of "means of egress" to read:
"MEANS OF EGRESS. As defined in Chapter 2 of the *Chicago Building Code*."
203. Revise the definition of "membrane-penetration firestop system" to read:
"MEMBRANE-PENETRATION FIRESTOP SYSTEM. As defined in Chapter 2 of the *Chicago Building Code*."
204. Revise the definition of "merchandise pad" to read:
"MERCHANDISE PAD. As defined in Chapter 2 of the *Chicago Building Code*."

205. Revise the definition of "mezzanine" to read:
"MEZZANINE. As defined in Chapter 2 of the *Chicago Building Code*."
206. Revise the definition of "multiple-station alarm device" to read:
"MULTIPLE-STATION ALARM DEVICE. As defined in Chapter 2 of the *Chicago Building Code*."
207. Revise the definition of "multiple-station smoke alarm" to read:
"MULTIPLE-STATION SMOKE ALARM. As defined in Chapter 2 of the *Chicago Building Code*."
208. Insert the following definition:
"MUNICIPAL CODE. The Municipal Code of the City of Chicago, Illinois."
209. Delete the definition of "nosing."
210. Revise the definition of "notification zone" to read:
"NOTIFICATION ZONE. As defined in Chapter 2 of the *Chicago Building Code*."
211. Revise the definition of "nuisance alarm" to read:
"NUISANCE ALARM. As defined in Chapter 2 of the *Chicago Building Code*."
212. Insert the following definition:
"OCCUPANCY CLASSIFICATION. The classification assigned to a building or portion thereof in accordance with Chapter 3 of the *Chicago Building Code*."
213. Revise the definition of "occupant load" to read:
"OCCUPANT LOAD. As defined in Chapter 2 of the *Chicago Building Code*."
214. Revise the definition of "occupiable roof" to read:
"OCCUPIABLE ROOFTOP. As defined in Chapter 2 of the *Chicago Building Code*."
215. Delete the definition of "open mall."
216. Delete the definition of "open mall building."
217. Delete the definition of "open parking garage."
218. Revise the definition of "opening protective" to read:
"OPENING PROTECTIVE. As defined in Chapter 2 of the *Chicago Building Code*."
219. Delete the definition of "outpatient clinic."
220. Delete the definition of "overhead doorstop."

221. Revise the definition of "owner" to read:
"OWNER. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
222. Revise the definition of "panic hardware" to read:
"PANIC HARDWARE. As defined in Chapter 2 of the *Chicago Building Code*."
223. Delete the definition of "passive RF emitting device."
224. Delete the definition of "peer review."
225. Delete the definition of "penthouse."
226. Revise the definition of "permit" to read:
"PERMIT (for this code only). An official document or certificate issued by the *fire code official* that authorizes performance of a specified activity."
227. Revise the definition of "person" to read:
"PERSON. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
228. Delete the definition of "personal care service."
229. Delete the definition of "pesticide."
230. Delete the definition of "photoluminescent."
231. Revise the definition of "plenum" to read:
"PLENUM. As defined in Chapter 2 of the *Chicago Mechanical Code*."
232. Delete the definition of "power-assisted door."
233. Delete the definition of "power-operated door."
234. Revise the definition of "pressure vessel" to read:
"PRESSURE VESSEL. As defined in Chapter 2 of the *Chicago Mechanical Code*."
235. Revise the definition of "private garage" to read:
"PRIVATE GARAGE. As defined in Chapter 2 of the *Chicago Building Code*."
236. Insert the following definition:
"PROFESSIONAL ENGINEER. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
237. Delete the definition of "psychiatric hospitals."

238. Revise the definition of "public way" to read:
"PUBLIC WAY. As defined in Chapter 2 of the *Chicago Building Code*."
239. Revise the definition of "public-use areas" to read:
"PUBLIC-USE AREAS. As defined in Chapter 2 of the *Chicago Building Code*."
240. Delete the definition of "puzzle room."
241. Delete the definition of "radio frequency (RF)."
242. Delete the definition of "railway."
243. Delete the definition of "ramp."
244. Delete the definition of "ramp, exit access."
245. Delete the definition of "ramp, exterior exit."
246. Delete the definition of "ramp, interior exit."
247. Revise the definition of "ready access (to)" to read:
"READY ACCESS (TO). As defined in Chapter 2 of the *Chicago Mechanical Code*."
248. Delete the definition of "record drawings."
249. Revise the definition of "refrigerant" to read:
"REFRIGERANT. As defined in Chapter 2 of the *Chicago Mechanical Code*."
250. Revise the definition of "refrigeration system" to read:
"REFRIGERATION SYSTEM. As defined in Chapter 2 of the *Chicago Mechanical Code*."
251. Revise the definition of "registered design professional" to read:
"REGISTERED DESIGN PROFESSIONAL. As defined in Chapter 2 of the *Chicago Construction Codes Administrative Provisions*."
252. Delete the definition of "religious worship, place of."
253. Delete the definition of "relocatable power tap."
254. Revise the definition of "repair garage" to read:
"REPAIR GARAGE. As defined in Chapter 2 of the *Chicago Building Code*."
255. Revise the definition of "scissor stairway" to read:
"SCISSOR STAIRWAY. As defined in Chapter 2 of the *Chicago Building Code*."

256. Revise the definition of "self-closing" to read:
"SELF-CLOSING. As defined in Chapter 2 of the *Chicago Building Code*."
257. Delete the definition of "self-luminous."
258. Delete the definition of "self-preservation, incapable of."
259. Revise the definition of "single-station smoke alarm" to read:
"SINGLE-STATION SMOKE ALARM. As defined in Chapter 2 of the *Chicago Building Code*."
260. Revise the definition of "site" to read:
"SITE. As defined in Chapter 2 of the *Chicago Building Code*."
261. Delete the definition of "site-fabricated stretch system."
262. Revise the definition of "sleeping unit" to read:
"SLEEPING UNIT. As defined in Chapter 2 of the *Chicago Building Code*."
263. Revise the definition of "smoke alarm" to read:
"SMOKE ALARM. As defined in Chapter 2 of the *Chicago Building Code*."
264. Revise the definition of "smoke barrier" to read:
"SMOKE BARRIER. As defined in Chapter 2 of the *Chicago Building Code*."
265. Revise the definition of "smoke compartment" to read:
"SMOKE COMPARTMENT. As defined in Chapter 2 of the *Chicago Building Code*."
266. Revise the definition of "smoke damper" to read:
"SMOKE DAMPER. As defined in Chapter 2 of the *Chicago Building Code*."
267. Revise the definition of "smoke detector" to read:
"SMOKE DETECTOR. As defined in Chapter 2 of the *Chicago Building Code*."
268. Revise the definition of "smoke partition" to read:
"SMOKE PARTITION. As defined in Chapter 2 of the *Chicago Building Code*."
269. Revise the definition of "smoke-developed index" to read:
"SMOKE-DEVELOPED INDEX. As defined in Chapter 2 of the *Chicago Building Code*."
270. Revise the definition of "smokeproof enclosure" to read:
"SMOKEPROOF ENCLOSURE. As defined in Chapter 2 of the *Chicago Building Code*."

271. Delete the definition of "smoke-protected assembly seating."
272. Revise the definition of "special amusement area" to read:
"SPECIAL AMUSEMENT BUILDING. As defined in Chapter 2 of the *Chicago Building Code*."
273. Delete the definition of "special expert."
274. Delete the definition of "sprinkler express riser."
275. Revise the definition of "stair" to read:
"STAIR. As defined in Chapter 2 of the *Chicago Building Code*."
276. Revise the definition of "stairway" to read:
"STAIRWAY. As defined in Chapter 2 of the *Chicago Building Code*."
277. Delete the definition of "stairway, exit access."
278. Delete the definition of "stairway, exterior exit."
279. Delete the definition of "stairway, interior exit."
280. Delete the definition of "stairway, scissor."
281. Delete the definition of "stairway, spiral."
282. Revise the definition of "standby power system" to read:
"STANDBY POWER SYSTEM. As defined in Chapter 2 of the *Chicago Building Code*."
283. Revise the definition of "standpipe, types of" and its subsections to read:
"STANDPIPE, TYPES OF. As defined in Chapter 2 of the *Chicago Building Code*."
284. Revise the definition of "standpipe system, classes of" and its subsections to read:
"STANDPIPE SYSTEM, CLASSES OF. As defined in Chapter 2 of the *Chicago Building Code*."
285. Delete the definition of "steel."
286. Revise the definition of "storage, hazardous materials" to read:
"STORAGE, HAZARDOUS MATERIALS. As defined in Chapter 2 of the *Chicago Building Code*."
287. Revise the definition of "story" to read:
"STORY. As defined in Chapter 2 of the *Chicago Building Code*."

288. Revise the definition of "story above grade plane" to read:
"**STORY ABOVE GRADE PLANE.** As defined in Chapter 2 of the *Chicago Building Code.*"
289. Revise the definition of "supervising station" to read:
"**SUPERVISING STATION.** As defined in Chapter 2 of the *Chicago Building Code.*"
290. Revise the definition of "supervisory service" to read:
"**SUPERVISORY SERVICE.** As defined in Chapter 2 of the *Chicago Building Code.*"
291. Revise the definition of "supervisory signal" to read:
"**SUPERVISORY SIGNAL.** As defined in Chapter 2 of the *Chicago Building Code.*"
292. Revise the definition of "supervisory signal-initiating device" to read:
"**SUPERVISORY SIGNAL-INITIATING DEVICE.** As defined in Chapter 2 of the *Chicago Building Code.*"
293. Delete the definition of "system."
294. Delete the definition of "temporary special event structure."
295. Delete the definition of "tent."
296. Revise the definition of "through-penetration firestop system" to read:
"**THROUGH-PENETRATION FIRESTOP SYSTEM.** As defined in Chapter 2 of the *Chicago Building Code.*"
297. Delete the definition of "townhouse."
298. Delete the definition of "townhouse unit."
299. Delete the definition of "transient."
300. Revise the definition of "transient aircraft" to read:
"**TRANSIENT AIRCRAFT.** As defined in Chapter 2 of the *Chicago Building Code.*"
301. Revise the definition of "trouble signal" to read:
"**TROUBLE SIGNAL.** As defined in Chapter 2 of the *Chicago Building Code.*"
302. Delete the definition of "twenty-four-hour basis."
303. Delete the definition of "umbrella structure."
304. Delete the definition of "uplink."
305. Delete the definition of "valet trash collection."

306. Revise the definition of "vegetative roof" to read:
"VEGETATIVE ROOF. As defined in Chapter 2 of the *Chicago Building Code*."
307. Revise the definition of "ventilation" to read:
"VENTILATION. As defined in Chapter 2 of the *Chicago Building Code*."
308. Delete the definition of "vertical water supply zone."
309. Revise the definition of "visible alarm notification appliance" to read:
"VISIBLE ALARM NOTIFICATION APPLIANCE. As defined in Chapter 2 of the *Chicago Building Code*."
310. Revise the definition of "water mist system, automatic" to read:
"WATER MIST SYSTEM, AUTOMATIC. As defined in Chapter 2 of the *Chicago Building Code*."
311. Delete the definition of "wildfire risk area."
312. Delete the definition of "winder."
313. Revise the definition of "wireless protection system" to read:
"WIRELESS PROTECTION SYSTEM. As defined in Chapter 2 of the *Chicago Building Code*."
314. Revise the definition of "workstation" to read:
"WORKSTATION. As defined in Chapter 2 of the *Chicago Building Code*."
315. Revise the definition of "yard" to read:
"YARD. As defined in Chapter 2 of the *Chicago Building Code*."
316. Revise the definition of "zone" to read:
"ZONE. As defined in Chapter 2 of the *Chicago Building Code*."
317. Revise the definition of "zone, notification" to read:
"ZONE, NOTIFICATION. As defined in Chapter 2 of the *Chicago Building Code*."

(Remainder of page intentionally blank.)

SECTION 5. The Municipal Code of Chicago is hereby amended by repealing Chapter 14F-6 in its entirety and replacing it as follows:

**CHAPTER 14F-6
BUILDING SERVICES AND SYSTEMS**

14F-6-600 CHAPTER 6.

The provisions of IFC Chapter 6 are not adopted. The following is adopted as Chapter 6 entitled "Building Services and Systems":

**"SECTION 601
GENERAL**

601.1 Compliance.

Building services and systems shall be provided and maintained in accordance with the other *Chicago Construction Codes*."

SECTION 6. The Municipal Code of Chicago is hereby amended by repealing Chapter 14F-7 in its entirety and replacing it as follows:

**CHAPTER 14F-7
FIRE AND SMOKE PROTECTION FEATURES**

14F-7-700 CHAPTER 7.

The provisions of IFC Chapter 7 are not adopted. The following is adopted as Chapter 7 entitled "Fire and Smoke Protection Features":

**"SECTION 701
GENERAL**

701.1 Compliance.

Fire and smoke protection features shall be provided and improved as part of construction or rehabilitation work in accordance with Chapter 7 of the *Chicago Building Code* and the *Chicago Building Rehabilitation Code*, as applicable. Fire and smoke protection features shall be provided retroactively and maintained in accordance with the *Chicago Minimum Requirements for Existing Buildings*."

SECTION 7. The Municipal Code of Chicago is hereby amended by repealing Chapter 14F-8 in its entirety and replacing it as follows:

**CHAPTER 14F-8
INTERIOR FINISHES**

14F-8-800 CHAPTER 8.

The provisions of IFC Chapter 8 are not adopted. The following is adopted as Chapter 8 entitled "Interior Finishes":

**"SECTION 801
GENERAL**

801.1 Compliance.

Interior finishes provided or improved as part of construction or rehabilitation work shall comply with Chapter 8 of the *Chicago Building Code* and the *Chicago Building Rehabilitation Code*, as applicable. Interior finishes shall be maintained in accordance with the *Chicago Minimum Requirements for Existing Buildings*."

SECTION 8. The Municipal Code of Chicago is hereby amended by repealing Chapter 14F-9 in its entirety and replacing it as follows:

**CHAPTER 14F-9
FIRE PROTECTION AND LIFE SAFETY SYSTEMS**

14F-9-901 GENERAL.

The provisions of IFC Section 901 are not adopted. The following is adopted as Section 901:

**"SECTION 901
GENERAL**

901.1 Compliance.

Fire protection and life safety systems shall be provided and improved as part of construction or rehabilitation work in accordance with Chapter 9 of the *Chicago Building Code* and the *Chicago Building Rehabilitation Code*, as applicable. Fire protection and life safety systems shall be provided retroactively and maintained in accordance with the *Chicago Minimum Requirements for Existing Buildings*."

14F-9-902 IFC SECTION 902.

The provisions of IFC Section 902 are not adopted.

14F-9-903 IFC SECTION 903.

The provisions of IFC Section 903 are not adopted.

14F-9-904 IFC SECTION 904.

The provisions of IFC Section 904 are not adopted.

14F-9-905 IFC SECTION 905.

The provisions of IFC Section 905 are not adopted.

14F-9-906 IFC SECTION 906.

The provisions of IFC Section 906 are not adopted.

14F-9-907 IFC SECTION 907.

The provisions of IFC Section 907 are not adopted.

14F-9-908 IFC SECTION 908.

The provisions of IFC Section 908 are not adopted.

14F-9-909 IFC SECTION 909.

The provisions of IFC Section 909 are not adopted.

14F-9-910 IFC SECTION 910.

The provisions of IFC Section 910 are not adopted.

14F-9-911 EXPLOSION CONTROL.

The provisions of IFC Section 911 are adopted by reference with the following modifications:

1. Revise the numbered items in Section 911.1 to read:
 - "1. Where a structure, room or space is occupied for purposes involving an explosion hazard as identified in Table 911.1.
 2. Where the quantities of any hazardous materials specified in Table 911.1 exceed the maximum allowable quantities specified in Table 307.1(1) of the *Chicago Building Code*."
2. Revise footnote a to Table 911.1 to read:

"a. Combustible dusts where manufactured, generated or used in such a manner that the concentration and conditions create a fire or explosion hazard."
3. Revise footnote f to Table 911.1 to read:

"f. Explosion venting is not required for Group H-5 Fabrication Areas complying with the *Chicago Building Code*."

14F-9-912 IFC SECTION 912.

The provisions of IFC Section 912 are not adopted.

14F-9-913 IFC SECTION 913.

The provisions of IFC Section 913 are not adopted.

14F-9-914 IFC SECTION 914.

The provisions of IFC Section 914 are not adopted.

14F-9-915 IFC SECTION 915.

The provisions of IFC Section 915 are not adopted.

14F-9-916 IFC SECTION 916.

The provisions of IFC Section 916 are not adopted.

14F-9-917 IFC SECTION 917.

The provisions of IFC Section 917 are not adopted.

SECTION 9. The Municipal Code of Chicago is hereby amended by repealing Chapter 14F-10 in its entirety and replacing it as follows:

**CHAPTER 14F-10
MEANS OF EGRESS**

14F-10-1000 CHAPTER 10.

The provisions of IFC Chapter 10 are not adopted. The following is adopted as Chapter 10 entitled "Means of Egress":

**"SECTION 1001
GENERAL**

1001.1 Compliance.

Means of egress shall be provided and improved during construction and rehabilitation work in accordance with Chapter 10 of the Chicago Building Code and the Chicago Building Rehabilitation Code, as applicable. Means of egress shall be provided retroactively and maintained in accordance with the Chicago Minimum Requirements for Existing Buildings."

SECTION 10. The Municipal Code of Chicago is hereby amended by repealing Chapter 14F-11 in its entirety and replacing it as follows:

**CHAPTER 14F-11
EXISTING BUILDINGS**

14F-11-1100 CHAPTER 11.

The provisions of IFC Chapter 11 are not adopted. The following is adopted as Chapter 11 entitled "Existing Buildings":

**"SECTION 1101
GENERAL**

1101.1 Compliance.

Existing buildings shall be made to comply with and be maintained in accordance with the Chicago Minimum Requirements for Existing Buildings. Rehabilitation work in existing buildings shall comply with the Chicago Building Rehabilitation Code."

SECTION 11. The Municipal Code of Chicago is hereby amended by repealing Chapter 14F-12 in its entirety and replacing it as follows:

**CHAPTER 14F-12
ENERGY SYSTEMS**

14F-12-1201 GENERAL.

The provisions of IFC Section 1201 are not adopted. The following is adopted as Section 1201:

**"SECTION 1201
GENERAL**

1201.1 Scope.

The provisions of this chapter shall apply to the installation, operation, maintenance, repair, retrofitting, testing, commissioning and decommissioning of used for generating or storing energy. It shall not apply to equipment associated with the generation, control, transformation, transmission, storage or distribution of energy that is under the exclusive control of an electric utility. Energy storage systems regulated by Section 1207 shall comply with this chapter, as appropriate, and NFPA 855.

1201.2 Electrical wiring and equipment.

Electrical wiring and equipment used in connection with energy systems shall be installed and maintained in accordance with this chapter, Chapter 14X-7 of the *Chicago Minimum Requirements for Existing Buildings* and the *Chicago Electrical Code*.

1201.3 Mixed system installation.

Where mixed systems are allowed, the aggregate nameplate kWh energy of all energy storage systems in a *fire area* shall not exceed the maximum quantity specified for any of the energy systems in this chapter. Where required by the *fire code official*, a hazard mitigation analysis shall be provided and *approved* in accordance with Section 411.1.1 of the *Chicago Construction Codes Administrative Provisions* to evaluate any potential adverse interaction between the various energy systems and technologies.”

14F-12-1202 IFC SECTION 1202.

The provisions of IFC Section 1202 are not adopted.

14F-12-1203 EMERGENCY AND STANDBY POWER SYSTEMS.

The provisions of IFC Section 1203 are not adopted. The following is adopted as Section 1203:

“SECTION 1203 EMERGENCY AND STANDBY POWER SYSTEMS

1203.1 General.

Emergency power systems and standby power systems required by the *Chicago Building Code* or *Chicago Electrical Code* shall comply with Section 2702.1 of the *Chicago Building Code*.

1203.2 Where required.

Emergency and standby power systems shall be provided where required by the *Chicago Building Code* or *Chicago Electrical Code*.

1203.3 Reserved.

1203.4 Maintenance and testing.

Emergency and standby power systems shall be maintained and tested in accordance with Chapter 7 of the *Chicago Minimum Requirements for Existing Buildings* and the *Chicago Electrical Code*.”

14F-12-1204 PORTABLE GENERATORS.

The provisions of IFC Section 1204 are adopted by reference with the following modifications:

1. Revise the last sentence of Section 1204.5 to read:
“Additional separation shall be provided for temporary structures as specified in Section 3103 of the *Chicago Building Code*.”
2. Delete Section 1204.9.
3. Revise Section 1204.10 by replacing “Section 906” with “Section 906 of the *Chicago Building Code*.”

14F-12-1205 SOLAR PHOTOVOLTAIC POWER SYSTEMS.

The provisions of IFC Section 1205 are adopted by reference with the following modifications:

1. Revise Section 1205.1 by deleting "or *International Residential Code*."
2. Revise Exception 1 to Section 1205.2 by replacing "R-3" with "R-3, R-4 and R-5."
3. Delete Exception 2 to Section 1205.2.
4. Revise Exception 3 to Section 1205.2 by deleting "approved,".
5. Revise Section 1205.2.1 by replacing each "R-3" with "R-3, R-4 and R-5."
6. Delete Exception 1 to Section 1205.2.1.
7. Delete Section 1205.2.1.3.
8. Delete Section 1205.2.2.
9. Revise Section 1205.3, including the exception, by replacing each "R-3" with "R-3, R-4 and R-5," "containing" with "containing exclusively," and "are a suitable" with "may be *approved* as an."
10. Revise the second sentence of Section 1205.5.1 to read:

"A noncombustible base, or a maintained vegetative surface *approved* by the *fire code official*, shall be installed and maintained under the photovoltaic arrays and associated electrical equipment installations."

14F-12-1206 STATIONARY FUEL CELL POWER SYSTEMS.

The provisions of IFC Section 1206 are adopted by reference with the following modifications:

1. Revise the exception to Section 1206.1 by replacing "R-3 or R-4" with "R-3, R-4 and R-5."
2. Revise Section 1206.2 by replacing "Section 105.6.10" with "Chapter 4 of the *Chicago Construction Codes Administrative Provisions*."
3. Revise Section 1206.3 by replacing "104.2.2" with "411.1.1 of the *Chicago Construction Codes Administrative Provisions*."
4. Revise Section 1206.4, including the exception by replacing "R-3 and R-4" with "R-3, R-4 and R-5" and "R-3 or R-4" with "R-3, R-4 or R-5."
5. Revise Section 1206.6.3 by replacing "*approved*" with "suitable."
6. Revise Section 1206.6.3.1 by replacing "*approved*" with "suitable."
7. Revise Section 1206.7 by deleting "in accordance with Section 312."
8. Revise Section 1206.9 by replacing "Chapter 53, Chapter 58" with "this code."

9. Revise Section 1206.13 to read:

"1206.13 Group R-3, R-4 and R-5 fuel cell vehicle energy storage system use.

The temporary use of a *dwelling unit* occupant's fuel cell-powered electric vehicle to power a Group R-3, R-4 or R-5 *dwelling unit* while parked in an attached or detached garage or outside shall comply with the vehicle manufacturer's instructions and the *Chicago Electrical Code*."

14F-12-1207 ELECTRICAL ENERGY STORAGE SYSTEMS (ESS).

The provisions of IFC Section 1207 are adopted by reference with the following modifications:

1. Revise the exception to Section 1207.1 by replacing "R-3 and R-4" with "R-3, R-4 and R-5."
2. Delete Section 1207.1.2.
3. Revise Table 1207.1.3 as shown:

TABLE 1207.1.3—ENERGY STORAGE SYSTEM (ESS) THRESHOLD QUANTITIES	
TECHNOLOGY	ENERGY CAPACITY ^a
Capacitor ESS	3 kWh
Flow batteries ^b	20 kWh
Lead-acid batteries, all types	70 kWh ^c
Lithium-ion batteries	20 kWh
Nickel-cadmium (Ni-Cd), nickel metal hydride (Ni-MH) and nickel zinc (Ni-Zn) batteries	70 kWh
Nonelectrochemical ESS ^d	70 kWh
Other battery technologies	10 kWh
Other electrochemical ESS technologies	3 kWh
Sodium nickel chloride batteries	70 kWh
Zinc manganese dioxide batteries (Zn-MnO ₂)	70 kWh
For SI: 1 kilowatt hour = 3.6 megajoules.	
a. Energy capacity is the total energy capable of being stored (nameplate rating), not the usable energy rating. For units rated in amp-hours, kWh shall equal rated voltage times amp-hour rating divided by 1,000.	
b. Shall include vanadium, zinc-bromine, polysulfide-bromide and other flowing electrolyte-type technologies.	
c. Fifty gallons of lead-acid battery electrolyte shall be considered equivalent to 70 kWh.	
d. Covers nonelectrochemical technologies such as flywheel and thermal ESS.	

4. Revise Section 1207.1.4 to read:

"1207.1.4 Permits and licenses.

Permits and licenses shall be obtained for ESS as follows:

1. Construction permits shall be obtained for stationary ESS installations and for mobile ESS charging and storage installations covered by Section 1207.10.1. Permits shall be obtained in accordance with Chapter 4 of the *Chicago Construction Codes Administrative Provisions*.
2. Hazardous materials use licenses shall be obtained for stationary ESS installations and for mobile ESS deployment operations covered by Section 1207.10.3. Licenses shall be obtained in accordance with Section 4-6-210 of the *Municipal Code of Chicago*."
5. Revise Section 1207.1.4.1 to read:

"1207.1.4.1 Communication utilities.
Hazardous materials use licenses shall not be required for lead-acid and nickel-cadmium battery systems at facilities under the exclusive control of communications utilities that comply with NFPA 76 and operate at less than 50 voltage alternating current (VAC) and 60 voltage direct current (VDC)."
6. Revise Section 1207.1.5 by replacing "the permit application" with "permit and license applications" and replacing "Section 404" with "Section 15-4-101 of the *Municipal Code of Chicago*."
7. Delete Section 1207.1.5.1.
8. Revise Section 1207.1.6 by replacing "104.2.2" with "411.1.1 of the *Chicago Construction Codes Administrative Provisions*."
9. Revise the second and third sentences of Section 1207.1.7 to read:

"The testing shall be conducted or witnessed and reported by an testing laboratory acceptable to the *fire code official* and show that a fire involving one ESS will not propagate to an adjacent ESS, and where installed within buildings, enclosed areas and walk-in units will be contained within the room, enclosed area or walk-in unit for the duration of the test. The test report shall be provided to the *fire code official* for review and approval in accordance with Section 411.1.1 of the *Chicago Construction Codes Administrative Provisions*."
10. Revise Section 1207.1.8 by replacing "system owner, agent or lessee" with "owner."
11. Revise the first sentence of Section 1207.1.8.1 to read:

"Where, in the opinion of the *fire code official*, it is essential for public safety that trained personnel be on-site to respond to possible ignition or re-ignition of a damaged ESS, the owner shall dispatch within 15 minutes one or more fire mitigation personnel to the premise, as required by the *fire code official*, at the owner's expense."
12. Revise Section 1207.2.1 by replacing "approved" with "submitted to the *fire code official* for review at least 14 days."
13. Revise Item 5 in Section 1207.2.1 by replacing "approved plans and specifications" with "construction permit and license."

14. Delete Exception 3 to Section 1207.2.1.
15. Revise Section 1207.2.1.2 by deleting "approved."
16. Revise Section 1207.2.2 by deleting "approved."
17. Revise Section 1207.2.3 by replacing "code official" with "fire code official."
18. Delete Exception 2 to Section 1207.3.1.
19. Revise Section 1207.3.4 by deleting "approved."
20. Revise Section 1207.3.7 by replacing "105.6.6" with "Chapter 4 of the *Chicago Construction Codes Administrative Provisions*."
21. Delete Item 2 in Section 1207.3.7.1.
22. Revise Section 1207.3.9 by replacing "as permitted in Section 104.9.1" with "where approved by the fire code official" and by deleting "approved."
23. Revise Section 1207.4.2 by resetting "Access" in italic type and by replacing "permit" with "allow."
24. Revise Section 1207.4.8 by replacing "Approved signs" with "Signs" and by deleting the exception.
25. Revise Section 1207.4.9 by deleting "and safeguarded in an approved manner."
26. Revise Section 1207.5.1 by deleting Exception 2.
27. Revise Section 1207.5.2 by deleting "within rooms, areas and walk-in units."
28. Revise Item 1 in Section 1207.5.3 to read:

"1. Where the floor is located more than 70 feet (21 336 mm) above *grade plane*."
29. Delete Exception 2 to Section 1207.5.3.
30. Revise Section 1207.5.4 by deleting each "approved" and by replacing "907.2" with "907.2 of the *Chicago Building Code*."
31. Delete Section 1207.5.4.1.
32. Revise Section 1207.5.5 by replacing each "903.3.1.1" with "903.3.1.1 of the *Chicago Building Code*" and "904" with "904 of the *Chicago Building Code*."
33. Delete Exception 2 to Section 1207.5.5.
34. Revise Section 1207.5.5.1 to read:

"1207.5.5.1 Water-reactive systems.
Electrochemical ESS that utilize water-reactive materials shall be protected by an alternative *automatic fire-extinguishing system* in accordance with Section 904 of the

Chicago Building Code. Such installations shall require large-scale fire testing complying with Section 1207.1.7.”

35. Revise Section 1207.5.7 by deleting the second sentence.
36. Revise Section 1207.6.1.2.4 by replacing “916” with “916 of the *Chicago Building Code*.”
37. Revise Exception 2 to Section 1207.6.3 by replacing “104.2.2” with “411.1.1 of the *Chicago Construction Codes Administrative Provisions*.”
38. Delete Exception 5 to Section 1207.6.3.
39. Revise Section 1207.7.3 to read:

“1207.7.3 Dwelling units and sleeping units.

ESS shall not be installed in *dwelling units* or *sleeping units*.”

40. Delete the exception to Section 1207.10.1.
41. Delete the exception to Section 1207.10.2.
42. Revise Section 1207.10.3 and its subsections to read:

“1207.10.3 Permits and licenses.

Construction permits and hazardous materials use licenses shall be obtained for charging and storage of mobile ESS as required by Section 1207.1.4. Hazardous materials use licenses shall be obtained for deployment of mobile ESS as required by Section 1207.1.4.

1207.10.3.1 Construction documents.

Construction documents complying with Section 1207.1.5 shall be submitted with the construction permit application for mobile ESS charging and storage locations.

1207.10.3.2 Deployment documents.

The following information shall be provided with the hazardous materials use license applications for mobile ESS deployments:

1. Relevant information for the mobile ESS equipment and protection measures in the *construction documents* required by Section 1207.1.5.
2. Location and layout diagram of the area in which the mobile ESS is to be deployed, including a scale diagram of all nearby exposures.
3. Location and content of signage, including no smoking signs.
4. Description of fencing to be provided around the ESS, including locking methods.
5. Details on fire suppression, smoke and automatic fire detection, system monitoring, thermal management, exhaust ventilation and explosion control, if provided.

6. For deployment, the intended duration of operation, including anticipated connection and disconnection times and dates.
7. Location and description of local staging stops during transit to the deployment site. See Section 1207.10.7.5.
8. Description of the temporary wiring, including connection methods, conductor type and size, and circuit overcurrent protection to be provided.
9. Description of how fire suppression system connections to water supplies or extinguishing agents are to be provided.
10. Contact information for personnel who are responsible for maintaining and servicing the equipment and responding to emergencies as required by Section 1207.1.8.1.

(Material based on NFPA 855 2023 Ed.)”

43. Delete Section 1207.10.4.
44. Revise Section 1207.10.5 by replacing “on the construction and operational permits” with “by the construction permits and hazardous materials use licenses.
45. Revise Exception 2 to Section 1207.10.7.1 to read:
 - “2. Mobile ESS deployments shall not exceed 180 days unless an additional license is obtained.”
46. Revise Section 1207.10.7.5 by replacing “permit” with “license.”
47. Revise Section 1207.10.7.6 by replacing “*approved*” with “noncombustible.”
48. Revise Section 1207.10.7.7 by replacing “in accordance with Section 310” with “in conspicuous locations.”
49. Revise Section 1207.11 by replacing each “R-3 and R-4” with “R-3, R-4 and R-5.”
50. Revise Section 1207.11.6 by replacing “R-3 and R-4” with “R-3, R-4 and R-5” and “907.2.11” with “907.2.10 of the *Chicago Building Code*.”
51. Revise Section 1207.11.9 by deleting “owner or.”

SECTION 12. Chapter 14F-13 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

(Omitted text is not affected by this ordinance.)

14F-13-1300.1 Other provisions of IFC.

Provisions of IFC not specifically referenced in this title are not part of this code. Where the *fire code official* deems it necessary to protect public safety, the *fire code official* is authorized to issue a written order requiring compliance with provisions of Chapters 20 through 30, 32, and 34

through 67 of IFC and Sections 415 through 418 and 425 through 428 of IBC (as defined in Section 14B-1-001) either in place of or in addition to the requirements of this code.

(Omitted text is not affected by this ordinance.)

14F-13-1300.2.4 Chapter 13-112.

The provisions of Sections 13-112-040, 13-112-050, 13-112-060, 13-112-080, 13-112-140, 13-112-150, ~~13-112-200, 13-112-210, 13-112-220,~~ 13-112-230, 13-112-250, 13-112-260, 13-112-270, 13-112-280, 13-112-290, and 13-112-300 of the *Municipal Code* are incorporated by reference.

(Omitted text is not affected by this ordinance.)

SECTION 13. The Municipal Code of Chicago is hereby amended by repealing Chapter 14F-31 in its entirety and replacing it as follows:

**CHAPTER 14F-31
TENTS AND OTHER TEMPORARY STRUCTURES**

14F-31-3100 CHAPTER 31.

The provisions of IFC Chapter 31 are not adopted. The following is adopted as Chapter 31 entitled "Tents and Other Temporary Structures":

**"SECTION 3101
GENERAL**

3101.1 Compliance.

Tents and other temporary structures shall be permitted in accordance with the *Chicago Construction Codes Administrative Provisions* and shall comply with the *Chicago Building Code.*"

SECTION 14. The Municipal Code of Chicago is hereby amended by repealing Chapter 14F-33 in its entirety and replacing it as follows:

**CHAPTER 14F-33
FIRE SAFETY DURING CONSTRUCTION, REHABILITATION AND DEMOLITION**

14F-33-3300 CHAPTER 33.

The provisions of IFC Chapter 33 are not adopted. The following is adopted as Chapter 33 entitled "Fire Safety During Construction, Rehabilitation and Demolition":

**"SECTION 3301
GENERAL**

3301.1 Compliance.

Construction, rehabilitation and demolition activities shall comply with Chapter 33 of the *Chicago Building Code.*"

SECTION 15. The Municipal Code of Chicago is hereby amended by adding a new Chapter 14F-80 as follows:

**CHAPTER 14F-80
REFERENCED STANDARDS**

14F-80-8000 CHAPTER 80.

The provisions of IFC Chapter 80 are adopted by reference with respect to the following standards only:

ASTM: E108

CSA: CSA FC1

NFPA: 2, 12, 15, 69, 72, 76, 495, 750, 853, 855, 2001, and 2010

UL: 790, 1741, 1778, 1973, 1974, 2201, 3741, 9540, and 9540A.

SECTION 16. Section 4-6-210 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

4-6-210 Hazardous materials.

(Omitted text is not affected by this ordinance.)

"Hazardous material(s)" means:

(Omitted text is not affected by this ordinance.)

(14) Stationary and mobile energy storage systems (ESS) exceeding the threshold quantities established in Section 14F-12-1207.

(Omitted text is not affected by this ordinance.)

SECTION 17. Section 15-4-030 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

15-4-030 Annual inspections Inspections.

(a) ~~The Fire Commissioner shall cause the following buildings or structures to~~ Buildings classified as Group A occupancies shall be inspected annually: ~~(1) all theaters, churches, schools, public assembly units, and open air assembly units; and,~~

~~(b) (2) all buildings~~ Other buildings over one story in height, except (i) single dwellings, (ii) multiple-use buildings, consisting of business and dwelling units two stories or less in height, and (iii) multiple dwellings three stories or less in height, unless such multiple dwellings are lodgishouses or roominghouses with sleeping accommodations for 20 or more persons, shall be inspected periodically and as often as necessary to protect public safety.

~~(c)~~ Such ~~annual~~ inspections shall be conducted by the Fire Commissioner. It shall be the duty of every owner, agent, lessee or occupant of any such building and of the person in charge or control of the same to permit the making of such ~~annual~~ inspection by the Fire Commissioner or by a duly authorized member of the Fire Department at any time upon demand being duly made.

~~(b) (d)~~ The fees for such inspections shall be \$500; provided, however, that the inspection fee for any high-rise building, as defined in Chapter 2 of the Chicago Building Code, shall be \$2,300.

SECTION 18. Section 15-4-101 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

15-4-101 Fire emergency plan required when.

The owner or operator of equipment or apparatus used for the generation, transmission or distribution of electricity by a public utility or as a stationary energy storage system (ESS) exceeding the threshold quantities established in Section 14F-12-1207 shall develop a fire emergency plan for each building, structure or portion thereof enclosing such equipment or apparatus. The fire emergency plan shall include the following: the location and type of equipment or apparatus; identification of supervisory personnel to be notified in the event of a fire affecting the equipment or apparatus, and the means of notification; a plan for evacuation of employees not involved in firefighting from the area of the fire; assignment of responsibilities for coordination with designated personnel for admission of fire department personnel and control of traffic on the premises in the event of a fire; a list of toxic, combustible or explosive materials stored or used on the premises; a schedule of drills to verify the viability of the plan; and such other related information as the fire commissioner may require. The fire emergency plan shall be in writing and shall be filed in the office of the fire commissioner or his designee. A copy of the plan shall be maintained on the premises where the electrical equipment is located. The owner or operator of the equipment or apparatus shall notify the commissioner in writing of any changes in any component of the plan within seven days after the change occurs.

(Omitted text is not affected by this ordinance.)

ARTICLE IV. TECHNICAL CORRECTIONS AND ADJUSTMENTS

SECTION 1. Section 2-14-155 of the Municipal Code of Chicago is hereby amended by deleting the language struck through, as follows:

2-14-155 Defenses to building code violations.

(Omitted text is not affected by this ordinance.)

(b) At the time of the hearing on the issue of whether the building code violation does or does not exist, the violation has been remedied or removed. This subsection (b) shall not create a defense to a violation of Section 14X-12-1202.6, or to a person or entity that is an architect, structural engineer, contractor or builder who has been charged with a violation of Section 14A-4-401.1 or Section 14A-4-411.4; nor shall it be a defense for any violation of Section 13-20-550 or Section 17-12-0709 pertaining to any off-premises sign, as that term is defined in Section 17-17-02108; nor shall it be a defense to a person or entity that is licensed or required to be licensed as a general contractor under Chapter 4-36, or registered or required to be registered as an electrical contractor under Section 4-290-030, for any violation of Section 4-36-110(B) or Section 13-20-550 pertaining to any on-premises sign, as that term is defined in Section 17-17-02109; nor shall it be a defense for any violation of ~~Section 4-6-290(f)(5)(i), Section 13-208-130,~~ or Section 14X-5-504.8 pertaining to smoke alarms or smoke detectors; nor shall it be a defense for any violation of Section 14X-5-504.9 pertaining to carbon monoxide detectors. However, for violations of Section 14X-8-802.2, it shall be a defense under this subsection only where the violation has been remedied or removed within seven days of service of notice of the building code violations as provided under Section 2-14-152;

(Omitted text is not affected by this ordinance.)

SECTION 2. Section 4-156-440 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 3. Sections 7-38-520, 7-38-530, 7-38-535, 7-38-550, 7-38-555, 7-38-560, 7-38-570 of the Municipal Code of Chicago are hereby repealed in their entirety.

SECTION 4. Section 7-44-040 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 5. Section 14A-1-102.5 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

14A-1-102.5 Existing structures, systems, and devices.

The lawfully-established use and occupancy of any *building* or other *structure* existing on the effective date of a given provision of the *Chicago Construction Codes* continues to be lawful, even if the *building* or other *structure* does not conform to requirements for a new building of similar use or occupancy. The lawfully-established use or operation of any building system or

device existing on the effective date of a given provision of the *Chicago Construction Codes* continues to be lawful, even if the system or device does not conform to requirements for a new system or device of the same type.

(Omitted text is not affected by this ordinance.)

SECTION 6. Section 14A-1-105 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 TRANSITIONAL PROVISIONS.

(Omitted text is not affected by this ordinance.)

14A-1-105.7 Reserved Fuel gas (Title 14G).

Beginning November 1, 2026, except as otherwise provided in Sections 14A-1-105.8.1 through 14A-1-105.8.3, all *permit* applications must be submitted and all construction and *rehabilitation* work must be performed in accordance with Title 14G as amended in 2026 (the 2026 *Chicago Fuel Gas Code*).

14A-1-105.8 Mechanical (Title 14M).

~~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.~~ Beginning November 1, 2026, except as otherwise provided in Sections 14A-1-105.8.1 through 14A-1-105.8.3, all *permit* applications must be submitted and all construction and *rehabilitation* work must be performed in accordance with Title 14M as amended in 2026 (the 2026 *Chicago Mechanical Code*).

14A-1-105.8.1 Permit applied for before November 1, 2026.

A *permit* applied for before November 1, 2026, based on all mechanical and fuel gas requirements in effect on the date of application, may be issued and the permitted work may be built in accordance with those requirements.

14A-1-105.8.2 Minor revision permits.

On and after November 1, 2026, the *building official* may allow a *permit* application that seeks a minor revision to an issued *permit* applied for before November 1, 2026, to be issued and built in accordance with all mechanical and fuel gas requirements applicable to the previously-issued *permit*. The *building official* may designate, by rule, criteria for application of this provision.

14A-1-105.8.3 Phased permitting.

On and after November 1, 2026, the *building official* may allow a *permit* application that seeks a *permit* for the second or subsequent phase of a project for which an issued *permit* for the first phase was applied for before November 1, 2026, to be issued and built in accordance with all mechanical and fuel gas requirements applicable to the previously-issued *permit*. The *building official* may designate, by rule, criteria for application of this provision.

14A-1-105.9 Energy (Title 14N).

Beginning June 1, 2019, and ending October 31, 2022, except as otherwise provided in Sections 14A-1-105.9.1 through 14A-1-105.9.3, all *permit* applications must be submitted and all construction and *rehabilitation* work must be performed in accordance with Title 14N (the 2019 *Chicago Energy Conservation Code*). Beginning November 1, 2022, and ending October 31, 2026, except as provided in Sections 14A-1-105.9.4 through 14A-1-105.9.6, all *permit* applications must be submitted and all construction and *rehabilitation* work must be performed in accordance with Title 14N as amended in 2022 (the 2022 *Chicago Energy Transformation Code*). Beginning November 1, 2026, except as provided in Sections 14A-1-105.9.7 through 14A-1-105.9.9, all *permit* applications must be submitted and all construction and *rehabilitation* work must be performed in accordance with Title 14N as amended in 2026 (the 2026 *Chicago Energy Transformation Code*).

14A-1-105.9.1 Permit applied for before June 1, 2019.

A Until January 1, 2023, a *permit* applied for before June 1, 2019, based on all applicable energy conservation requirements in effect on the date of application, may be issued and the permitted work may be built in accordance with those requirements.

14A-1-105.9.2 Minor revision permits.

On and after June 1, 2019, and until October 31, 2022, the *building official* may allow a *permit* application that seeks a minor revision to an issued *permit* applied for before June 1, 2019, to be issued and built in accordance with all energy conservation requirements applicable to the previously-issued *permit*. The *building official* may designate, by rule, criteria for application of this provision.

14A-1-105.9.3 Phased permitting.

On and after June 1, 2019, and until October 31, 2022, the *building official* may allow a *permit* application that seeks a *permit* for the second or subsequent phase of a project for which an issued *permit* for the first phase was applied for before June 1, 2019, to be issued and built in accordance with all energy conservation requirements applicable to the previously-issued *permit*. The *building official* may designate, by rule, criteria for application of this provision.

14A-1-105.9.4 Permit applied for before November 1, 2022.

A Until October 31, 2026, a *permit* applied for before November 1, 2022, based on all applicable energy conservation requirements in effect on the date of application, may be issued and the permitted work may be built in accordance with those requirements.

14A-1-105.9.5 Minor revision permits.

On and after November 1, 2022, and until October 31, 2026, the *building official* may allow a *permit* application that seeks a minor revision to an issued *permit* applied for before November 1, 2022, to be issued and built in accordance with all energy conservation requirements applicable to the previously-issued *permit*. The *building official* may designate, by rule, criteria for application of this provision.

14A-1-105.9.6 Phased permitting.

On and after November 1, 2022, and until October 31, 2026, the *building official* may allow a *permit* application that seeks a *permit* for the second or subsequent phase of a project for which the first phase *permit* was issued under the 2019 *Chicago Energy Conservation Code* to be issued and built under that code. On and after January 1, 2023, and until October 31, 2026, the *building official* may allow a *permit* application that seeks a *permit* for the second or subsequent phase of a project for which the first

phase *permit* was issued under the 2022 *Chicago Energy Transformation Code* to be issued and built under the requirements of that code applicable to the first phase *permit*. The *building official* may designate, by rule, criteria for application of this provision.

14A-1-105.9.7 Permit applied for before November 1, 2026.

A *permit* applied for before November 1, 2026, based on all applicable energy-related requirements in effect on the date of application, may be issued and the permitted work may be built in accordance with those requirements.

14A-1-105.9.8 Minor revision permits.

On and after November 1, 2026, the *building official* may allow a *permit* application that seeks a minor revision to an *issued permit* applied for before November 1, 2026, to be issued and built in accordance with all energy-related requirements applicable to the previously-issued *permit*. The *building official* may designate, by rule, criteria for application of this provision.

14A-1-105.9.9 Phased permitting.

On and after November 1, 2026, the *building official* may allow a *permit* application that seeks a *permit* for the second or subsequent phase of a project for which the first phase *permit* was issued under the 2022 *Chicago Energy Transformation Code* to be issued and built under that code. The *building official* may designate, by rule, criteria for application of this provision.

SECTION 7. Section 14A-2-201.3.1 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14A-2-201.3.1 Words defined in other codes.

Where a non-italicized word is not defined in Section 14A-2-202 and is defined in the *Chicago Building Code*, *Chicago Conveyance Device Code*, *Chicago Electrical Code*, *Chicago Fire Prevention Code*, *Chicago Fuel Gas Code*, *Chicago Mechanical Code*, *Chicago Energy Conservation Transformation Code*, *Chicago Plumbing Code*, *Chicago Building Rehabilitation Code*, or *Chicago Minimum Requirements for Existing Buildings*, the definition in that other title applies to this title unless the context requires otherwise.

SECTION 8. Section 14A-2-202 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14A-2-202 DEFINITIONS.

(Omitted text is not affected by this ordinance.)

PRIVATE GARAGE. As defined in Chapter 2 of the *Chicago Building Code*.

PROFESSIONAL ENGINEER. An individual who is licensed to practice professional engineering by the State of Illinois.

(Omitted text is not affected by this ordinance.)

REGISTERED GEOTECHNICAL ENGINEER. ~~An individual who is licensed to practice professional engineering by the State of Illinois and~~ A professional engineer who is experienced in the use of geotechnical data to evaluate foundation systems.

(Omitted text is not affected by this ordinance.)

SECTION 9. Chapter 14A-3 of the Municipal Code of Chicago is hereby amended by inserting a new Section 14A-3-307.1.1 as follows:

14A-3-307.1.1 Relocation of residents.

Where the *building official* orders a *building* to be vacated and closed under Section 14A-3-307.1, the *building official* may further order the *owner* to provide suitable housing for displaced residents of the building at the *owner's* expense, until the *building* is deemed safe to reoccupy by the *building official* or a court of competent jurisdiction.

SECTION 10. Section 14A-4-402.1 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

14A-4-402.1 General.

No *permit* is required for the following:

(Omitted text is not affected by this ordinance.)

Permanent Structures:

(Omitted text is not affected by this ordinance.)

6. Permanent structures in the *public way*, other than *buildings* containing habitable space, subject to the jurisdiction of the Commissioner of Transportation.

(Omitted text is not affected by this ordinance.)

Mechanical:

(Omitted text is not affected by this ordinance.)

2. Portable ventilation appliances and equipment.

(Omitted text is not affected by this ordinance.)

6. Portable fuel cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

(Omitted text is not affected by this ordinance.)

SECTION 11. Section 14A-4-411 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14A-4-411 SUPPORTING DOCUMENTS.

(Omitted text is not affected by this ordinance.)

14A-4-411.1.1 Technical information.

To determine if the work proposed in a permit application complies with the Chicago Construction Codes, the building official or fire code official may require the owner to provide a technical opinion or technical report.

14A-4-411.1.1.1 Cost.

Any report or document required under this section, and the work necessary to prepare such report or document, including any inspections, investigations, or tests, must be prepared and provided without cost to the City.

14A-4-411.1.1.2 Preparer qualifications.

Any report or document required under this section must be prepared by a qualified person who is acceptable to the building official or fire code official.

14A-4-411.1.1.3 Content.

Any report or document required under this section must specifically analyze both the work proposed in the permit application and existing conditions at the premises where work is to be performed as the basis of any opinion or recommendation.

14A-4-411.1.1.4 Tests.

Where there is insufficient evidence that proposed work complies with the provisions of the Chicago Construction Codes, the building official or fire code official may require tests to be performed to establish compliance. Test methods shall be as specified in the Chicago Construction Codes or other recognized test standards. In the absence of recognized test standards, test procedures must be approved by the building official or fire code official. Where tests are required, the tests must be performed by a qualified person who is acceptable to the building official or fire code official.

(Omitted text is not affected by this ordinance.)

14A-4-411.3.1 Format and required information.

Construction documents must be signed and sealed by a registered design professional or Illinois-licensed professional engineer professional engineer acting within the limitations of the applicable licensing law. Construction documents must be drawn to a legible scale and accurately dimensioned. Construction documents must be submitted in an electronic format where required by the building official. Construction documents must be of sufficient clarity to indicate the location, nature, and extent of the work proposed and show in detail that it will conform to the provisions of the Chicago Construction Codes, the Chicago Zoning Ordinance, and other relevant laws to the satisfaction of the building official. Every page of construction documents must indicate the property address.

(Omitted text is not affected by this ordinance.)

14A-4-411.3.13 Energy conservation.

Construction documents must include the following details, as applicable:

1. Energy compliance path.
- ~~2.~~ Insulation materials and their R-values.
- ~~3.~~ Fenestration U-factors and solar heat gain coefficients (SHGCs).
- ~~4.~~ Area-weighted U-factor and solar heat gain coefficient (SHGC) calculations.
5. Air barrier and air sealing details, including the location of the air barrier.
6. Thermal bridges.
- ~~7.~~ Mechanical system design criteria.
- ~~8.~~ Mechanical and service water heating systems and equipment types, sizes, and efficiencies.
- ~~9.~~ Economizer description.
- ~~10.~~ Equipment and system controls.
- ~~11.~~ Fan motor horsepower (hp) and controls.
- ~~12.~~ Duct sealing and duct and pipe insulation locations.
- ~~13.~~ Lighting fixture schedule with wattage and control narrative.
- ~~14.~~ Location of required daylight zones on floorplans.
- ~~15.~~ Air barrier and air sealing details, including the location of the air barrier.
- ~~16.~~ Energy compliance path.

(Omitted text is not affected by this ordinance.)

14A-4-411.3.28 Mechanical information.

Construction documents must include the following information required by Section 18-28-403.14 of the Municipal Code where applicable: as applicable:

1. A space-by-space schedule to show compliance with the ventilation requirements of the Chicago Mechanical Code.
2. Capacities of heating and cooling equipment and the basis of design.
3. Plans showing each location where proposed equipment will penetrate a fire-resistance rated assembly and indicating the materials and methods for maintaining required structural safety, fire-resistance, and fireblocking.
4. Documentation that air intake and exhaust locations comply with applicable separation requirements.

5. Plans showing the location, size and basis of design for ducts.
6. Plans showing the location, size and basis of design for refrigeration piping and refrigeration machinery rooms.
7. Plans showing the location, size, and basis of design for fuel gas piping.

(Omitted text is not affected by this ordinance.)

14A-4-411.4 Code compliance.

It is unlawful for any *registered design professional* or ~~Illinois-licensed professional engineer~~ *professional engineer* to knowingly or negligently submit to the *building official*, for the *building official's* approval, any signed and sealed *construction documents* that propose work that does not comply with the *Chicago Construction Codes*.

14A-4-411.4.1 Certification required.

Construction documents submitted to the *building official* in connection with a *permit* application must be accompanied by a certificate of the *registered design professional(s)* or ~~Illinois-licensed professional engineer~~ *professional engineer* who signed and sealed the *construction documents* stating that the *construction documents* comply with the *Chicago Construction Codes*.

(Omitted text is not affected by this ordinance.)

SECTION 12. Chapter 14A-4 of the Municipal Code of Chicago is hereby amended by inserting a new Section 14A-4-412.5.3 as follows:

14A-4-412.5.3 Disabled veterans.

The *building official* must waive all *permit-related fees* for improvements to the residence of a veteran with a disability if the improvements are required to accommodate a disability of the veteran in accordance with Section 11-13-28 of the Illinois Municipal Code (65 ILCS 5/11-13-28).

SECTION 13. Section 14A-4-413.3 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14A-4-413.3 Approval of working drawings.

All working drawings which are used in the construction of *buildings* or *structures* must be either made or checked by the *registered design professional* or ~~Illinois-licensed professional engineer~~ *professional engineer* responsible for the *building design of the building or building system shown in the working drawings*. The *registered design professional* or ~~Illinois-licensed professional engineer~~ *professional engineer* must mark each working drawing to certify that such drawings conform to the *permitted construction documents*. This In addition to other relevant information, the certification must cover the size of wood or concrete members, the size

and weight of structural steel members, and the size, length, and bending of concrete reinforcement, together with the adequacy of all connections.

SECTION 14. Section Chapter 14A-5 of the Municipal Code of Chicago is hereby amended by inserting a new Section 14A-5-501.1.3 as follows:

14A-5-501.1.3 Technical information.

To determine if work performed under a *permit* complies with the *Chicago Construction Codes*, the *building official* or *fire code official* may require the *owner* to provide a technical opinion or technical report. Such report shall meet the requirements in Section 14A-4-411.1.1.

SECTION 15. Section 4-8-042 of the Municipal Code of Chicago is hereby repealed in its entirety and replaced as follows:

4-8-042 Inspections of and inspection fees for a place for eating.

(a) The Building Commissioner shall make an inspection every two years of each place for eating licensed under this Chapter 4-8. Such inspection shall be conducted as one inspection, which shall include inspections pursuant to Sections 14A-6-602, 14A-6-606 and 13-20-530, as applicable. If, within the 24-month period preceding such inspection, the place of eating was inspected by the Department of Buildings in connection with a permit inspection, periodic inspection, code compliance inspection or certificate of occupancy, such inspection shall be deemed to meet the inspection requirement herein. The Department of Buildings is authorized to conduct such additional inspections as the Department deems necessary to maintain health and safety.

(b) The fees for the inspections conducted by the Department of Buildings pursuant to subsection (a) of this section, as of January 1, 2026, are as follows:

- (1) Up to 1,500 square feet: \$200.00
- (2) 1,501 to 4,500 square feet: \$500.00
- (3) 4,501 to 10,000 square feet: \$800.00
- (4) Over 10,000 square feet: \$1,100.00

Beginning in 2026, on or before October 1 of each year, the Building Commissioner shall determine the percentage change in the Consumer Price Index for All Urban Consumers, US City Average (CPI-U) from January 2025 to January of the present year and prepare a fee schedules, based this subsection (b), with monetary values increased in proportion to any positive change in the CPI-U. The Building Commissioner shall round fees to the nearest \$5.00 increment. Fee schedules prepared in accordance with this section and published on the City's public web site shall take effect on January 1 of the succeeding year.

(c) The fees provided in subsection (b) shall be collected by the Commissioner of Business Affairs and Consumer Protection in connection with the renewal of licenses issued under this Chapter 4-8.

(d) This section shall not apply to any inspection by the Department of Buildings that is required as a condition of the issuance or renewal of any license or permit issued pursuant to this Code, other than a license under this Chapter 4-8. This section shall not apply to any reinspection, emergency inspection, or inspection in response to a complaint conducted by the Department of Buildings.

SECTION 16. Chapter 13-84 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 17. Sections 13-112-200, 13-112-210 and 13-112-220 of the Municipal Code of Chicago are hereby repealed in their entirety.

SECTION 18. Chapter 13-208 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 19. Chapter 13-212 of the Municipal Code of Chicago is hereby repealed in its entirety.

SECTION 20. Section 14B-2-201 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-2-201 General.

The provisions of Section 201 of IBC are not adopted. The following language is adopted as Section 201:

(Omitted text is not affected by this ordinance.)

201.3 Words defined in other codes.

Where non-italicized words are not defined in this code and are defined in the *Chicago Construction Codes Administrative Provisions, Chicago Conveyance Device Code, Chicago Electrical Code, Chicago Fire Prevention Code, Chicago Fuel Gas Code, Chicago Mechanical Code, Chicago Energy Conservation Transformation Code, Chicago Plumbing Code, Chicago Building Rehabilitation Code, or Chicago Minimum Requirements for Existing Buildings*, such words shall have the meanings ascribed to them in those codes unless the context requires otherwise.

(Omitted text is not affected by this ordinance.)

SECTION 21. Section 14B-2-202 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-2-202 Definitions.

The provisions of Section 202 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

95.1. Revise the definition of "fire area" to read:

"FIRE AREA. The aggregate floor area enclosed and bounded by fire walls, fire barriers, exterior walls and horizontal assemblies having a fire-resistance rating not less than that required by Section 707.3.10."

(Omitted text is not affected by this ordinance.)

125.1. Revise the definition of "gypsum board" to read:

"GYPSUM BOARD. A type of gypsum panel product consisting of a noncombustible core primarily of gypsum with paper surfacing."

125.2. Revise the definition of "gypsum panel product" to read:

"GYPSUM PANEL PRODUCT. The general name for a family of sheet products consisting essentially of gypsum complying with the standards specified in Table 2506.2, Table 2507.2 and Chapter 35."

(Omitted text is not affected by this ordinance.)

160.1. Insert the following definition:

"NATURAL VENTILATION. The movement of air into and out of a space through intentionally provided openings, such as windows and doors, or through nonpowered ventilators."

(Omitted text is not affected by this ordinance.)

163. Revise the definition of "occupiable space" to read:

"OCCUPIABLE SPACE. A room or enclosed space intended for human occupancy in which individuals reside; congregate for amusement, education or similar purposes; or are engaged at labor, and which is required to be equipped with means of egress and light and ventilation facilities by this code. An enclosed space intended to be regularly occupied for human activities such as bathing, cooking, eating, learning, living, sleeping, recreation and working, excluding any space that is only intended to be occupied occasionally and for short periods of time, such as a storage room. All habitable spaces are occupiable spaces. A space which is only required by this code to be provided with means of access by maintenance and service personnel is not an occupiable space.

189.1. Insert the following definition:

"REFRIGERATION MACHINERY ROOM. As defined in Chapter 2 of the Chicago Mechanical Code."

SECTION 22. Section 14B-2-203 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-2-203 Measurements.

The following language is adopted as a new Section 203:

(Omitted text is not affected by this ordinance.)

203.5.1.2 Unseparated Nonseparated mixed occupancies.

The *gross floor area* of an occupancy that is not separated in accordance with Section 508.4 shall be measured to the centerline of interior walls and partitions that separate the occupancy from other occupancies in the same *story*.

(Omitted text is not affected by this ordinance.)

SECTION 23. Section 14B-5-506 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

14B-5-506 Building area.

The provisions of Section 506 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

11. Revise Equation 5-5 to read:

(Omitted text is not affected by this ordinance.)

S = Where *building* is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2, S = 2; where *building* is not equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2, S = 1.

(Omitted text is not affected by this ordinance.)

SECTION 24. Section 14B-5-509 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-5-509 Incidental uses.

The provisions of Section 509 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

Refrigerant machinery room <u>Refrigeration machinery room</u>	1 hour
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(Omitted text is not affected by this ordinance.)

<p>Stationary storage battery systems <u>Stationary fuel cell power systems</u> having an energy capacity greater than the threshold quantity specified in <u>Chapter 12</u> of the <i>Chicago Fire Prevention Code</i></p>	<p>1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies.</p>
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(Omitted text is not affected by this ordinance.)

SECTION 25. Section 14B-7-706 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-7-706 Fire walls.

The provisions of Section 706 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

14. Add a new Section 706.6.3 to read:

"706.6.3 Offset construction.

Where a *fire wall* is offset at an intermediate floor level, the offset floor and its supporting construction shall have a *fire-resistance rating* of not less than 4 hours. *Interior exit stairways* and *interior exit ramps* other vertical shafts shall not penetrate the horizontal offset of a *fire wall*."

(Omitted text is not affected by this ordinance.)

SECTION 26. Section 14B-9-907 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-9-907 Fire alarm and detection systems.

(Omitted text is not affected by this ordinance.)

5. Revise Section 907.2 to read:

(Omitted text is not affected by this ordinance.)

Exceptions:

1. The *manual fire alarm box* is not required for fire alarm systems dedicated to elevator recall control and supervisory service.
2. The *manual fire alarm box* shall not be installed in a *high-rise building*.

(Omitted text is not affected by this ordinance.)

45. Revise Section 907.5.1 to read:

“907.5.1A Chicago high-rise fire alarm systems.

Fire alarm systems in high-rise buildings shall be supervising station alarm systems in accordance with NFPA 72. Fire alarm systems in high-rise buildings shall not initiate occupant notification until initiated from the fire command center.

907.5.1B Presignal feature.

Fire alarm systems in the following buildings shall be provided with a presignal feature:

1. Group I occupancies where the floor area of any story exceeds 8,000 square feet (743 m²).
2. Group I occupancies in buildings with more than three stories.
3. ~~High-rise buildings.~~

A presignal feature shall not be installed in other building types unless *approved* by the *fire code official*. Where a presignal feature is provided, a signal shall be annunciated at a *constantly attended location* acceptable to the *fire code official* so that occupant notification can be activated in the event of fire or other emergency.”

(Omitted text is not affected by this ordinance.)

SECTION 27. Section 14B-9-913 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

14B-9-913 Fire pumps.

The provisions of Section 913 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

1.1. Add a new Section 913.2.3 to read:

“913.2.3 Piping for fire pumps.

All suction piping to the fire pump and all discharge piping, except standpipe risers, shall be painted red or identified as fire protection system piping with permanent signage at intervals of not less than 15 feet (4.57 m).”

(Omitted text is not affected by this ordinance.)

SECTION 28. Section 14B-9-915 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

14B-9-915 Carbon monoxide detection.

(Omitted text is not affected by this ordinance.)

8. Add a new Sections 915.3 to read:

"915.3.1 Fire alarm system connection.

New buildings that are required by Section 907.2 to have a fire alarm system and by Sections 915.2 and 915.4.3 to have carbon monoxide detectors shall have the carbon monoxide detectors connected to the fire alarm system in accordance with NFPA 72."

SECTION 29. Section 14B-10-1011 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

14B-10-1011 Stairways.

The provisions of Section 1011 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

19. Revise the second sentence of Section 1011.16 to read:

"Permanent ladders shall be constructed in accordance with Section 306.5 of the Chicago Mechanical Code."

(Omitted text is not affected by this ordinance.)

SECTION 30. Section 14B-10-1020 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-10-1020 Corridors.

The provisions of Section 1020 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

5. Revise ~~exception 1~~ to Section 1020.5 by deleting ~~"smoking lounges."~~ including its exceptions to read:

"1020.5 Air movement in corridors.

Air movement in corridors shall comply with Section 601.2 of the Chicago Mechanical Code."

6. Add new ~~exception 5~~ to Section 1020.5 to read: [Reserved]

~~"5. Use of a corridor as a source of makeup air for exhaust systems in Group R-2 dwelling units and sleeping units that open directly onto such corridors shall be permitted, provided that each such corridor is directly supplied with outdoor air at a rate greater than the rate of makeup air taken from the corridor and the dwelling units and sleeping units are provided with an independent source of air for ventilation."~~

7. Delete item 5 in Section 1020.5.1.

(Omitted text is not affected by this ordinance.)

SECTION 31. Section 14B-12-1202 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-12-1202 Ventilation.

The provisions of Section 1202 of IBC are adopted by reference with the following modifications:

1. Revise Section 1202.1 to read:

"1202.1 General.

~~Every space intended for human occupancy shall be provided with natural ventilation in accordance with Section 1202.5, or mechanical ventilation in accordance with the Chicago Mechanical Code.~~

Exceptions:

1. ~~Where the air infiltration rate in a dwelling unit is less than 5 air changes per hour where tested with a blower door at a pressure 0.2 inch w.c. (50 Pa) in accordance with the Chicago Energy Conservation Code, the dwelling unit shall be ventilated by mechanical means in accordance with Section 403 of the Chicago Mechanical Code.~~
2. ~~In dwelling units in Group I-1, R-2, R-3, and R-5 occupancies, natural ventilation in accordance with Section 1202.5 shall be provided in all living, dining and sleeping rooms with a floor area of 70 square feet (6.5 m²) or more.~~
3. ~~Rooms containing bathtubs, showers, spas and similar bathing fixtures shall be mechanically ventilated in accordance with the Chicago Mechanical Code.~~
4. ~~Ambulatory care facilities and Group I-2 occupancies shall be ventilated by mechanical means in accordance with the Chicago Mechanical Code.~~
5. ~~Natural ventilation shall not be substituted for mechanical ventilation in rooms or spaces where mechanical ventilation is specifically required by the Chicago Mechanical Code or Chicago Energy Conservation Code.~~
6. ~~Ventilation and exhaust systems for occupancies and operations involving flammable or combustible hazards or other contaminant sources as covered in the Chicago Mechanical Code or the Chicago Fire Prevention Code shall be provided as required by both codes."~~

"1202.1 Ventilation required.

Every occupiable space shall be provided with ventilation in accordance with Sections 1202.1.1 through 1202.1.3.

1202.1.1 Mechanical exhaust systems.

A mechanical exhaust system in accordance with the Chicago Mechanical Code shall be provided in toilet rooms and bathrooms.

1202.1.2 Mechanical ventilation.

Mechanical ventilation in accordance with Section 403 of the Chicago Mechanical Code shall be provided in:

1. Ambulatory care facilities.
2. Group I-2 occupancies.
3. Dwelling units and sleeping units complying with or exceeding the new construction building thermal envelope air leakage requirements in the Chicago Energy Conservation Code or Chicago Energy Transformation Code in effect at the time of construction. Dwelling units and sleeping units in buildings and additions constructed in or after 2010 shall be presumed to meet this standard.
4. Rooms or spaces where mechanical ventilation is specifically required by Chapter 4, the Chicago Mechanical Code, the Chicago Energy Transformation Code, or the Chicago Fire Prevention Code.
5. Rooms or spaces required to be provided with cooling and dehumidification equipment in accordance with Section 1203 of this code or Section 803 of the Chicago Minimum Requirements for Existing Buildings.
6. Rooms or spaces not provided with means of natural ventilation in accordance with Section 1202.5.

1202.1.3 Natural ventilation.

Means of natural ventilation in accordance with Section 1202.5 of shall be provided in:

1. Rooms intended for dining, living or sleeping in a dwelling unit in a Group I-1, R-2, R-3, R-4 or R-5 occupancy.

Exception: Buildings containing 20 or more dwelling units where all dwelling units in the building are provided with mechanical ventilation in accordance with Section 403 of the Chicago Mechanical Code and the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

2. Rooms or spaces not provided with mechanical ventilation in accordance with Section 403 of the Chicago Mechanical Code."

SECTION 32. Section 14B-15-1516 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

14B-15-1516 Interior roof edge for shafts and fully enclosed courts.

(Omitted text is not affected by this ordinance.)

The edges of a *low-sloped roof* that adjoin a shaft or a *court* that is enclosed on all sides shall be provided with a parapet wall, extended masonry, or guard, or any combination thereof, that meets the requirements of Section 1015.

(Omitted text is not affected by this ordinance.)

All skylights and other openings located in the plane of a *low-sloped roof* that are not otherwise required to remain open and unobstructed by law shall be either: (i) glazed with wired glass, plain glass, or glass block, or polycarbonate plastic that is designed to meet the applicable live load requirements for the roof under Section 1607; or (ii) provided with a parapet wall, extended masonry, or guard, or any combination thereof, that meets the requirements of Section 1015.”

SECTION 33. Section 14B-26-2603 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-26-2603 Foam plastic insulation.

The provisions of Section 2603 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

8. ~~Section 2603.4.1.6. [Reserved]~~

(Omitted text is not affected by this ordinance.)

SECTION 34. Section 14B-33-3313 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-33-3313 IBC ~~Section 3313~~ Fire pump.

The provisions of Section 3313 of IBC are not adopted. The following language is adopted as Section 3313:

“3313. FIRE PUMP

3313.1 General.

When the height of the building reaches 300 feet (91.4 m), fire pumps shall be installed and in service for the standpipe risers required by Section 3311. The fire pumps may be part of the permanent installation or may be an independent temporary system.

(Omitted text is not affected by this ordinance.)

SECTION 35. Article 5 of Chapter 18-29 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

Article 5. Water Heaters.

(Omitted text is not affected by this ordinance.)

18-29-501.2 Deliberately omitted Standards.

Domestic electric water heaters shall be listed in accordance with UL 174 or UL 1453 and be installed in accordance with the Chicago Electrical Code. Commercial electric water heaters shall be listed in accordance with UL 1453 and be installed in accordance with the Chicago Electrical Code. Fuel gas-fired water heaters shall be listed in accordance with ANSI Z21.10.1/CSA 4.1 or ANSI Z21.10.3/CSA 4.3 and be installed in accordance with the Chicago Fuel Gas Code. Oil-fired water heaters shall be listed in accordance with UL 732 and be installed in accordance with the Chicago Mechanical Code. Solid-fuel-fired water heaters shall be listed in accordance with UL 2523 and be installed in accordance with the Chicago Mechanical Code. Solar thermal water heating systems shall comply with Chapter 14 of the Chicago Mechanical Code and ICC 900/SRCC 300.

(Omitted text is not affected by this ordinance.)

18-29-501.4 Location for access.

Water heaters and storage tanks shall be located and connected so as to provide access for observation, maintenance, servicing and replacement. Water heaters shall be capable of being removed without first removing a permanent portion of the building structure.

(Omitted text is not affected by this ordinance.)

SECTION 36. Section 14R-2-202 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14R-2-202 General definitions.

The provisions of Section 202 of IEBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

26. Insert the following definitions:

(Omitted text is not affected by this ordinance.)

PROPERTY LINE. As defined in Chapter 2 of the *Chicago Building Code*.

RECONFIGURED SPACE. A newly created room or space or an existing room or space where any of the following apply:

1. An increase in floor area exceeding five percent.
2. An increase in occupant load exceeding five percent.
3. Creation of an unprotected opening connecting two or more stories.
4. An increase in exit access travel distance exceeding five percent.
5. An increase in common path of egress travel distance exceeding five percent.
6. An increase in exit discharge travel distance through an indoor area on the level of exit discharge exceeding five percent.
7. Elimination of an operable window in a *dwelling unit* or *sleeping unit*.
8. An increase in travel distance to toilet facilities exceeding twenty percent.

(Omitted text is not affected by this ordinance.)

- 34.1. Revise the definition of "work area" to read:

"WORK AREA. The portion or portions of a *building* consisting of all *reconfigured spaces* intended as part of a project or series of related projects and not classified as an *addition*. ~~reconfigured spaces as indicated on the construction documents.~~ Work area excludes other portions of the *building* where incidental work ~~entailed~~ necessitated by the intended work must be performed and portions of the *building* where work not initially intended by the owner is specifically required by the *Chicago Construction Codes*."

(Omitted text is not affected by this ordinance.)

SECTION 37. Section 14R-4-407 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14R-4-407 Mechanical.

The provisions of Section 407 of IEBC are adopted by reference ~~without modification.~~ with the following modifications:

1. Insert a new Section 407.3 to read:

"407.3 Appliances.

Elements of listed appliances regulated by the *Chicago Fuel Gas Code* or *Chicago Mechanical Code* shall only be repaired or altered in a manner that preserves the original listing."

2. Insert a new Section 407.4 to read:

“407.4 Refrigerant.

Changes of refrigerant shall comply with Section 1101.7 of the Chicago Mechanical Code.”

SECTION 38. Section 14R-8-803 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14R-8-803 Fire protection.

The provisions of Section 803 of IEBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

3. Revise the exception to Section 803.2.2 to read:

“Exceptions:

1. If the *existing building* does not have sufficient municipal water supply for design of an automatic sprinkler system available to the *work area* without installation of a new fire pump or new water service, *work areas* shall be protected by an automatic smoke detection system throughout all corridors, stairways and occupiable spaces, other than individual sleeping units or individual dwelling units, that activates the occupant notification system in accordance with Sections 907.4, 907.5 and 907.6 of the *Chicago Building Code*.

(Omitted text is not affected by this ordinance.)

SECTION 39. Section 14X-1-104.1 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

14X-1-104.1 General.

Where a condition report is required by this code, it must be prepared by a *registered design professional*, signed and sealed by the *registered design professional*, and based on a physical inspection of the premises performed by or under the direct supervision of the *registered design professional* in accordance with requirements of the *Chicago Construction Codes*, accepted industry standards, and applicable rules adopted by the *building official*.

Exceptions:

1. A condition report regarding an electrical system or device, including a fire alarm system, may be prepared, signed, and sealed by a professional engineer or prepared and signed by a licensed supervising electrician.
2. A condition report regarding a mechanical system or device may be prepared, signed, and sealed by a professional engineer or prepared and signed by a person approved to prepare such a report based on professional qualifications and experience.

3. A condition report regarding a plumbing system or device may be prepared, signed, and sealed by a *professional engineer* or prepared and signed by a licensed plumber.
2. A condition report regarding a non-electrical fire protection system or device may be prepared, signed, and sealed by a *professional engineer* or prepared and signed by a person *approved by the fire code official* to prepare such a report based on professional qualifications and experience.
4. A condition report regarding a conveyance device may be prepared, signed, and sealed by a *professional engineer* or prepared and signed by a licensed supervising elevator mechanic.

SECTION 40. Section Chapter 14X-8 of the Municipal Code of Chicago is hereby amended by inserting a new Section 14X-8-801.3 as follows:

14X-8-801.3 Maintenance.

Heating, cooling, and mechanical systems and equipment must be maintained in proper operating condition in accordance with the original design. Heating, cooling, and mechanical equipment must be maintained and operated in a safe and sanitary condition. Devices or safeguards that were required by law or the manufacturer's instructions at the time of installation must be maintained in compliance with those requirements. To determine compliance with this chapter, the *building official* may require a condition report in accordance with Section 14X-1-104.

SECTION 41. Chapter 17-17 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

**CHAPTER 17-17
TERMINOLOGY AND MEASUREMENTS**

(*Omitted text is not affected by this ordinance.*)

17-17-0102-A Group Living. Residential occupancy of a dwelling by other than a "*household*", typically providing communal kitchen/dining facilities. Examples of *group living* uses include but are not limited to fraternities, sororities, convents, monasteries, *nursing homes* and the following specific use types:

(*Omitted text is not affected by this ordinance.*)

6. Temporary Overnight Shelter. A building, or portion thereof, in which sleeping accommodations are provided for no more than 12 hours per day, for 3 or more persons who are not related to the *property owner*, operator, manager or other occupants thereof by blood or by marriage, ~~as described in Chapter 13-208 of the Municipal Code.~~

(*Omitted text is not affected by this ordinance.*)

17-17-0104-BB Sports and Recreation, Participant. Provision of sports or recreation primarily by and for participants. (Spectators would be incidental and on a nonrecurring basis).

The following are participant sports and recreation use types (for either general or personal use):

1. Amusement Arcades. A place of amusement that includes ~~4~~ five or more automatic amusement devices as defined in Section 4-6-120, "~~Automatic amusement operator~~" of the Municipal Code, ~~whether directly or remotely operated or controlled~~; provided, however, that when calculating the number of automatic amusement devices, jukeboxes will not be counted.

(Omitted text is not affected by this ordinance.)

17-17-0251.5-D EVSE-Ready Space. A parking space having *electric vehicle supply equipment infrastructure* installed so as to provide conduit and wiring for a 40-ampere, 208- or 240-volt dedicated branch circuit terminating at a receptacle or junction box within 3 feet of the parking space. For two adjacent parking spaces, a single branch circuit and single junction box is allowed. For outdoor parking spaces, the wiring may be omitted from the conduit. The electrical panel directory and receptacle or junction box must both be permanently marked "For future electric vehicle supply equipment".

(Omitted text is not affected by this ordinance.)

17-17-02175 Temporary Overnight Shelter. A building, or portion thereof, in which sleeping accommodations are provided for no more than twelve hours per day, for three or more persons who are not related to the *property owner*, operator, manager or other occupants thereof by blood or by marriage, ~~as described in Chapter 13-208 of this Code.~~

(Omitted text is not affected by this ordinance.)

17-17-02182 Transitional Shelter. A building, or portion thereof, in which temporary residential accommodations are provided for three or more persons who are not related to the *property owner*, operator, manager or other occupants thereof by blood or by marriage, ~~as described in Chapter 13-212 of the Municipal Code.~~

(Remainder of this page intentionally blank.)

ARTICLE V. RESIDENTIAL CONSTRUCTION REQUIREMENTS

SECTION 1. Table 14A-12-204.3(4) of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

Table 14A-12-1204.3(4) Scope of Review Factor for Rehabilitation ^a

(Omitted text is not affected by this ordinance.)

All	0.75	<u>Change of occupancy</u> without an increase in any hazard category (per Chapter 10 of the <i>Chicago Building Rehabilitation Code</i>) and without creation of food-related facilities requiring a public health inspection, <u>excluding Group R</u>	\$2,000
		<u>Change of occupancy</u> or change of use involving creation of food-related facilities requiring a public health inspection	\$1,500
	1.0	<u>Change of occupancy</u> with an increase in any hazard category (per Chapter 10 of the <i>Chicago Building Rehabilitation Code</i>), <u>excluding Group R</u>	\$3,000

(Omitted text is not affected by this ordinance.)

SECTION 2. Section 14B-2-202 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-2-202 Definitions.

The provisions of Section 202 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

141.1. Insert the following definition:

“INTERLOCKING INTERIOR EXIT STAIRWAY GROUP. A set of two interlocking or adjoining *interior exit stairways*. Each *stairway* is separated from the other by fire-resistance rated construction as required for *shaft enclosures*.”

(Omitted text is not affected by this ordinance.)

SECTION 3. Section 14B-4-403 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-4-403 High-rise buildings.

The provisions of Section 403 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

22. Add a new exception to Revise Section 403.5.1 to read:

"In high-rise buildings that are more than 300 feet (91.4 m) in building height, required interior exit stairways shall be separated by a distance not less than 30 feet (9144 mm) or not less than one-fourth of the length of the maximum overall diagonal dimension of the building or area to be served, whichever is less.

Exception: In Group R-2 occupancies with an automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 installed throughout all interior corridors serving dwelling units, required interior exit stairways shall be separated by a distance not less than 15 feet (4572 mm)."

(Omitted text is not affected by this ordinance.)

- 28.1. Add a new Section 403.5.7 to read:

403.5.7 Interlocking interior exit stairway groups.
Interlocking interior exit stairway groups shall comply with Sections 403.5.7.1 and 403.5.7.2.

403.5.7.1. Shaft enclosures.

Shaft enclosures separating interlocking interior exit stairway groups from other areas of the building shall have a fire-resistance rating of not less than 3 hours.
Shaft enclosures separating exit stairways within an interlocking interior exit stairway group shall have a fire-resistance rating of not less than 2 hours.

403.5.7.2. Two-way communication systems.

In each exit stairway, the two-way fire department communication system required by Section 403.5.3.1 shall be provided at every level served by the exit stairway other than the level of exit discharge."

SECTION 4. Section 14B-6-601 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-6-601 General.

The provisions of Section 601 of IBC are adopted by reference with the following modification:

1. Replace Table 601 as shown:

(Omitted text is not affected by this ordinance.)

- h. In buildings of exclusively Group R-2, R-3, R-4 or R-5 occupancy with no more than ~~four~~ five stories above grade plane, the required fire-resistance rating of roof construction and associated secondary members not supporting an occupiable rooftop shall be reduced to 30 minutes.

(Omitted text is not affected by this ordinance.)

SECTION 5. Section 14B-7-705 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-7-705 Exterior walls.

The provisions of Section 705 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

2. Insert Tables 705.2.1 and 705.2.2 as shown:

(Omitted text is not affected by this ordinance.)

Other <i>open porches</i> and <i>exterior exit stairways</i> , serving more than 4 <u>one</u> but no more than 4 <u>five</u> stories above grade plane	U	No	No	No	No
	UNC	Yes	Yes	Yes	Yes
<i>Exterior exit stairways</i> , other than fire escapes, serving any <i>story</i> or <u>occupiable rooftop</u> more than 4 <u>five</u> stories above grade plane	PNC	Yes	Yes	Yes	Yes

(Omitted text is not affected by this ordinance.)

9. Insert Tables 705.8(1) and 705.8(2) as shown:

(Omitted text is not affected by this ordinance.)

**TABLE 705.8(2)
MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASED ON FIRE
SEPARATION DISTANCE AND DEGREE OF OPENING PROTECTION
FOR PRIVATE GARAGES AND GROUP R-2, R-3, R-4 AND R-5
OCCUPANCIES UP TO ~~4~~ FIVE STORIES ABOVE GRADE PLANE ^a**

(Omitted text is not affected by this ordinance.)

- a. Table 705.8(2) is applicable to detached *private garages* and *carports*, *private garages* and *carports* attached to *buildings* exclusively containing a Group R-2, R-3, R-4 or R-5 occupancy with no more than ~~four~~ five stories above grade plane, and *buildings* exclusively containing a Group R-2, R-3, R-4 or R-5 occupancy with no more than ~~four~~ five stories above grade plane. All other *buildings* shall be subject to the requirements of Table 705.8(1).

(Omitted text is not affected by this ordinance.)

14. Revise Section 705.8.6 to read:

(Omitted text is not affected by this ordinance.)

3. Group R buildings that are ~~four~~ five stories or less above grade plane."

(Omitted text is not affected by this ordinance.)

SECTION 6. Section 14B-10-1007 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-10-1007 Exit and exit access doorway configuration.

The provisions of Section 1007 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

2. Revise Section 1007.1.1 to read:

(Omitted text is not affected by this ordinance.)

6. In Group R-2 R occupancies where the *building* is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 and dead-end *corridors* do not exceed 20 feet (6096 mm), the separation distance shall be not less than 15 feet (4572 mm)."

- 2.1. Add new exceptions to Section 1007.1 to read:

“Exceptions:

1. In buildings with a *building height* of 150 feet (45.7 m) or less that are equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, an *interlocking interior exit stairway group* shall be counted as two *exit stairways* for *stories up to 15 stories above grade plane* that contain only Group R *dwelling units* or *sleeping units*. All elements of the *shaft enclosure* for each *interior exit stairway* shall be constructed of *masonry* or *concrete* and provide a *fire-resistance rating* of at least 2 hours.
2. For conditions not subject to exception 1, an *interlocking interior exit stairway group* shall only be allowed to be counted as two *exit stairways* where *approved* by the *building official* and *fire code official*.”

(Omitted text is not affected by this ordinance.)

SECTION 7. Section 14B-10-1011 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-10-1011 Stairways.

The provisions of Section 1011 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

1. Revise exception 1 to Section 1011.2 by replacing “an *occupant load*” with “a *story* or *mezzanine* with an *occupant load*”. to read:

“*Stairways* that are not part of an *interlocking interior exit stairway group* and serve a *story* or *mezzanine* with an *occupant load* of less than 50 shall have a width of not less than 36 inches (914 mm).”

SECTION 8. Section 14B-10-1014 of the Municipal Code of Chicago is hereby amended by inserting the language underscored, as follows:

14B-10-1014 Handrails.

The provisions of Section 1014 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

3. Revise Exception 1 to Section 1014.6 by replacing "within" with "within or serving."

SECTION 9. Section 14B-10-1023 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-10-1023 Interior exit stairways and ramps.

The provisions of Section 1023 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

- 5.1. Insert a new Section 1023.9.2 to read:

"1023.9.2 Designation.

Stairways that are not part of interlocking interior exit stairway groups shall be designated using letters indicating the compass direction of the location of the stairway within the building, such as N, NE, E, SE, S, SW, W and NW. Stairways that are part of interlocking interior exit stairway groups shall be designated using A and B or C and D.

Exception: Letter-based designation schemes ~~approved~~ approved by the fire code official."

(Omitted text is not affected by this ordinance.)

SECTION 10. Section 14B-10-1027 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-10-1027 Exterior exit stairways and ramps.

The provisions of Section 1027 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

2. Revise Section 1027.5 to read:

(Omitted text is not affected by this ordinance.)

Exceptions:

1. *Exterior exit stairways, porches and exterior exit ramps serving not more than ~~4~~ five stories or occupiable rooftops in Group R-2, R-3 and R-5 occupancies shall have a minimum separation distance of 3 feet (914 mm) if constructed of combustible materials; a separation distance is not required for exterior exit stairways, porches and exterior exit ramps constructed of entirely noncombustible materials.*

(Omitted text is not affected by this ordinance.)

5. Revise exception 4 to Section 1027.6 to read:

- “4. In Group R-2, R-3, and R-5 occupancies not more than ~~four~~ five stories above grade plane, exterior exit stairways and exterior exit ramps are not required to be separated from the interior of the building and openings are not limited where the exterior exit stairway or exterior exit ramp discharges directly to grade.”

(Omitted text is not affected by this ordinance.)

SECTION 11. Section 14B-10-1028 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14B-10-1028 Exit discharge.

The provisions of Section 1028 of IBC are adopted by reference with the following modifications:

(Omitted text is not affected by this ordinance.)

4. ~~Revise Section 1028.4.1 by replacing “Group R-3 and U occupancies” with “Group R-3, R-5 and U occupancies and Group R-2 occupancies in buildings with no more than 4 stories above grade plane.”~~ Revise Section 1028.4 and its subsections to read:

“1028.4 Egress courts.

Egress courts serving as a portion of the exit discharge in the means of egress system shall comply with the requirements of Sections 1028.4.1 through 1028.4.3.

1028.4.1 Width.

The required width of egress courts shall be determined as specified in Section 1005.1, but the minimum width shall be not less than 44 inches (1118 mm).

Exception: The minimum width shall be not less than 36 inches (914 mm) for egress courts serving only Group R-3, R-5 and U occupancies and Group R-2 occupancies in buildings with no more than five stories above grade plane.

1028.4.2 Height.

The required width of egress courts shall be unobstructed to a height of 7 feet (2134 mm).

Exception: Encroachments complying with Section 1005.7.

1028.4.3 Construction and opening protectives.

Where an egress court serving a building or portion thereof is less than 10 feet (3048 mm) in width, the egress court walls shall have a fire-resistance rating of not less than 1-hour for a distance of 10 feet (3048 mm) above the floor of the egress court. Openings within such walls shall be protected by opening protectives having a fire protection rating of not less than 3/4 hour.

Exceptions:

1. Egress courts serving an occupant load of less than 10.
2. Egress courts serving only Group R-3 or R-5 occupancies.
3. For egress courts serving Group R-2 occupancies in buildings with no more than five stories above grade plane, opening protectives shall not be required for openings into individual dwelling units adjacent to locations where occupants have access to two or more separate and distinct egress routes."

5. ~~Revise exception 2 to Section 1028.4.2 by replacing "Group R-3" with "Group R-3 or R-5."~~

SECTION 12. Section 14R-10-1000 of the Municipal Code of Chicago is hereby amended by deleting the language struck through and by inserting the language underscored, as follows:

14R-10-1000 IEBC Chapter 10.

The provisions of Chapter 10 of IEBC are not adopted. The following is adopted as Chapter 10:

(Omitted text is not affected by this ordinance.)

**TABLE 1011.4
MEANS OF EGRESS HAZARD CATEGORIES**

RELATIVE HAZARD	OCCUPANCY CLASSIFICATIONS
1 (Highest Hazard)	H
2	I-2; I-3; I-4
3	A; E; I-1; M; R-1; R-2 ^a ; R-4, Condition 2
4	B; F-1; R-3; R-4, Condition 1; R-5; S-1
5 (Lowest Hazard)	F-2; S-2; U

a. A building or portion of a building undergoing a change of occupancy to a Group R-2 occupancy shall be classified as category 4 where the building is protected throughout with an automatic sprinkler system in accordance Section 903.3.1.1 or 903.3.1.2 of the Chicago Building Code and does not use a fire escape as a means of egress.

(Omitted text is not affected by this ordinance.)

**TABLE 1011.5
HEIGHTS AND AREAS HAZARD CATEGORIES**

RELATIVE HAZARD	OCCUPANCY CLASSIFICATIONS
1 (Highest Hazard)	H
2	A-1; A-2; A-3; A-4; I; R-1; R-4, Condition 2
3	E; F-1; M; R-2 ^a ; S-1
4 (Lowest Hazard)	B; F-2; S-2; A-5; R-3; R-4, Condition 1; R-5; U

a. A building or portion of a building undergoing a *change of occupancy* to a Group R-2 occupancy shall be classified as category 4 where the building is protected throughout with an automatic sprinkler system in accordance Section 903.3.1.1 of the *Chicago Building Code*.

(Omitted text is not affected by this ordinance.)

ARTICLE VI. EFFECTIVE DATES

SECTION 1. Articles III, IV, and V of this Ordinance, excluding Sections 30 and 31 of Article IV and Section 6 of Article V, shall take effect upon passage and publication.

SECTION 2. Article I, Section 3 shall take effect after passage and publication on November 1, 2026.

SECTION 3. The remainder of this Ordinance shall take effect after passage and publication on September 1, 2026.