CHAPTER 6
BUILDING SERVICES AND SYSTEMS

SECTION FC 601
GENERAL

601.1 Scope. This chapter shall govern the design, installation, operation and maintenance of selected devices, equipment and systems used or designed to be used to provide building services, including battery, commercial cooking, elevator recall, emergency power, heating and refrigerating systems.

601.2 Permits. Permits shall be required as set forth in FC105.6.

601.3 General. Fuel-fired appliances, devices, equipment and systems, emergency power systems, electrical systems and equipment, refrigerating systems, elevator recall, battery systems and commercial cooking systems shall be designed, installed, operated and maintained in accordance with this chapter.

601.4 Supervision. Fuel oil storage systems, refrigerating systems and battery systems shall be supervised in accordance with FC 601.4.1 through 601.4.3.

601.4.1 Fuel oil storage and transfer. A stationary fuel oil storage tank, and related piping, that is installed on the lowest floor of a building and that transfers fuel oil through piping to another stationary fuel oil storage tank, or to fuel-oil burning equipment, installed above such floor, shall be under the general supervision of a certificate of fitness holder. The periodic inspection and testing of such tanks and piping pursuant to FC603.1.9 shall be conducted under the personal supervision of such certificate of fitness holder.

601.4.2 Refrigerating systems. Refrigerating systems shall be supervised by a person holding a certificate of qualification in accordance with FC606.1.1 and FC Table 606.1.1.

601.4.3 Battery systems. Battery systems subject to compliance with the requirements of FC608 shall be under the general supervision of a person holding a certificate of fitness.

SECTION FC 602
DEFINITIONS

602.1 Definitions. The following terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

BATTERY SYSTEM, STATIONARY LEAD ACID. A system which consists of three interconnected subsystems:

1. A lead-acid battery.

2. A battery charger.

3. A collection of rectifiers, inverters, converters, and associated electrical equipment as required for a particular application.

BATTERY TYPES

Lithium-ion battery. A storage battery in which an electrical current is generated by lithium ions embedded in a carbon graphite or nickel metal-oxide substrate placed in a high-viscosity carbonate mixture or gelled polymer electrolyte.

Lithium metal polymer battery. A storage battery in which an electrical current is generated by the interaction between lithiated positive active material electrically separated from metallic lithium or lithiated negative active material, and nonaqueous liquid or polymerized electrolytes.

Nickel cadmium (Ni-Cd) battery. An alkaline storage battery in which the positive active material is nickel oxide, the negative active material contains cadmium, and the electrolyte is potassium hydroxide.

Nonrecombinant battery. A storage battery in which, under conditions of normal use, hydrogen and oxygen gases created by electrolysis are vented into the air outside of the battery.

Recombinant battery. A storage battery in which, under conditions of normal use, hydrogen and oxygen gases created by electrolysis are converted into water inside the battery instead of venting into the air outside of the battery.

Stationary storage battery. A storage battery designed for use in a stationary installation, in which electrochemical cells are interconnected to supply a nominal voltage of direct current power. The nominal voltage rating of a stationary storage battery is a function of the number of cells connected in a series, and the discharge capacity is a function of the size of the cells. Stationary storage batteries are characterized by their ability to be restored to a fully charged condition by reversing the flow of the electric current after discharge.

Valve-regulated lead-acid (VRLA) battery. A lead-acid battery consisting of sealed cells furnished with a valve that opens to vent the battery whenever the internal pressure of the battery exceeds the ambient pressure by a set amount. In VRLA batteries, the liquid electrolyte in the cells is immobilized in an absorptive glass mat (AGM cells or batteries) or by the addition of a gelling agent (gel cells or gelled batteries).

Vented (flooded) lead-acid battery. A lead-acid battery consisting of cells that have electrodes immersed in liquid electrolyte. Flooded lead-acid batteries have a provision for the user to add water to the cell and are equipped with a flame-arresting vent which permits the escape of hydrogen and oxygen gas from the cell in a diffused manner such that a spark, or other ignition source, outside the cell will not ignite the gases inside the cell.

CERTIFICATE OF QUALIFICATION. A written statement issued by the commissioner certifying that the person to whom it is issued has passed an examination as to his or her

qualifications to direct, control and supervise the operation of a refrigerating system, for which such certificate is required by this code or the rules.

CITYWIDE-STANDARD KEY. See FC502.1.

COMMERCIAL COOKING APPLIANCES. Appliances used in a commercial food service establishment for heating or cooking food and which produce grease vapors, steam, fumes, smoke or odors that are required to be removed through a local exhaust ventilation system. Such appliances shall include deep fat fryers; upright broilers; griddles; broilers; steam-jacketed kettles; hot-top ranges; under-fired broilers (charbroilers); ovens; barbecues; rotisseries; and similar appliances. For the purpose of this definition, a food service establishment shall include any building or structure used for the preparation and serving of food, other than commercial cooking appliances in carts or other mobile stands operated by street vendors.

HOOD. An air-intake device used to capture by entrapment, impingement, adhesion or similar means, grease and similar contaminants before they enter a duct system.

Type I. A kitchen hood for collecting and removing grease vapors and smoke.

REFRIGERANT. The fluid used for heat transfer in a refrigerating system; the refrigerant absorbs heat and transfers it at a higher temperature and a higher pressure, usually with a change of state.

REFRIGERATING SYSTEM. A combination of interconnected refrigerant-containing parts constituting one closed refrigerant circuit in which a refrigerant is circulated for the purpose of extracting then expelling heat.

SECTION FC 603
FUEL-FIRED APPLIANCES AND EQUIPMENT

603.1 Installation. Nonportable fuel-fired appliances, devices, equipment and systems shall be designed, installed, operated and maintained in accordance with the construction codes, including the Fuel Gas Code and the Mechanical Code.

603.1.1 Manufacturer's instructions. In addition to the requirements of this code and other applicable laws, rules and regulations, the installation shall be made in accordance with the manufacturer's instructions. Where it becomes necessary to change, modify, or alter a manufacturer's instructions in any way, written approval shall first be obtained from the manufacturer.

603.1.2 Approval. The design, construction and installation of fuel-fired appliances, devices, equipment and systems shall be in accordance with the construction codes, including the Fuel Gas Code and the Mechanical Code.

603.1.3 Electrical wiring and equipment. Electrical wiring and equipment used in connection with oil-burning equipment shall be installed and maintained in accordance with FC605 and the Electrical Code.

603.1.4 Fuel oil. The grade of fuel oil used in a burner shall be that for which the burner is approved and as stipulated by the burner manufacturer and approved by the Department of Buildings. Oil containing gasoline shall not be used. Waste crankcase oil shall not be used, except when such waste oil is mixed with number six fuel oil in bulk or waste oil recovery plants, the resultant mixture meets the minimum specifications for number six fuel oil set forth in the Building Code, and the use of such waste oil complies with all laws, rules and regulations relating to smoke and other emissions and is approved by the Department of Environmental Protection.

603.1.5 Access. The installation shall be readily accessible for cleaning hot surfaces; removing burners; replacing motors, controls, air filters, chimney connectors, draft regulators, and other working parts; and for adjusting, cleaning and lubricating parts.

603.1.6 Testing, diagrams and instructions. After installation of the oil-burning equipment, operation and combustion performance tests shall be conducted to determine that the burner is in proper operating condition and that all accessory equipment, controls, and safety devices function properly in accordance with the requirements of the Department of Buildings and the Department of Environmental Protection.

603.1.6.1 Diagrams. Contractors installing industrial oil-burning systems shall furnish not less than two copies of diagrams showing the main oil lines and controlling valves, one copy of which shall be posted at the oil-burning equipment and another at an approved location that will be accessible in case of emergency.

603.1.6.2 Instructions. After completing the installation, the installer shall instruct the owner or operator in the proper operation of the equipment. The installer shall also furnish the owner or operator with the name and telephone number of persons to contact for technical information or assistance and routine or emergency services.

603.1.7 Clearances. Working clearances between oil-fired appliances and electrical panelboards and equipment shall be in accordance with the Electrical Code. Clearances between oil-fired equipment and oil supply tanks shall be in accordance with the construction codes, including the Building Code and the Mechanical Code.

603.1.8 Supervision of operation. Every stationary oil-fired device, equipment or system that is not fully automatic or requires preheating of the oil shall be operated by or under the personal supervision of a person holding a certificate of fitness or a person holding a high-pressure boiler operating engineer's license issued by the Department of Buildings. In addition to providing personal supervision, such person shall be present at the device, equipment or system during startup. A stationary oil-fired device, equipment or system that is subject to annual inspection pursuant to Article 303 of Title 28 of the Administrative Code may be operated under the general supervision of a certificate of fitness holder or a high-pressure boiler operating engineer license holder.

603.1.9 Fuel oil transfer maintenance. The fuel oil storage tanks and piping systems in which fuel oil is transferred from a stationary fuel oil storage tank installed on the lowest

floor of a building to another stationary fuel oil storage tank, or to fuel-oil burning equipment, installed above such floor, shall be inspected for evidence of leaks, and stationary tank float switches shall be tested to ensure that they are in good working order, on not less than a weekly basis.

603.2 Chimneys. Masonry chimneys shall be constructed in accordance with the construction codes, including the Building Code. Factory-built chimneys shall be installed in accordance with the construction codes, including the Mechanical Code. Metal chimneys shall be constructed and installed in accordance with the construction code, including the Building Code and the Mechanical Code.

603.3 Fuel oil storage systems. Fuel oil storage and piping systems shall be installed in accordance with the construction codes, including the Mechanical Code. Fuel oil storage shall be subject to the permit requirements set forth in FC105.6.

603.3.1 Portable fire extinguisher. In all occupancies other than Group R-3 occupancies, stationary fuel oil-burning equipment, including boilers, emergency generators, furnaces, hot water heaters and space heaters, shall be provided with a dry chemical type portable fire extinguisher with at least a 20-B:C rating, or a carbon dioxide type portable fire extinguisher with at least a 2-B:C rating. Such portable fire extinguisher shall be located not more than 30 feet (9144 mm) from the fuel oil fired equipment, except that such travel distance may be increased to a maximum of 50 feet (15 240 mm) if a dry chemical portable fire extinguisher with at least a 40-B:C rating, or a carbon dioxide portable fire extinguisher with at least a 4-B:C rating, is provided.

603.4 Reserved.

603.5 Heating appliances and equipment. Heating appliances and equipment shall be listed and shall comply with the requirements of this section.

603.5.1 Protection of heating element. The heating element or combustion chamber shall have a permanent device to prevent accidental contact by persons or material.

603.5.2 Heating appliance and equipment installation. Heating appliances and equipment shall be installed in accordance with the manufacturer's instructions, the Electrical Code, and the construction codes, including the Building Code, the Mechanical Code and the Fuel Gas Code.

603.6 Chimney installation. Chimneys, smokestacks or similar devices for conveying smoke or hot gases to the outer air and the incinerators, stoves, furnaces, fireboxes or boilers to which such devices are connected, shall be maintained so as not to create a fire hazard.

603.6.1 Masonry chimneys. Masonry chimneys that, upon inspection, are found to have open mortar joints which will permit smoke or gases to be discharged into the building or structure, or which are cracked as to be dangerous, shall be repaired or relined with a listed chimney liner system installed in accordance with the manufacturer's installation instructions or a flue lining system installed in accordance with the construction codes, including the

Building Code and the Mechanical Code, and appropriate for the intended class of chimney service.

603.6.2 Metal chimneys. Metal chimneys which are corroded or improperly supported shall be repaired or replaced.

603.6.3 Decorative shrouds. Decorative shrouds installed at the termination of factory-built chimneys shall be removed except where such shrouds are listed and labeled for use with the specific factory-built chimney system and are installed in accordance with the chimney manufacturer's installation instructions.

603.6.4 Factory-built chimneys. Existing factory-built chimneys that are damaged, corroded or improperly supported shall be repaired or replaced.

603.6.5 Connectors. Existing chimney and vent connectors that are damaged, corroded or improperly supported shall be repaired or replaced.

603.6.6 Incinerator requirements. Incinerators shall be maintained and operated in accordance with FC 603.6.6.1 and 603.6.6.2.

603.6.6.1 Spark arrestor. Incinerators shall be equipped with an effective means for arresting sparks.

603.6.6.2 Time of burning. Burning shall take place only during approved hours.

603.6.7 Discontinuance. The commissioner may require the operation of an incinerator or other device connected to a chimney to be discontinued immediately upon a determination that the use of the incinerator or other device constitutes an undue fire hazard because of conditions in the surrounding environment.

603.7 Discontinuing operation of unsafe heating appliances and equipment. The commissioner may order that measures be taken to prevent the operation of any existing stove, oven, furnace, incinerator, boiler or any other heat-producing appliance, device, equipment or system found to be defective or in violation of code requirements for existing appliances, devices, equipment or systems after giving notice to this effect to any person, owner, firm or agent or operator in charge of the same. The commissioner may take measures to prevent the operation of any appliance, device, equipment or system without notice upon a determination of the existence of an immediate fire hazard or imminent peril to public safety. The defective appliance, device, equipment or system shall remain out of service until all necessary repairs or alterations have been made.

603.7.1 Unauthorized operation. It shall be a violation of this code for any person, user, firm or agent to continue the utilization of any appliance, device, equipment or system (the operation of which has been discontinued or ordered discontinued in accordance with FC603.7), unless written authority to resume operation is given by the department. Removing or breaking the means by which operation of the appliance, device, equipment or system is prevented shall be a violation of this code.

603.8 Reserved.

603.9 Gas meters. Aboveground gas meters, regulators and piping subject to damage shall be protected by a barrier complying with the requirements of FC312 or otherwise protected in an approved manner.

SECTION FC 604
EMERGENCY POWER SYSTEMS

604.1 Installation. Emergency power systems shall be designed, installed, operated and maintained in accordance with the Electrical Code and the construction codes, including the Building Code.

604.2 Where required. Emergency power systems shall be maintained in accordance with NFPA 110, as modified by FC Appendix B, and NFPA 111, such that the system is capable of supplying service within the time specified for the type and duration of emergency power required by the Electrical Code and the construction codes, including the Building Code.

604.3 Maintenance. Emergency power systems shall be maintained such that the system is capable of supplying service within the time specified for the type and duration of emergency power required by the Electrical Code and the construction codes, including the Building Code.

604.3.1 Schedule. Inspection, testing and other maintenance of emergency power systems shall be conducted in accordance with an approved schedule established upon completion and approval of the system installation.

604.3.2 Written record. Written records of the inspection, testing and other maintenance of emergency power systems shall include the date of service, name of the servicing technician, a summary of conditions noted and a detailed description of any conditions requiring correction and what corrective action was taken.

604.3.3 Switch maintenance. Emergency power system transfer switches shall be included in the maintenance schedule required by FC604.3.1. Transfer switches shall be maintained free from accumulated dust and dirt. Inspection shall include examination of the transfer switch contacts for evidence of deterioration. When evidence of contact deterioration is detected, the contacts shall be replaced in accordance with the transfer switch manufacturer's instructions.

604.4 Inspection and testing. Emergency power systems, including all appurtenant components, shall be periodically inspected and tested under load in accordance with NFPA 110, as modified by FC Appendix B, and NFPA 111.

Exception: Where the emergency power system is used for standby power or peak load shaving, such use shall be recorded and may substitute for scheduled testing of the emergency power system, provided that appropriate records are maintained of such use.

604.4.1 Transfer switch test. The test of the transfer switch shall consist of electrically operating the transfer switch from the normal position to the alternate position and then returning back to the normal position.

604.5 Supervision. Inspection, testing and other maintenance shall be conducted under the personal supervision of a person who possesses the required knowledge and training to conduct such maintenance, and who has at least one of the following qualifications:

1. An electrician licensed by the Department of Buildings.

2. An electrician holding a special license issued by the Department of Buildings.

3. A person holding a stationary engineer license, or high-pressure boiler operating engineer's license, issued by the Department of Buildings.

4. A person holding a certificate of qualification.

5. A person holding a certificate of fitness as an FLS director.

6. A registered design professional.

SECTION FC 605
ELECTRICAL EQUIPMENT, WIRING AND HAZARDS

605.1 Abatement of electrical hazards. Defective devices, equipment or systems shall not be used and the hazardous conditions shall be corrected or the device, equipment or system shall be removed from the premises. Electrical wiring, devices and other equipment that is damaged or otherwise constitutes an electrical or fire hazard shall not be used, and the hazardous condition shall be corrected or the equipment removed from the premises.

605.2 Illumination. Illumination shall be provided for service equipment areas, motor control centers and electrical panelboards.

605.3 Working space and clearance. A working space of not less than 30 inches (762 mm) in width, 36 inches (914 mm) in depth and 78 inches (1981 mm) in height shall be provided in front of electrical service equipment. Where the electrical service equipment is wider than 30 inches (762 mm), the working space shall not be less than the width of the equipment. No storage of any materials shall be located within the designated working space.

Exceptions:

1. Where other dimensions are required or allowed by the Electrical Code.

2. Access openings into attics or under-floor areas which provide a minimum clear opening of 22 inches (559 mm) by 30 inches (762 mm).

605.3.1 Labeling. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating ELECTRICAL ROOM or similar approved wording. The disconnecting means for each service, feeder or branch circuit originating on a switchboard or panelboard shall be legibly and durably marked to indicate its purpose unless such purpose is clearly evident.

605.4 Multiplug adapters. Multiplug adaptors, such as cube adaptors, unfused plug strips or any other device not complying with the requirements of the Electrical Code shall be prohibited.

605.4.1 Power tap design. Portable power taps shall be of the polarized or grounded type, equipped with overcurrent protection, and shall be listed in accordance with UL 1363.

605.4.2 Power supply. Portable power taps shall be directly connected to a permanently installed receptacle.

605.4.3 Installation. Portable power tap cords shall not extend through walls, ceilings, floors, under doors or floor coverings, or be subject to environmental or physical damage.

605.5 Extension cords. Extension cords and flexible cords shall not be a substitute for permanent wiring. Extension cords and flexible cords shall not be affixed to buildings or structures, extended through walls, ceilings or floors, or under doors or floor coverings, nor shall such cords be subject to environmental damage or physical impact. Extension cords shall be used only with portable devices.

605.5.1 Power supply. Extension cords shall be plugged directly into an approved receptacle, power tap or multiplug adapter and, except for approved multiplug extension cords, shall serve only one portable device.

605.5.2 Ampacity. The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord.

605.5.3 Maintenance. Extension cords shall be maintained in good condition without splices, deterioration or damage.

605.5.4 Grounding. Extension cords shall be grounded when serving grounded portable devices.

605.6 Unapproved conditions. Open junction boxes and open-wiring splices shall be prohibited. Approved covers shall be provided for all switch and electrical outlet boxes.

605.7 Electrical devices and equipment. Electrical devices and equipment shall be listed or labeled and installed in accordance with the construction codes and the Electrical Code.

605.8 Electrical motors. Electrical motors shall be maintained free from excessive accumulations of oil, dirt, waste and debris.

605.9 Temporary wiring. Temporary wiring for electrical power and lighting installations is allowed for a period not to exceed 90 calendar days. Temporary wiring methods shall meet the applicable provisions of the Electrical Code.

Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair or demolition of buildings, structures, equipment or similar activities.

605.9.1 Attachment to structures. Temporary wiring attached to a building or structure shall be attached in an approved manner.

605.10 Portable electric space heaters. The use of portable electric space heaters shall be in accordance with this section.

605.10.1 Listed and labeled. Portable electric space heaters shall be listed and labeled. Portable electric space heaters shall be operated only in locations for which they are listed.

605.10.2 Power supply. Portable electric space heaters shall be plugged directly into a receptacle. Extension cords shall not be used for electrical connections for portable electric space heaters.

605.10.3 Prohibited use. It shall be unlawful to use portable electric space heaters in the following locations:

1. In any building or occupancy, where the power requirements for the portable electric space heater exceed the rating of the electrical circuit or receptacle from which the heater will draw current.

2. In any occupancy, within 3 feet (914 mm) of any combustible material.

3. In Group I-2 occupancies, except that a portable electric space heater with a heating element designed not to exceed a temperature of 212°F (100°C) may be used in nonsleeping staff and employee areas.

4. In Group R-1 college and university dormitories.

5. In any location considered to be a hazardous location in accordance with the Electrical Code, unless listed for such use.

605.11 Portable halogen floor lamps. Portable halogen floor lamps shall be designed, operated and maintained in compliance with the requirements of this section.

605.11.1 Prohibitions. It shall be unlawful to:

1. store or use portable halogen floor lamps in Group I-2 occupancies and Group R-1 college and university dormitories.

2. use portable halogen floor lamps for any purpose other than lighting.

3. store or use portable halogen floor lamps that are not designed with an approved glass or wire bulb guard or when such guard is not in place.

605.11.2 Manufacturer instructions. Portable halogen floor lamps shall be used in accordance with the manufacturer's instructions.

605.11.3 Placement. Portable halogen floor lamps shall be placed in locations where the risk of the lamp being tipped over by occupant traffic or activities, or of igniting curtains, furnishings or other combustible materials, is minimized.

605.11.4 Bulb replacement and disposal. Portable halogen floor lamp bulbs shall be replaced and discarded only when the bulb is cool to the touch.

SECTION FC 606
REFRIGERATING SYSTEMS

606.1 General. Refrigerating systems shall be designed, installed, operated and maintained in accordance with this code and the construction codes, including the Mechanical Code.

606.1.1 Supervision. It shall be unlawful to operate any refrigerating system for which a permit is required and which is a system described in FC Table 606.1.1, unless such operation is under either the personal supervision or general supervision, as set forth in FC Table 606.1.1, of a person who has obtained a certificate of qualification for refrigerating system operating engineer. For purposes of this section, personal supervision shall mean that such person is present in the building at all times while the system is in operation and that the operation of such system is under his or her personal direction and control, and general supervision shall mean that such person is responsible at all times for the safe operation of such system when such system is in operation and that such system is operated under his or her general direction and control. Persons providing general or personal supervision as required by this section shall register their work location with the department.

606.1.2 Operator inspection after repairs. After any repairs are made to a refrigerating system the operation of which requires supervision by a certificate of qualification holder, the certificate of qualification holder shall check the repairs, together with the functioning of all control devices and the positioning of all valves. Such certificate of qualification holder shall also be present when the system is restarted after repairs.

606.1.3 Operator logbook. A logbook or other form of approved recordkeeping shall be maintained for all refrigerating systems whose operation requires either personal or general supervision by a certificate of qualification holder. For systems requiring personal supervision the logbook shall, at a minimum, contain an entry for each shift the system is in operation. For systems requiring general supervision the logbook shall, at a minimum, contain an entry for each day during which the system is in operation.

606.1.3.1 Logbook entries. The logbook shall provide information relevant to the operation of the system, including any operating problems or deficiencies and required periodic tests. The signature of the certificate of qualification holder shall appear next to each entry.

606.2 Refrigerants. The use and purity of new, recovered, and reclaimed refrigerants shall be in accordance with the construction codes, including the Mechanical Code.

606.3 Refrigerant classification. Refrigerants shall be classified in accordance with the construction codes, including the Mechanical Code.

606.4 Change in refrigerant type. Any change in the type of refrigerant in a refrigerating system shall be made in accordance with the construction codes, including the Mechanical Code.

606.5 Access. Refrigerating systems having a refrigerant circuit containing more than 200 pounds (91 kg) of Group A1 or 30 pounds (14 kg) of any other group refrigerant shall be accessible to the department at all times as required by the commissioner. Refrigerating systems requiring a permit shall be accessible at all times, and shall, where practicable, be made accessible for department inspection without the use of portable ladders or other portable equipment.

606.6 Testing of equipment. Refrigerating equipment and systems having a refrigerant circuit containing more than 200 pounds (91 kg) of Group A1 or 30 pounds (14 kg) of any other group refrigerant shall be subject to periodic testing in accordance with FC606.6.1. Tests of emergency devices or systems required by this chapter shall be conducted by a person holding a certificate of qualification.

606.6.1 Periodic testing. The following emergency devices or systems shall be tested at least monthly in accordance with the manufacturer's instructions.

1. Treatment and flaring systems.

2. Valves and appurtenances necessary to the operation of emergency refrigerating system control boxes.

3. Fans and associated equipment intended to operate emergency ventilation systems.

4. Detection and alarm systems.

FC TABLE 606.1.1 REFRIGERATING SYSTEM OPERATING ENGINEER

Installation Date	Refrigerant Group Or Name[a]	Occupancy Type[b]	Application	Pounds Of Refrigerant In System	System Horsepower	System Design[c]	Supervision Required
Prior to June 1, 1957	A1	Industrial	Human comfort	More than 50	NA	Not fully automatic	Personal
	A1	Industrial	Human comfort	More than 200	NA	Fully automatic	Personal

	A1	Industrial	Human comfort	More than 50 up to 200	NA	Fully automatic	General
	A1	All except Industrial	All	More than 50	NA	Not fully automatic	Personal
	A1	All except Industrial	All	More than 200	NA	Fully automatic	Personal
	A1	All except Industrial	All	More than 50 up to 200	NA	Fully automatic	General
On or after June 1, 1957	A1	Industrial	Human comfort	NA	More than 50 (or kilowatt equivalency)	NA	Personal
	A1	All except Industrial	All	NA	More than 50 (or kilowatt equivalency)	NA	Personal
Regardless of when installed	A2, A3, B1, B2, B3 and carbon dioxide	All	All	More than 50	NA	Not fully automatic	Personal
	A2, A3, B1, B2, B3 and carbon dioxide	All	All	More than 200	NA	Fully automatic	Personal
	A1	Industrial	All except human comfort	More than 50	NA	Not fully automatic	Personal
	A1	Industrial	All except human comfort	More than 200	NA	Fully automatic	Personal
	A1 and carbon dioxide	Industrial	All except human comfort	More than 50 up to 200	NA	Fully automatic	General
	A1	All	Human comfort	NA	Aggregate exceeds 100[d]	NA	Personal

a. For purposes of this table, refrigerant R-123 shall be treated as a group A1 refrigerant, and carbon dioxide shall not be treated as a group A1 refrigerant.

b. For purposes of this table, "industrial" occupancy refers to occupancy groups F, H and S. For installations constructed under the 1968 Building Code, "industrial" occupancy refers to occupancy groups A, B and D. For installations constructed prior to such 1968 code, "industrial" occupancy refers to that portion of a building used for manufacturing, processing, or storage of materials or products, including, among others, chemical, food, candy, and ice

cream factories, ice making plants, meat packing plants, refineries, perishable food warehouses, and similar occupancies.

c. A fully automatic refrigerating system is one whose regulating and safety devices are automatically activated once the system is in operation.

d. This aggregate provision applies only to systems within a single building which are under the sole direct control of a single occupant, lessee or owner. Systems with a rating of 15 horsepower or less or the kilowatt equivalency thereof are excluded from the aggregate.

606.7 Emergency signs. Emergency signs shall be provided in accordance with the construction codes, including the Mechanical Code.

606.8 Refrigerant detector. Machinery rooms shall contain a refrigerant detector with an audible and visual alarm as required by the construction codes, including the Mechanical Code for the refrigerant classification.

606.9 Remote controls. Remote control of the mechanical equipment and appliances located in the machinery room and the emergency ventilation system shall be provided in accordance with the construction codes, including the Mechanical Code.

606.10 Storage, handling and use. Flammable liquids, combustible liquids, combustible materials and combustible waste, except for quantities of combustible liquids below permit amounts, spare parts, tools, and incidental materials necessary for the safe and proper operation and maintenance of the system, shall not be stored in machinery rooms for refrigerating systems. Storage, use or handling of extra refrigerant or refrigerant oils shall be as required by FC Chapters 27, 30, 32 and 34 and the Mechanical Code.

606.11 Termination of relief devices. Pressure relief devices, fusible plugs and purge systems for refrigerating systems containing more than 6.6 pounds (3 kg) of Group A2 or B2 refrigerants, as classified in the Mechanical Code, shall be provided with an approved discharge system as required by FC 606.11.1, 606.11.2 and 606.11.3. Discharge piping and devices connected to the discharge side of a fusible plug or rupture member shall have provisions to prevent plugging the pipe in the event of the fusible plug or rupture member functions. The location for the relief valve discharge from systems containing Group A3 or B3 refrigerants shall be approved.

606.11.1 Flammable refrigerants. Systems containing flammable refrigerants having a density equal to or greater than the density of air shall discharge vapor to the atmosphere only through an approved treatment system in accordance with FC606.11.4 or a flaring system in accordance with FC606.11.5. Systems containing flammable refrigerants having a density less than the density of air shall be allowed to discharge vapor to the atmosphere provided that the point of discharge is located outdoors and not less than 20 feet (6096 mm) above the adjoining grade level and not less than 20 feet (6096 mm) from any window, ventilation opening or exit.

606.11.2 Toxic and highly toxic refrigerants. Systems containing toxic or highly toxic refrigerants shall discharge vapor to the atmosphere only through an approved treatment system in accordance with FC606.11.4 or a flaring system in accordance with FC606.11.5.

606.11.3 Ammonia refrigerant. Systems containing ammonia refrigerant shall discharge vapor to the atmosphere through an approved treatment system in accordance with FC606.11.4, a flaring system in accordance with FC606.11.5, or through an approved ammonia diffusion system in accordance with FC606.11.6, or by other approved means.

Exceptions:

1. Ammonia/water absorption systems containing less than 22 pounds (10 kg) of ammonia and for which the ammonia circuit is located entirely outdoors.

2. When the commissioner determines, on review of an engineering analysis prepared in accordance with FC104.7.2, that a fire, health or environmental hazard would not result from discharging ammonia directly to the atmosphere.

606.11.4 Treatment systems. Treatment systems shall be designed to reduce the allowable discharge concentration of the refrigerant gas to not more than 50 percent of the IDLH at the point of exhaust. Treatment systems shall be in accordance with FC Chapter 37.

606.11.5 Flaring systems. Flaring systems for incineration of flammable refrigerants shall be designed to incinerate the entire discharge. The products of refrigerant incineration shall not pose health or environmental hazards. Incineration shall be automatic upon initiation of discharge, shall be designed to prevent blowback, and shall not expose structures or materials to threat of fire. Emergency power shall have the capacity to operate for one and one-half the required time for complete incineration of refrigerant in the system.

606.11.6 Ammonia diffusion systems. Ammonia diffusion systems shall include a tank containing 1 gallon of water for each pound of ammonia (4 L of water for each 1 kg of ammonia) that will be released in 1 hour from the largest relief device connected to the discharge pipe. The water shall be prevented from freezing. The discharge pipe from the pressure relief device shall distribute ammonia in the bottom of the tank, but no lower than 33 feet (10 058 mm) below the maximum liquid level. The tank shall contain the volume of water and ammonia without overflowing.

606.12 Discharge location for refrigerating system machinery room ventilation. Exhaust from mechanical ventilation systems serving refrigerating machinery rooms capable of exceeding 25 percent of the LFL or 50 percent of the IDLH shall be equipped with approved treatment systems to reduce the discharge concentrations of flammable, toxic or highly toxic refrigerants to those values or lower.

606.13 Notification of refrigerant discharges. The commissioner shall be notified immediately when a discharge becomes reportable under state, federal or local regulations in accordance with FC2703.3.1.

606.14 Records. A written record shall be kept of refrigerant quantities brought into and removed from the premises.

606.15 Electrical equipment. Where refrigerants of Groups A2, A3, B2 and B3, as defined in the Mechanical Code, are used, refrigerating system machinery rooms shall conform to the Class I, Division 2 hazardous location classification requirements of the Electrical Code.

Exception: Ammonia machinery rooms that are provided with ventilation in accordance with Chapter 11 of the Mechanical Code.

606.16 Use of Group A3 and B3 refrigerants. Nothing contained in this section shall be construed to authorize the use of Group A3 or B3 refrigerants, as classified in the Mechanical Code, if otherwise prohibited by the construction codes, including the Mechanical Code.

SECTION FC 607
ELEVATORS IN READINESS

607.1 Phase I emergency recall operation and Phase II emergency in-car operation. Elevators intended to serve the needs of emergency personnel for firefighting or rescue purposes shall be provided with Phase I emergency recall operation and Phase II emergency in-car operation in accordance with the Building Code.

607.2 Emergency signs. All required signage for elevators shall be provided in accordance with the construction codes, including the Building Code.

607.3 Elevators in readiness. Elevators in every building 75 feet (22 860 mm) or more in height shall be kept ready for immediate use by the department during all hours of the night and day including holidays and weekends. There shall be a competent building attendant available to operate such elevators, except that no attendant shall be required for buildings between 75 and 150 feet (22 860 and 45 720 mm) in height having elevators with Phase I emergency recall operation and Phase II emergency in-car operation.

607.4 Emergency elevator operation and maintenance. All elevators equipped with Phase I emergency recall operation and Phase II emergency in-car operation shall be maintained in proper working order such that the emergency elevator operations are operable at all times. All elevators with Phase I emergency recall operation shall be subjected, at least monthly, to a Phase I recall test. All elevators with Phase II emergency in-car operation shall be subjected, at least monthly, to a minimum of a one-floor operation II test.

SECTION FC 608
STATIONARY STORAGE BATTERY SYSTEMS

608.1 Scope. Stationary storage battery systems having an electrolyte capacity of more than 50 gallons (189 L) for flooded lead acid, nickel cadmium (Ni-Cd) and valve-regulated lead acid (VRLA), or 1,000 pounds (454 kg) for lithium-ion and lithium metal polymer, used for facility standby power, emergency power or uninterrupted power supplies, shall comply with this section and FC Table 608.1.

FC TABLE 608.1
BATTERY REQUIREMENTS

REQUIREMENT	NONRECOMBINANT BATTERIES		RECOMBINANT BATTERIES		OTHER
	Flooded Lead Acid Batteries	Flooded Nickel-Cadmium (Ni-Cd) Batteries	Valve Regulated Lead Acid (VRLA) Batteries	Lithium-ion Batteries	Lithium Metal Polymer
Safety caps	Venting caps (608.2.1)	Venting caps (608.2.1)	Self-resealing flame-arresting caps (608.2.2)	No caps	No caps
Thermal runaway management	Not required	Not required	Required (608.3)	Not required	Required (608.3)
Spill control	Required (608.5)	Required (608.5)	Not required	Not required	Not required
Neutralization	Required (608.5.1)	Required (608.5.1)	Required (608.5.2)	Not required	Not required
Ventilation	Required (608.6.1; 608.6.2)	Required (608.6.1; 608.6.2)	Required (608.6.1; 608.6.2)	Not required	Not required
Signage	Required (608.7)	Required (608.7)	Required (608.7)	Required (608.7)	Required (608.7)
Seismic protection	Required (608.8)	Required (608.8)	Required (608.8)	Required (608.8)	Required (608.8)
Smoke detection	Required (608.9)	Required (608.9)	Required (608.9)	Required (608.9)	Required (608.9)

608.2 Safety caps. Safety caps for stationary storage battery systems shall comply with FC 608.2.1 and 608.2.2.

608.2.1 Nonrecombinant batteries. Vented lead acid, nickel-cadmium and other types of nonrecombinant batteries shall be provided with safety venting caps.

608.2.2 Recombinant batteries. VRLA batteries shall be equipped with self-resealing flame-arresting safety vents.

608.3 Thermal runaway. VRLA and lithium metal polymer battery systems shall be provided with a listed device or other approved method to preclude, detect and control thermal runaway.

608.4 Room design and construction. Stationary battery system rooms and enclosures shall be designed and constructed in accordance with the Building Code. Battery systems may be installed in the same room as the equipment to which they provide power.

608.4.1 Separate rooms. When stationary battery systems are installed in a separate equipment room accessible only to authorized personnel, the batteries may be installed on an open rack for ease of maintenance.

608.4.2 Occupied areas. Only VRLA, lithium-ion, and other types of sealed, nonventing batteries may be installed in an occupied area. Such batteries shall be housed in a noncombustible cabinet to prevent access by unauthorized personnel. Such cabinets shall be located within 10 feet (3048 mm) of the equipment to which the batteries they house provide power.

608.5 Spill control and neutralization. An approved method and materials for the control and neutralization of a spill of electrolyte shall be provided in areas containing lead-acid, nickel-cadmium or other types of batteries with free-flowing liquid electrolyte.

Exception: VRLA, lithium-ion, lithium metal polymer and other types of sealed batteries with immobilized electrolyte shall not require spill control.

608.5.1 Nonrecombinant battery neutralization. For battery systems containing lead-acid, nickel-cadmium or other types of batteries with free-flowing electrolyte, the method and materials shall be capable of neutralizing a spill of the total capacity from the largest cell or block to a pH between 5.0 and 9.0.

608.5.2 Recombinant battery neutralization. For VRLA and other types of sealed batteries with immobilized electrolyte, the method and material shall be capable of neutralizing a spill of 3 percent of the capacity of the largest VRLA cell or block in the room to a pH between 5.0 and 9.0.

Exception: Lithium-ion and lithium metal polymer batteries shall not require neutralization.

608.6 Ventilation. Ventilation of stationary storage battery systems shall comply with FC 608.6.1 and 608.6.2.

608.6.1 Room ventilation. Ventilation for flooded lead acid, flooded Ni-Cd and VRLA batteries shall be provided in accordance with the Mechanical Code and the following requirements:

1. The ventilation system shall be designed to limit the maximum concentration of hydrogen to 1 percent of the total volume of the room; or

2. Continuous ventilation shall be provided at a rate of not less than 1 cubic foot per minute per square foot (0.0051 $m^3/s/m^2$) of floor area of the room.

Exception: Ventilation is not required for lithium-ion and lithium metal polymer batteries.

608.6.2 Cabinet ventilation. When VRLA batteries are installed inside a cabinet, such cabinet shall be approved for use in occupied spaces and shall be mechanically or naturally vented by one of the following methods:

1. The cabinet ventilation shall be designed to limit the maximum concentration of hydrogen to 1 percent of the total volume of the cabinet during the worst-case event of simultaneous “boost” charging of all batteries in the cabinet; or

2. Continuous ventilation shall be provided at a rate of not less than 1 cubic foot per minute per square foot (0.0051 $m^3/s/m^2$) of floor area covered by the cabinet. The room in which the cabinet is installed shall also be ventilated as required in FC608.6.1.

608.6.3 Ventilation system monitoring. Mechanical ventilation systems where required by FC 608.6.1 and 608.6.2 shall be supervised by an approved central station or shall initiate an audible and visual signal at a constantly attended on-site location.

608.7 Signage. Signs shall be provided in accordance with FC 608.7.1 and 608.7.2.

608.7.1 Equipment room and building signage. A durable sign that reads as follows shall be posted on doors into electrical equipment rooms or buildings containing stationary battery systems: "CAUTION: This room contains energized battery systems. Battery electrolyte solutions may be corrosive."

608.7.2 Cabinet signage. Cabinets shall have a sign or marking identifying the type of battery system, the electrical rating (voltage and current) of the system, and applicable chemical and fire hazards.

608.8 Seismic protection. The battery systems shall be seismically braced in accordance with the Building Code.

608.9 Smoke detection. An approved automatic smoke detection system shall be installed in accordance with the Building Code in rooms containing stationary battery systems.

608.10 Emergency procedures. Emergency procedures detailing how to shut down the power from the battery system shall be posted on or near the battery system or kept in an approved location on the premises. The procedures shall also include a 24-hour/7-day per week telephone number by which the owner can be contacted to provide additional information to emergency responders.

SECTION FC 609
COMMERCIAL COOKING SYSTEMS

609.1 General. Commercial cooking systems shall be designed, installed, operated and maintained in accordance with this section.

609.2 Design and installation. Commercial cooking systems shall be designed and constructed in accordance with the construction codes, including the Building Code and the Mechanical Code, and shall comply with the requirements of this section.

609.2.1 Fire extinguishing systems. The fire extinguishing system for commercial cooking systems shall comply with the requirements of FC904.11.

609.2.2 Commercial cooking exhaust systems. Commercial cooking exhaust hoods and exhaust ducts shall comply with the requirements of this section.

609.2.2.1 Exhaust hoods. Commercial cooking exhaust hoods shall be designed, installed, operated and maintained in accordance with the construction codes, including the Building Code and the Mechanical Code. Type 1 hoods shall be operated and maintained in accordance with this section.

609.2.2.2 Exhaust ducts. Commercial cooking exhaust ducts shall be provided with cleanout openings in accordance with Chapter 5 of the Mechanical Code, to allow for cleaning and other maintenance, as required by this section.

609.2.3 Deep fat fryers. Deep fat fryers shall be designed and installed in accordance with this section.

609.2.3.1 Separation. Deep fat fryers shall be separated from any adjacent cooking equipment that uses an open flame by at least 16 inches (406 mm). In lieu of such separation distance, a 16-inch (406-mm) high by ⅛-inch (3.2-mm) thick steel baffle permanently attached to the longer of the two adjacent cooking appliances may be used. The baffle shall extend to the full depth of the cooking equipment to which it is attached.

609.2.3.2 High-limit controls. Deep fat fryers shall be equipped with an independent high-limit control in addition to the adjustable operating control (thermostat). Such high-limit control shall be designed and arranged to shut off the fuel supply, including electrical energy, when the fat temperature reaches not more than 475°F (246°C), 1 inch (25 mm) below the liquid surface.

609.2.4 Solid fuel cooking. Solid fuel cooking systems and facilities shall be designed and installed in accordance with the requirements of this section.

609.2.4.1 Cooking equipment. Cooking equipment burning solid fuel shall be installed on floors of noncombustible construction that extend 3 feet (914 mm) from the cooking equipment in all directions. Cooking equipment burning solid fuel shall not be installed within 3 feet (914 mm) horizontally of combustible surfaces or construction, or within 6 feet (1829 mm) vertically of such surfaces or construction.

609.2.4.2 Solid fuel storage. Solid fuel shall be stored in a dedicated room with walls, floor and ceiling having a minimum fire rating of one hour. The storage room floor shall be noncombustible or surfaced with noncombustible material.

609.3 Operation. Commercial cooking systems shall be operated in accordance with this section and FC609.5.

609.3.1 Unlawful operation. It shall be unlawful to operate commercial cooking equipment that generates smoke or grease-laden vapors or fumes:

1. without a permit for the operation of the commercial cooking system.

2. without a lawful fire extinguishing system.

3. without a lawful exhaust system.

4. without the required grease filters.

5. while its fire extinguishing system or exhaust system is out of service.

609.3.2 Supervision. Commercial cooking equipment shall be attended at all times while in operation.

609.3.3 Portable commercial cooking equipment markings. The designated location for portable (wheeled) commercial cooking equipment shall be outlined on the floor in a durable 1-inch (25-mm) wide yellow line markings or other approved means. Such location shall be determined in relation to the location of the fire extinguishing system nozzle protecting such portable commercial cooking equipment.

609.3.4 Ventilation system. Commercial cooking ventilation systems shall be operated and maintained in accordance with this section.

609.3.4.1 Operation during cooking. Exhaust systems shall be operated at all times while cooking equipment is in use. The ventilation system into which commercial cooking system exhaust hoods exhaust shall be operating at the required rate of air movement, and approved grease filters shall be in place when equipment under the exhaust hood is in use.

609.3.4.2 Grease extractors. When installed, grease extractors shall be operated at all times while cooking equipment is in use.

609.3.4.3 Maintenance of operational efficiency. Fixed air supply openings installed to provide make-up air for air exhausted through the exhaust system shall not be restricted by covers, dampers, or any other means that would reduce the operating efficiency of the exhaust system. Commercial cooking hoods shall not be painted.

609.3.5 Signage. A sign clearly and concisely summarizing the operation, maintenance and cleaning requirements for commercial cooking systems regulated by this code, together with a schematic drawing depicting the origin, run, and terminus of the exhaust system shall be provided in accordance with this section. Such sign shall be at least 8½ inches (216 mm) by 11 inches (279 mm) in size, posted at or near the main entrance to the cooking area, and laminated or framed under a clear glass or plexiglas cover.

609.3.6 Staff training. The owner or operator of commercial cooking equipment shall train all staff in the proper procedure for the use of all components of the grease removal system, cleaning of filters, and the manual operation of the fire extinguishing system. Refresher training in the manual operation of the fire extinguishing system shall be provided at least once every 6 months.

609.4 Maintenance. Commercial cooking systems shall be maintained in accordance with this section and FC609.5.

609.4.1 Exhaust system inspection and cleaning. The entire exhaust system, including exhaust hoods, grease filters, grease extractors, ducts, exhaust fans, pollution control devices, and other appurtenances, shall be inspected and cleaned at least once every 3 months by a

person holding a certificate of fitness. Surfaces shall be cleaned to bare metal. The powder residue or other foreign substance left by saponifying agents or other cleaning materials shall be removed. Flammable cleaning fluids shall not be used. Cleaning fluids shall not be applied to fusible links or other detection devices of the fire extinguishing system.

Exceptions:

1. Commercial cooking equipment utilizing solid fuel shall be inspected monthly by a trained and knowledgeable person, and cleaned by a certificate of fitness holder as necessary but not less frequently than once every 3 months.

2. Vertical portions of interior and exterior vertical ducts in excess of three stories in height shall be cleaned at least every 6 months by a person holding a certificate of fitness. Horizontal portions of such ducts, including all elbows, shall be inspected and cleaned in accordance with this section.

609.4.2 System deactivation. Unless necessary to accomplish cleaning, components of the fire extinguishing system shall not be rendered inoperable during the cleaning process. If electrical switches, detection devices, or other components of the fire extinguishing system must be deactivated during the cleaning process, such deactivation shall be performed by a licensed master fire suppression piping contractor. Immediately upon completion of the cleaning process the licensed master fire suppression piping contractor shall restore the system to proper operation. Electrical switches that may be accidentally activated during the cleaning process shall be electrically locked out during such process.

609.4.3 Grease filters. In addition to the cleaning required by FC609.4.1, grease filters shall be regularly cleaned or replaced by a trained and knowledgeable person, as necessary but at least once per month.

609.4.4 High-limit controls for deep fat fryers. All high-limit controls shall be replaced every 3 years with a new or rebuilt unit certified to operate at not more than 475°F (246°C).

609.5 Solid fuel commercial cooking systems. In addition to the other requirements of FC609, solid fuel cooking systems shall be operated and maintained in accordance with this section.

609.5.1 Cooking operations. Unless otherwise approved by the Commissioner of Buildings, the burning of solid fuel in commercial cooking equipment, such as briquettes, mesquite, hardwood, or charcoal, shall be allowed only for purposes of flavor enhancement. Solid fuel shall be ignited with a match or other approved means. Combustible or flammable liquids shall not be used. Matches shall not be stored in the immediate vicinity of cooking equipment. Solid fuel shall be added to the fire in a safe manner and only in quantities that will not create a flame higher than required. Long-handled tongs, hooks and other required devices shall be provided and used in order to safely add fuel, adjust the fuel, position and control the fire without having to reach into the fire box. The room where solid fuel is stored or used shall be protected throughout by a sprinkler system.

609.5.2 Solid fuel storage. Not more than a one-day supply may be kept in the same room as the solid fuel cooking equipment or masonry oven or in the room with the fuel loading or clean-out doors. Solid fuel shall not be stored:

1. within 3 feet (914 mm) of any portion of a solid fuel burning equipment, masonry oven or any other heating or cooking appliance.

2. within 6 feet (1829 mm) of any solid fuel loading opening or door of the solid fuel cooking equipment or masonry oven.

3. above any heating or cooking equipment, flue or vent.

609.5.3 Water supply. A water supply with a flexible hose shall be readily available to solid fuel cooking appliances and masonry ovens to cool down any fire that becomes too hot and to completely extinguish any fire before leaving the premises. The water source shall be a fixed pipe system with a hose of adequate length to reach to the combustion and cooking chambers of the appliance. The nozzle shall be equipped with a manual shutoff device, and shall be of the type to provide a fine to medium spray. A full flow or strong stream shall not be used.

609.5.4 Spent fuel. Spent fuel, ash, cinders and other fire debris shall be removed from the fire box at regular intervals, but at least once a day, and, once removed, shall not be stored indoors. Adequate long handle rakes, hoes, scrapers and shovels shall be provided for such removal. When being removed from the fire box, the spent fuel shall be wetted down and cooled with water from the required water supply. Metal containers with covers shall be provided for such spent fuel removal. Such metal containers shall be of a minimum 16 gauge construction and shall be limited in size to a capacity not exceeding 20 gallons (75.7 L), so as to facilitate easy handling by any employee assigned to the task and to enable such containers to easily pass through any door or passageway. The spent fuel shall be placed outdoors in a dumpster or heavy metal container used exclusively for this purpose and kept covered at all times. Such dumpster or container shall be kept separate from combustible construction, and stored combustible materials and combustible waste.

609.6 Portable fire extinguishers. Portable fire extinguishers shall be readily available for use in the cooking area but in any event no further than 30 feet (9144 mm) of travel distance from the commercial cooking equipment.

609.6.1 Commercial cooking. Commercial cooking equipment areas shall be provided with a Class K rated portable fire extinguisher.

609.6.2 Deep fat fryers. When a deep fat fryer is installed in a cooking area, Class K portable fire extinguishers shall be provided as follows:

1. For up to four fryers individually having a maximum cooking medium capacity of 80 pounds (36.3 kg) and a maximum surface area of 6 square feet (0.55 m^2): One having a minimum 1½ gallon (6 L) capacity.

2. For every additional group of up to four fryers, individually having a maximum cooking medium capacity of 80 pounds (36.3 kg) and a maximum surface area of 6 square feet (0.55 m^2) each: One additional Class K portable fire extinguisher having a minimum 1½ gallon (6 L) capacity.

3. For individual fryers having a maximum cooking medium capacity exceeding 80 pounds (36.3 kg) or 6 square feet (0.55 m^2) in surface area: Provide Class K portable fire extinguishers in accordance with the portable fire extinguisher manufacturer's recommendations.

609.6.3 Solid fuel cooking equipment. When solid fuel cooking equipment is installed in a cooking area, Class K portable fire extinguishers shall be provided as follows:

1. For equipment with individual fireboxes of 5 cubic feet (0.14 m^3) or less in volume: One having a minimum 2½ gallon (9 L) capacity, or two having a minimum 1½ gallon (6 L) capacity.

2. For equipment with fireboxes exceeding 5 cubic feet (0.14 m^3): Provide Class K portable fire extinguishers in accordance with the portable fire extinguisher manufacturer's recommendations.

609.7 Recordkeeping. A record shall be maintained of the following commercial cooking system maintenance in accordance with FC107.7:

1. The inspection and cleaning of the exhaust system required by FC609.4.1, including the date that such inspection and cleaning was conducted, and the name and certificate of fitness number of the certificate of fitness holder or the name of the trained and knowledgeable person conducting such inspection and cleaning.

2. The replacement of deep fat fryer high-limit controls in accordance with FC609.4.4.

3. The servicing of the fire extinguishing system in accordance with FC904.11.6.