7.4.1.1* ((~~For systems other than manual systems, the performance of such systems shall include details of the fire signature required to initiate alarm.~~))At least one automatic fire detection system to identify and locate a fire in a tunnel shall be provided.

7.4.1.2 Automatic fire detectors, including fixed water-based fire-fighting system water flow alarm-initiating devices, shall be installed in accordance with the requirements of *NFPA 72*.

7.4.1.3 Automatic fire detectors and fixed water-based fire-fighting system water flow alarm-initiating devices protecting the roadway and ancillary spaces within tunnels (pump stations, utility rooms, cross-passages, ventilation structures) and other areas shall be supervised by automatic fire alarm systems.

7.4.1.4 Spot detectors shall have a light that remains on until the device is reset, or shall be provided with remote alarm or supervisory indication in a location acceptable to the authority having jurisdiction.

7.4.1.5 Automatic fire detection systems for zoned deluge fixed water-based fire-fighting systems within a tunnel shall be zoned to correspond with the fixed water-based fire-fighting system zones.

7.4.1.6 Automatic fire detection systems within a tunnel shall be zoned to correspond with the tunnel ventilation zones if tunnel ventilation is provided.

((~~**7.4.1.2 Manual Fire Alarm Boxes**~~

~~**7.4.1.2.1** Manual fire alarm boxes mounted in NEMA Enclosure Type 4 (IP 65) or equivalent boxes shall be installed at intervals of not more than 90 m (300 ft) and at all cross-passages, and means of egress from the tunnel.~~

~~**7.4.1.2.2** The manual fire alarm boxes shall be accessible to the public and the tunnel personnel.~~

~~**7.4.1.2.3** The location of the manual fire alarm boxes shall be approved.~~

~~**7.4.1.2.4** The alarm shall indicate the location of the manual fire alarm boxes at the monitoring station.~~

~~**7.4.1.2.5** The system shall be installed, inspected, and maintained in compliance with *NFPA 72*.~~

~~**7.4.1.3 Closed-Circuit Television (CCTV) Systems.**~~

~~**7.4.1.3.1** CCTVs with or without traffic-flow indication devices shall be permitted to identify fires in tunnels with 24-hour supervision.~~

~~**7.4.1.3.2*** Ancillary spaces within tunnels (pump stations, utility rooms, cross-passages, ventilation structures) and other areas shall be supervised by automatic fire alarm systems.~~))

((~~***A.7.4.1.3.2** Examples of these areas include the following:~~
~~(1) Pump stations~~
~~(2) Utility rooms~~
~~(3) Cross-passages~~
~~(4) Ventilation structures~~))

((~~**7.4.1.4 Automatic Fire Detection Systems.**~~

~~**7.4.1.4.1** Automatic fire detection installed in accordance with the requirements of *NFPA 72* shall be installed in tunnels where 24-hour supervision is not provided.~~

~~**7.4.1.4.2** Where a fire detection system is installed in accordance with the requirements of 7.4.1.4.1, signals for the purpose of evacuation and relocation of occupants shall not be required.~~

~~**7.4.1.4.3** Where a fire detection system is installed in accordance with the requirements of 7.4.1.4.1, the system shall be for fire detection only.~~

~~**7.4.1.4.4** Automatic fire detection systems shall be capable of identifying the location of the fire within 15 m (50 ft).~~

~~**7.4.1.4.5** Spot detectors shall have a light that remains on until the device is reset~~

~~**7.4.1.4.6** CCTV systems used for automatic fire detection shall be permitted when listed for the intended purpose and installed in accordance with the manufacturers' requirements and *NFPA 72*.~~

~~**7.4.1.4.7** Automatic fire detection systems within a tunnel shall be zoned to correspond with the tunnel ventilation zones where tunnel ventilation is provided.~~))

***

7.4.3 Closed-Circuit Television (CCTV) Systems.

7.4.3.1 CCTVs shall be provided, and shall be capable of identifying the location of the fire within 15 m (50 ft).

7.4.3.2 CCTVs with or without traffic-flow indication devices may automatically identify fires in tunnels if all of the components of the video image fire detection system, including hardware and software, are listed for the purpose of fire detection.

7.4.4 Emergency Telephones.

7.4.4.1 Emergency telephones shall be installed at intervals of not more than 90 m (300 ft) and at all cross-passages, standpipe hose connection locations, and means of egress from the tunnel.

7.4.4.2 The location of the emergency telephones during off-hook condition shall be indicated at the monitoring station.

7.4.5 Emergency Communication System

7.4.5.1 An approved Emergency Communication System in accordance with the 2010 edition of NFPA 72 shall be provided within the tunnel.

7.4.5.2 The Emergency Communication System shall include fire alarm system strobes at all tunnel egress doors.

7.4.6 Fire Command Center. If required by the authority having jurisdiction, road tunnels shall be provided with a fire command center in accordance with Section 509 of the 2009 *Seattle Fire Code*.

7.5((*)) Communication Systems.

((~~**A.7.5** Radio communications systems, such as highway advisory radio (HAR) and AM/FM commercial station overrides, can be provided to give motorists information regarding the nature of the emergency and the actions the motorist should take. All messaging systems should be capable of real-time composition. The communications system can also feature a selection of prerecorded messages for broadcasting by the emergency response authority. Areas of refuge or assembly, if available, should be provided with reliable two-way voice communications to the emergency response authority.~~))

7.5.1 If required by the authority having jurisdiction,((~~In~~)) new and existing tunnels and ancillary structures((~~, wherever necessary for dependable and reliable communications, a separate radio network capable of two-way radio communication for fire department personnel to the fire department communication center~~)) shall be provided with an emergency responder radio system in accordance with Section 510 of the 2009 Seattle Fire Code.

***

7.9.1 Fixed water-based fire-fighting systems ((~~shall be permitted~~))are required in road tunnels as part of an integrated approach to the management of fire and life safety.

7.9.1.1 Fixed water-based fire-fighting systems in road tunnels shall be designed and installed in accordance with NFPA 13.

7.9.1.2 Minimum protection of the roadway shall be in accordance with NFPA 13 for Extra Hazard Group 2. If flammable liquids and/or hazardous materials will be present, protection shall be based on an engineering analysis and approved by the authority having jurisdiction.

7.9.1.3 Protection of electrical rooms and mechanical spaces shall be in accordance with NFPA 13 for Ordinary Hazard Group 1.

7.9.1.4 Protection of exit enclosures shall be in accordance with NFPA 13 for Light Hazard.

***

7.14.3 Maintenance. The means of egress shall be maintained in accordance with ((~~NFPA 1~~)) Chapter 10 of the 2009 *Seattle Fire Code*.

***

7.14.6.3* Egress Pathway.

A.7.14.6.3 The maximum means of egress travel speed shall be computed for reduced visibility due to a smoke filled environment. The travel speed for such environment is in the range of 0.5 – 1.5 m/s (100 – 300 fpm) depending on visibility, illuminance, design of exit signs and egress pathway.

7.14.6.3.1 The tunnel roadway surface, if supported by a traffic management system, shall be considered part of the egress pathway.

7.14.6.3.2 If walkways are provided for egress purposes, the walkway egress path shall have a minimum clear width of 1.12 m (3.6 ft), lead directly to an emergency exit, and be protected from traffic.

7.14.6.4 The emergency exits shall be separated from the tunnel by a minimum of a 2-hour fire-rated construction enclosure having a Class A interior finish as defined in the 2009 *Seattle Building Code*.

7.14.6.5 Emergency exits shall be pressurized in accordance with NFPA 92A, 2009 edition, with doors meeting the requirements of Section 7.14.5.

7.14.6.6 If portals of the tunnel are below surface grade, surface grade shall be accessible by a stair, vehicle ramp, or pedestrian ramp.

7.14.6.7 If cross-passageways are to be used as emergency exits, provisions shall be to stop all traffic operation in the adjacent tunnel when the cross-passageways are in use.

***

Chapter 9 Standpipe, Fire Hydrants, and Water Supply

***

9.1.4.3 ((~~Heat trace material shall be listed for the intended purpose and supervised for power loss.~~))Heat tracing systems for freeze protection for standpipes shall be in accordance with Seattle Fire Department Administrative Rule 9.03.09, *Automatic Sprinkler and Standpipe Systems* and any future revisions of this rule adopted by the authority having jurisdiction.

***

9.2 Standpipe Water Supply

***

9.2.3 ((~~Acceptable water supplies shall include the following:~~
~~(1) Municipal or privately owned waterworks systems that have adequate pressure and flow rate and a level of integrity acceptable to the authority having jurisdiction~~
~~(2) Automatic or manually controlled fire pumps that are connected to an approved water source~~
~~(3) Pressure-type or gravity-type storage tanks that are installed, inspected, and maintained in accordance with NFPA 22~~))
Standpipes shall be sized to provide 1000 gpm. Hydraulic calculations shall be based on 500 gpm at 130 psi at the hydraulically most remote hose connection, with a simultaneous flow of 500 gpm at the next hydraulically most remote hose connection. The maximum calculated pressure at any point in the system shall not exceed 350 psi.

***

9.3.1 Fire department connections shall be of the threaded ((~~two-way or three-way~~))65-mm (2½-in) four-way type((~~ or shall consist of one 100 mm (4 in.) quick-connect coupling that is accessible~~)).

***

9.4 Standpipe Hose Connections

***

9.4.2 ((~~Hose connection spacing shall not exceed more 85 m (275 ft).~~))Dual 65-mm (2½-in) hose connection outlets having separate valves shall be provided at each hose connection location.

***

9.7 Fire Hydrants and Water Supply.

9.7.1 Fire hydrants for limited access and depressed highways shall be provided at spacing not to exceed 1,000 feet to provide for transportation hazards.

9.7.2 Fire hydrants for roadways beneath air-right structures, bridges, and elevated highways shall be provided so that no location on the protected roadway is more than 90 m (300 ft) from a fire hydrant.

9.7.3 Fire hydrants for road tunnels shall be provided so that no location on the protected roadway is more than 45 m (150 ft) from a fire hydrant.

9.7.4 The water supply for fire hydrants shall provide a minimum of 1,000 gpm (63 L/s) at 20 psi (138 kPa) flowing independently, and a minimum of 1,500 gpm (34 L/s) at 20 psi (138 kPa) with two fire hydrants flowing simultaneously.

9.8 Bridges and Elevated Highways.

9.8.1 Fire hydrants for bridges and elevated highways shall be provided in accordance with this section and Section 9.7.

9.8.2 If median dividers and/or four or more traffic lanes are present, fire hydrants for bridges and elevated highways shall be provided on both sides of the roadway at the required spacing or installed in the median divider at the required spacing.

9.8.3 Fire hydrants for bridges and elevated highways shall have two 100 mm (4 in) hose connection outlets, with external threads in accordance with City of Seattle Standard Plan No. 310a, and each outlet provided with a hand-operable valve readily accessible from the roadway.

9.8.4 The hose connection outlets shall be oriented parallel to the roadway and face in both directions of travel.
Exception: The outlets may be angled in towards the roadway at an angle not exceeding 22.5 degrees.

9.8.5 Hose connection outlets shall be positioned such that the centerline of each outlet is installed not more than 400 mm (16 in) horizontally from the inside edge of the top and not less than 200 mm (8 in) above the top of the guardrail or edge barrier, and not more than 1370 mm (54 in) above the roadway.

9.8.6 Hose connection outlets shall be provided with caps that are removable with a standard hydrant wrench.

9.8.7 Hose connection outlet caps shall be provided with a 3 mm (1/8 in) hole and be secured with a short length of chain or cable to prevent falling after removal.

9.8.8 Water shall be supplied to bridge and elevated highway hydrants by the use of approved manually actuated preaction or deluge valves installed in locations not subject to freezing, such as in underground vaults or other *approved* locations.

9.8.9 Access to the preaction or deluge valves and manual actuation capability at the valve locations shall be provided, including access key box if the water supply vault will be locked.

9.8.10 A preaction or deluge valve actuation device (such as an electrical switch, push button, manual pull station, etc,) shall be installed at each hydrant location and be protected from damage in a weatherproof enclosure that can be opened without the use of tools or special knowledge, or with a standard hydrant wrench, or other approved method.

9.8.11 The location of the preaction or deluge valve actuation switch installed at each hydrant shall be readily visible and have approved signage.

9.8.12 A means to indicate that the system is in the tripped condition such as a light beacon or remote monitoring of the system shall be provided.

9.8.13 Hydrant systems for bridges and elevated highways shall have provisions for complete draining after use.

9.8.14 Combination air relief/vacuum valves shall be installed at each high point on the system.

9.8.15 Water supply vault location information, vault access instructions, and a phone number for road crew to drain the system shall be provided at the roadway control panel push button location.

9.8.16 If used, heat tracing systems for freeze protection for hydrant systems shall be in accordance with Seattle Fire Department Administrative Rule 9.03.09, *Automatic Sprinkler and Standpipe Systems* and any future revisions of this rule adopted by the authority having jurisdiction.

9.9 Maintenance and Confidence Testing

9.9.1 Standpipe and hydrant systems shall be inspected and tested at least annually.

9.9.2 Reports of inspections and tests shall be submitted to the Seattle Fire Department Confidence Testing Unit. Maintenance and periodic testing are the owner's responsibility, or the responsibility of such other person as may be designated by the owner, and are separate from fire department inspections.

9.9.3 The person, firm or corporation performing such work shall have a Type STP-1 certificate from the fire department. See Administrative Rules 9.01.09, *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* and Administrative Rule 9.02.09, *Confidence Test Requirements for Life Safety Systems.*

9.10 Standpipe Installations in Tunnels Under Construction.

9.10.1 A standpipe system shall be installed in tunnels under construction in accordance with 9.10.1.1 and 9.10.1.2.

9.10.1.1 A standpipe system shall be installed before the tunnel under construction has exceeded a length of 61 m (200 ft) beyond any access shaft or portal and shall be extended as work progresses to within 61 m (200 ft) of the most remote portion of the tunnel.

9.10.1.2 Standpipes shall be sized for approved water flow and pressure at the outlet, based upon the maximum predicted fire load.

***

10.1.1.1 If an engineering analysis is not conducted, or does not support the use of natural ventilation for the configurations described in 10.1.1, a mechanical emergency ventilation system shall be provided.

10.1.1.2 The engineering analysis of the ventilation system shall include a validated subway analytical simulation program augmented as appropriate by a quantitative analysis of airflow dynamics produced in the fire scenario, such as would result from the application of validated computational fluid dynamics (CFD) techniques.

10.1.1.3 The results of the analysis shall include the no-fire (or cold) air velocities that can be measured during commissioning to confirm that a mechanical ventilation system as built meets the requirements determined by the analysis.

***

10.5.1* The design fire size [heat-release rate] shall consider the types of vehicles that are expected to use the tunnel.

Table A.10.5.1 Fire Data for Typical Vehicles

Vehicles	Peak Fire Heat–Release Rates (MW)
Passenger car	((~~5–~~))10
Multiple passenger cars (2–4 vehicles)	((~~10–~~))20
Bus	((~~20–~~))30
Heavy goods truck	((~~70–~~))200
Tanker*	((~~200–~~))300

***

11.4* Emergency Power Supply System (EPSS). Road tunnels shall be provided with a Class 2 ((~~I~~)), Type 60, Level 1 ((~~emergency power~~))Emergency Power Supply System (EPSS) in accordance with Article 700 of NFPA 70 and ((~~with~~)) Chapter 4 of NFPA 110.

A.11.4 It is expected that the operations of all systems within the vicinity of a fire can fail. Section 11.4 is intended to limit the area of such failure. The class defines the minimum time, in hours, that the Emergency Power Supply System (EPSS) is designed to operate at its rated load without being refueled or recharged. The type defines the maximum time, in seconds, that the EPSS will permit the load terminals of the transfer switch to be without acceptable electrical power. NFPA 110 recognizes two levels of EPSS equipment installation, performance and maintenance. Level 1 systems shall be installed if failure of the EPSS to perform could result in loss of human life or serious injuries.

11.4.1 The following systems shall be connected to the emergency power supply system:
(1) Emergency voice/alarm communication systems ((~~lighting~~))
(2) Traffic control system(s)
(3) Exit signs and means of egress illumination
(4) ((~~Communication~~)) Lighting for mechanical rooms.
(5) Tunnel drainage system(s)
(6) Ventilation and automatic fire detection equipment for smoke proof enclosures.
(7) Automatic Fire detection systems
(8) Security system(s)
(9) Closed-circuit television or video system(s)
(10) Smoke control systems.
(11) Electrically powered fire pumps.
(12) Power and lighting for the fire command center.
(13) Fire alarm systems.
(14) Elevator car lighting.

***

12.3* Emergency Response Plan.

The emergency response plan shall be submitted for acceptance and approval by the authority having jurisdiction and shall include, as a minimum, the following:

(1) Name of plan and the specific facility(s) the plan covers
(2) Name of responsible agency
(3) Names of responsible individuals
(4) Dates adopted, reviewed, and revised
(5) Policy, purpose, scope, and definitions
(6) Participating agencies, senior officials, and signatures of executives authorized to sign for each agency
(7) Safety during emergency operations
(8) Purpose and operation of operations control center (OCC) and alternative location(s) as applicable
a. Procedure for staffing the backup location(s) shall be specified
b. Procedure to control risk while the OCC does not have staff until the backup facility can take over.
(9) Purpose and operation of command post and auxiliary command post
(10) Communications (e.g., radio, telephone, and messenger service) available at central supervising station and command post; efficient operation of these facilities
(11) Fire detection, fire protection, and fire-extinguishing equipment; access/egress and ventilation facilities available; details of the type, amount, location, and method of ventilation
(12) Procedures for fire emergencies, including a list of the various types of fire emergencies, the agency in command, and the procedures to follow
(13) Maps and plans of the roadway system, including all local streets
(14) Any additional information that the participating agencies want to include

***

12.5.1.1* The OCC may serve as a proprietary supervising station to allow direct receipt of alarms where approved by the authority having jurisdiction.

A.12.5.1.1 Expanding the OCC functions to be a proprietary supervising station will allow faster and more coordinated control and monitoring of the various fire and life safety systems. This will expedite emergency functioning by eliminating delays from a central supervising station company. A proprietary station has significant requirements under NFPA 72 that should be fully understood before adopting this as a policy and practice.

12.5.1.2 For the OCC to be a proprietary supervising station, it shall meet the relevant requirements of NFPA 72.

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12.8.4 Limited Access Highways and Road Tunnels.

***

13.1* General. This chapter applies to the transportation of hazardous materials through road tunnels as follows:
(1)If the tunnel length equals or exceeds 240 m (800 ft) and if the maximum distance from any point within the tunnel to an area of safety exceeds 120 m (400 ft).
(2)If tunnel length equals or exceeds 300 m (1000 ft).

Exceptions:
(1) The existing Mount Baker Tunnel (Interstate-90) and the Washington State Convention and Trade Center lid (Interstate-5) if the foam-water fire protection system(s) are fully functional and in-service.
(2) Fuel contained in the fuel system of the transporting vehicle, or in the fuel systems of vehicles and equipment being towed or carried.

A.13.1 Hazardous Material. A substance or material, including a hazardous substance, that has been determined by the Secretary of Transportation for the United States Department of Transportation (U.S.D.O.T.) to be capable of posing an unreasonable risk to health, safety and property when transported in commerce and which has been so designated.

13.1.1((~~* The authority having jurisdiction shall adopt rules and regulations that apply to the transportation of regulated and unregulated cargoes.~~))Flames used for heating vehicles or loads shall be extinguished before the vehicle enters the road tunnel or its approaches.

13.1.2 *((~~Design and planning of the facility shall address the potential risk presented by regulated and unregulated cargoes as permitted by 13.1.1.~~))Vehicles transporting hazardous materials in quantities that require DOT placards in accordance with 49 CFR are prohibited in road tunnels.

TABLE A.13.1.2

The following classes of hazardous materials are defined in the United States Department of Transportation Regulations, 49 CFR 173, which is incorporated by reference:			
Name of Class or Division	Class Number	Division Number (if any)	49 CFR Reference for Definitions
Explosives (with a mass explosion hazard)	1	1.1	173.50
Explosives (with a projection hazard)	1	1.2	173.50
Explosives (with predominantly a fire	1	1.3	173.50

hazard)			
Explosives (with no significant blast hazard)	1	1.4	173.50
Very insensitive explosives; blasting agents	1	1.5	173.50
Extremely insensitive detonating substances	1	1.6	173.50
Flammable gas	2	2.1	173.115
Nonflammable compressed gas	2	2.2	173.115
Poisonous gas	2	2.3	173.115
Flammable and combustible liquid	3	---	173.120
Flammable solid	4	4.1	173.124
Spontaneously combustible materials	4	4.2	173.124
Dangerous when wet material	4	4.3	173.124
Oxidizers	5	5.1	173.127
Organic peroxides	5	5.2	173.128
Poisonous materials	6	6.1	173.132
Infectious substances (Etiological agents)	6	6.2	173.134
Radioactive materials	7	---	173.403
Corrosive materials	8	---	173.136
Miscellaneous hazardous materials	9	---	173.140
Other regulated materials: ORM-D	None	---	173.144

***

13.1.4 Tank vehicles that are empty, or that have a residue, or vehicles transporting empty containers are prohibited from entering road tunnels if they previously transported the following hazardous materials:
(1) Class 1 explosives, division 1.1, 1.2, and 1.3;
(2) Class 2, division 2.3 poisonous gas;
(3) Class 4, division 4.3 dangerous when wet materials;
(4) Class 6, division 6.1 poisonous materials marked PG I (Inhalation Hazard), or PG III (Stow Away From Foodstuffs)

Exceptions:

1. Tank vehicles or containers that have been sufficiently cleaned of residue and purged of vapor to remove any potential hazard;
2. Tank vehicles or containers that have been reloaded with a material not classified as a hazardous material;

13.1.5 Alternative-fuel vehicles powered by liquefied petroleum gas (LPG), liquefied natural gas (LNG) or compressed natural gas (CNG) are permitted if the:
(1) Vehicle has a dedicated alternative-fuel system installed by the manufacturer of the vehicle.
(2) Vehicle has a fuel system that has been properly converted to an alternative fuel system.
(3) Vehicle alternative-fuel system conforms to applicable industry standards, including:
(a) NFPA 52 - Standard for Compressed Natural Gas (CNG) Vehicular Fuel Systems, which is incorporated by reference; or
(b) NFPA 58 - Standard for the Storage and Handling of Liquefied Petroleum Gases (LPG), which is incorporated by reference.
(4) Vehicle alternative-fuel system conforms to applicable federal regulations.
(5) Fuel capacity of the vehicle does not exceed 300 pounds water capacity.

13.1.5.1 Alternative-fuel vehicles shall display all markings and symbols required by law to identify the alternative-fuel system.

***

Section 42. Sections 2 through 426 of Ordinance 122491 are hereby repealed.

Section 43. Severability. The provisions of this ordinance are declared to be separate and severable. The invalidity of any clause, sentence, paragraph, subdivision, section or portion of this ordinance, or the invalidity of its application to any person or circumstance, shall not affect the validity of the remainder of this ordinance, or the validity of its application to other persons or circumstances.

Section 44. This ordinance shall take effect and be in force 30 days from and after its approval by the Mayor, but if not approved and returned by the Mayor within ten days after presentation, it shall take effect as provided by Seattle Municipal Code Section 1.04.020.

Form revised February 4, 2010

FISCAL NOTE FOR NON-CAPITAL PROJECTS

Department:	Contact Person/Phone:	DOF Analyst/Phone:
Fire	Lynne M. Kilpatrick/386-1373	Joe Regis/615-0087 Greg Doss/615-1759

Legislation Title:

AN ORDINANCE relating to the Seattle Fire Code, adopting as the Seattle Fire Code the 2009 edition of the International Fire Code with some exceptions, amending and adding various provisions to that code; amending Section 22.600.020 of the Seattle Municipal Code; and repealing Sections 2-426 of Ordinance 122491.

- **Summary of the Legislation:** The legislation adopts the 2009 International Fire Code, with local amendments, as the 2009 Seattle Fire Code. The express purpose of this code is to promote the health, safety and welfare of the general public.

- **Background:** This ordinance locally adopts and amends the 2009 International Fire Code, which is the technical fire code and edition specified respectively by the State Legislature and State Building Code Council as the minimum standard for use throughout our state. By adopting such codes locally and making amendments, we are able to address many unique characteristics of our community. Companion codes including the building code, residential code, mechanical code, and fuel gas code are being submitted simultaneously by the Department of Planning and Development, each a separate ordinance.

  Notable changes between the current 2006 Seattle Fire Code and the proposed legislation include increased fire protection controls for ambulatory health care facilities, installation of school alerting systems for all schools, sprinkler protection for certain furniture and mattress stores and for institutional occupancies used for medical care on a 24-hour basis, installation of carbon monoxide alarms in most residential occupancies, annual notification requirement of the location of laboratories where activities involving certain infectious and communicable diseases are conducted, and marking exit paths in high-rise buildings with self-luminous tape or paint. New provisions in the 2009 code also require a system to be installed in most buildings that will ensure radio coverage for emergency responders and high-rise buildings more than 120 feet are required to have an elevator dedicated for use by the fire service.

  The amendments proposed in this ordinance have the approval of the Fire Code Advisory Board whose members represent the public, labor, business, industries, and technical and professional disciplines. The members of this board have been meeting regularly to review the proposed code for the past fourteen months.

__x__ **This legislation does not have any financial implications.**

Passed by the City Council the 20th day of September, 2010, and signed by me in open session in authentication of its passage this 20th day of September, 2010.

President _____ of the City Council

Approved by me this 28th day of September, 2010.

Michael McGinn, Mayor

Filed by me this 29th day of September, 2010.

City Clerk

(Seal)

Lynne Kilpatrick/lmk
SFD 2009 Seattle Fire Code ORD
July 8, 2010
Version #6

ORDINANCE _____

AN ORDINANCE relating to the Seattle Fire Code, adopting as the Seattle Fire Code the 2009 edition of the International Fire Code with some exceptions, amending and adding various provisions to that code; amending Section 22.600.020 of the Seattle Municipal Code; and repealing Sections 2-426 of Ordinance 122491.

BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:

Section 1. The 2009 International Fire Code, along with Appendixes B, D, E, F, G, H, I, and J, as published by the International Code Council, Inc., one copy of which is filed with the City Clerk in Clerk File 310922, is hereby adopted by reference.

Section 2. Section 22.600.020 of the Seattle Municipal Code is amended as follows:

22.600.020 ((~~Adoption of the International~~)) The Seattle Fire Code

((~~The following is hereby adopted and by this reference made a part of this subtitle: ((2006))2009 International Fire Code with some exceptions, with Appendixes B, D, E, F,((and)) G, H, I, and J as published by the International Code Council, Inc., one copy of which is filed with the City Clerk in C.F. _____.~~))

The Seattle Fire Code consists of:

1. the ((~~2006~~))2009 International Fire Code, ((~~with some exceptions, together~~)) along with Appendices B, D, E, F, G, H, I, and J, all as published by the International Code Council, Inc., one copy of which is filed with the City Clerk in Clerk File 310922;

2. ((~~with~~))the amendments ((~~and additions~~))to the 2009 International Fire Code and to Appendices B, D, E, F, G, H, I, and J, ((~~thereto~~)) adopted by Council by ordinance, introduced as Council Bill 116918; and

3. ((~~including~~))the standards referenced in Chapter ((~~45~~))47 of the ((~~2006~~))2009 International Fire Code, including ((~~as~~))those standards added and NFPA Standards 58, 130, and 502 that are further((~~as~~)) amended by Council by ((~~Ordinance~~))ordinance, introduced as Council Bill 116918. One copy of each amended standard is on file with the City Clerk in Clerk Files 310924, 310925, and 310923.

Wherever in this ordinance there is a conflict between metric units of measurement and English units, the English units govern.

Section 3. Chapter 1 of the 2009 International Fire Code is amended as follows:

Part 1—GENERAL PROVISIONS

SECTION 101
SCOPE AND GENERAL REQUIREMENTS

101.1 Title. These regulations shall be known as the *Seattle Fire Code* ((~~of [NAME OF JURISDICTION]~~)), hereinafter referred to as "this code."

Throughout this code, where references are made to the *International Building Code*, *International Residential Code*, *International Mechanical Code*, *International Fuel Gas Code*, and the *International Existing Building Code*, those references mean those codes with Seattle amendments. Where NFPA 70 is referenced, it means the *Seattle Electrical Code*, which is the *National Electrical Code* with Seattle amendments.

101.2 Scope. This code establishes regulations affecting or relating to structures, processes, premises, *motor vehicles*, *vessels,* and safeguards regarding:

1. The hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices;
2. Conditions hazardous to life, property or public welfare in the occupancy of structures or premises;
3. Fire hazards in the structure or on the premises from occupancy or operation;
4. Matters related to the construction, extension, repair, alteration or removal of fire suppression or alarm systems; and
5. Conditions affecting the safety of fire fighters and emergency responders during emergency operations.

101.2.1 Appendices. Provisions in the appendices ((~~shall~~))do not apply unless specifically adopted.

101.3 Intent. The purpose of this code is to establish the minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures, ((~~and~~))premises, *motor vehicles,* and *vessels* and to provide safety to fire fighters and emergency responders during emergency operations.

This code is enacted as an exercise of the police power of the City of Seattle to protect the public peace, health, safety and welfare, and its provisions shall be liberally construed to accomplish these purposes. The express purpose of this code is to promote the health, safety and welfare of the general public, and not to create or otherwise establish or designate any particular class or

group of persons who will or should be especially protected or benefitted by the terms of this code or ordinance.

The specific intent of this code is to place the obligation of complying with its requirements upon the owners or occupiers of premises, buildings, *motor vehicles, vessels*, and structures within its scope. No provision or term used in this code is intended to impose any duty whatsoever upon the city, or any of its officers or employees, for whom the implementation or enforcement of this code is discretionary, not mandatory.

* * *

101.6 Point of information or code interpretation. Text marked "Point of Information" or "Code Interpretation" in the *Seattle Fire Code* is for guidance only and does not have the force of law.

SECTION 102
APPLICABILITY

102.1 Construction and design provisions. The construction and design provisions of this code ((~~shall~~))apply to:

1. Structures, facilities and conditions arising after the adoption of this code.
2. Existing structures, facilities and conditions not legally in existence at the time of adoption of this code. A condition is not "legally in existence at the time of adoption of this code" unless the condition is in compliance with the building code and fire code of the City of Seattle in effect when the condition first arose, and the practice, process, materials used and storage configurations have not changed since the condition first arose.
3. Existing structures, facilities and conditions when required in Chapter 46.
4. Existing structures, facilities and conditions which, in the opinion of the *fire code official*, constitute a distinct hazard to life or property.

* * *

102.5 Application of residential code. ((~~Where~~))If structures are designed and constructed in accordance with the *International Residential Code*, the provisions of this code ((~~shall~~))apply as follows:

1. Construction and design provisions: Provisions of this code pertaining to the exterior of the structure ((~~shall~~)) apply including, but not limited to, premises identification, fire apparatus access and water supplies. ((~~Where~~))If interior or exterior systems or devices are installed, ((~~construction~~))installation permits required by Section 105.7 of this code ((~~shall~~)) also apply.
2. Administrative, operational and maintenance provisions: All such provisions of this code ((~~shall~~)) apply.

* * *

102.7 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 47((~~5~~)), including amendments adopted by Council by ordinance, and such codes and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between the provisions of this code and the referenced standards, the provisions of this code shall apply.

* * *

103.2 Appointment. ((~~The~~))A *fire code official*, other than the fire chief, shall be appointed by the chief appointing authority of the jurisdiction; and the *fire code official*, other than the fire chief, shall not be removed from office except for cause and after full opportunity to be heard on specific and relevant charges by and before the appointing authority.

* * *

103.4 Liability. Nothing contained in this code is intended to, nor shall be construed to, create or form the basis for any liability on the part of the city, its officers, employees or agents, for any injury or damage resulting from the failure of the owner or occupier of premises, buildings, structures, *motor vehicles* or *vessels*, to comply with this code, or for any injury or damage caused by any act or omission on the part of the city by its officers, employees or agents in the course of implementing or enforcing this code.

Any lawsuit brought against the city, or its officers, or employees because of acts or omissions in the implementation or enforcement of this code, or other pertinent laws, ordinances, or regulations implemented through the enforcement of this code or enforced by the *fire code official*, shall, as provided by Seattle Municipal Code chapter 4.64, be defended by the City, and any resulting judgment or settlement shall be assumed or paid by the City as provided by Chapter 4.64 and other relevant sections of the *Seattle Municipal Code*.

Limited public funds are available for the implementation and enforcement of this code. The issuance of permits, reviews of permit applications, and inspections conducted pursuant to this code are spot checks designed to encourage compliance, and are not representations, guarantees, or assurances that permits, or work undertaken pursuant to issuance of permits, comply with any applicable codes.

((~~The *fire code official*, member of the board of appeals, officer or employee charged with the enforcement of this code, while acting for the jurisdiction, in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally, and is hereby relieved from all personal liability for any damage accruing to *persons* or property as a result of an act or by reason of an act or omission in the discharge of official duties.~~

~~**103.4.1 Legal defense.** Any suit instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the legal representative of the jurisdiction until the final termination of the proceedings. The *fire code official* or any subordinate shall not be liable for costs in an action, suit or proceeding that is instituted in pursuance of the provisions of this code; and any officer of the department of fire prevention, acting in good faith and without malice, shall be free from liability for acts performed under any of its provisions or by reason of any act or omission in the performance of official duties in connection therewith.~~))

SECTION 104
GENERAL AUTHORITY AND RESPONSIBILITIES

104.1 General. The *fire code official* is hereby authorized to enforce the provisions of this code and shall have the authority to render interpretations of this code, and to adopt policies, procedures, rules and regulations in order to carry out the provisions of this code and clarify the application of its provisions. Such interpretations, policies, procedures, rules and regulations shall be in compliance with the intent and purpose of this code and shall not have the effect of waiving requirements specifically provided for in this code.

* * *

104.3 Right of entry. Whenever it is necessary to make an inspection to enforce the provisions of this code, or whenever the *fire code official* has reasonable cause to believe that there exists in a building or upon any premises any conditions or violations of this code which make the building or premises unsafe, dangerous or hazardous, the *fire code official* shall have the authority to enter the building or premises at all reasonable times to inspect or to perform the duties imposed upon the *fire code official* by this code. If such building or premises is occupied, the *fire code official* shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the *fire code official* shall first make a reasonable effort to locate the *owner* or other *person* having charge or control of the building or premises and request entry. If entry is refused, the *fire code official* has recourse to every remedy provided by law to secure entry.

104.3.1 Owner consent. With the consent of the *owner* or occupier of a building, premises, *motor vehicle*, or *vessel*, or pursuant to a lawfully issued warrant, the *fire code official* may enter any building, premises, *motor vehicle*, or *vessel* at any reasonable time to inspect or to perform the duties authorized by this code.

104.3.((~~1~~))2 Warrant. ((~~When the *fire code official* has first obtained a proper inspection warrant or other remedy provided by law to secure entry, an~~))An *owner* or occupant or *person*

having charge, care or control of the building or premises shall not fail or neglect, after a warrant is presented,((~~proper request is made as herein provided,~~)) to permit entry therein by the *fire code official* for the purpose of inspection and examination pursuant to this code.

104.4 Identification. The *fire code official* shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

104.5 Notices and orders. The *fire code official* is authorized to issue such notices or orders as are required to affect compliance with this code in accordance with Sections 109((~~.1 and 109.2~~)),110, and 111. The *fire code official* shall serve the responsible party with a copy of violations, correction letters, and orders issued.

104.6 Official records. The *fire code official* shall keep official records as required by Sections 104.6.1 through 104.6.4. Such official records shall be retained for not less than five years or for as long as the structure or activity to which such records relate remains in existence, unless otherwise provided by other laws or regulations.

104.6.1 Approvals. A record of approvals shall be maintained by the *fire code official* and shall be available for public inspection during business hours in accordance with applicable laws.

104.6.2 Inspections. The *fire code official* shall keep a record of ((~~each inspection made, including notices~~)) violations, correction letters, and orders issued, showing the findings and disposition of each.

104.6.3 Fire records. The fire department shall keep a record of fires occurring within its jurisdiction and of facts concerning the same, including statistics as to the extent of such fires and the damage caused thereby, together with other information as required by the *fire code official.*

104.6.4 Administrative. Application for modification, alternative methods or materials and the final decision of the *fire code official* on any such application shall be in writing and shall be officially recorded in the permanent records of the *fire code official.*

104.7 Approved materials and equipment. All *approved* materials, equipment and devices ((~~*approved* by the *fire code official*~~))shall be constructed and installed in accordance with such approval.

* * *

104.11.2 Obstructing operations. No *person* shall obstruct the operations of the fire department in connection with extinguishment, or control or investigation of any fire, or actions relative to other emergencies, or disobey any lawful command of the fire chief or officer of the

fire department in charge of the emergency, or any part thereof, or any lawful order of a police officer assisting the fire department.

* * *

104.12 Motor vehicle impoundment and removal. The *fire code official* may order the owner or operator to remove, or may request that the Seattle Police Department impound a *motor vehicle* under the following conditions:

1. The *motor vehicle* poses an immediate hazard to public safety; or
2. The *motor vehicle* is transporting hazardous materials, and is left unattended on a residential street or within 500 feet (152 400 mm) of any building containing a Group A, R, E or I occupancy, including, but not limited to, any dwelling apartment, hotel, day care, school, hospital or health care facility; or
3. The *motor vehicle* contains or is carrying hazardous materials, or flammable or combustible liquids or gases, and is left unattended while transferring such materials, liquids or gases by means of hose line.

The Seattle Police Department shall carry out *motor vehicle* impoundment requests of the *fire code official* in accordance with the authority of Chapter 11.30 of the *Seattle Municipal Code* and impoundment procedures of the Seattle Police Department.

104.13 Prohibited uses, sales devices. The *fire code official* may prohibit the use, display or sale of any device, material or object that is designed to be used in such a manner as to violate any provisions of this code, or if the use or sale of such constitutes a distinct hazard to life or property. Any materials shown by test to have a life hazard greater than that indicated and controlled by building code interior finish regulations or fire code decorative material regulations is either prohibited or shall be installed or used with such additional fire safety features as are necessary to substantially reduce the life hazard.

104.14 Standby fire personnel and fire watch personnel. The fire code official has the authority to require, at no cost to the jurisdiction, standby fire personnel and/or fire watch personnel if in the opinion of the *fire code official* potentially hazardous conditions or reductions in a life safety feature exist. The owner, agent, or lessee shall provide one or more qualified persons, as required and approved, to be on duty. Such standby fire personnel or fire watch personnel shall be subject to the fire code official's orders at all times and remain on duty during the times such places are open to the public, when such activity is being conducted, or as required by the fire code official.

SECTION 105
PERMITS

105.1 General. Permits shall be in accordance with Sections 105.1.1 through 105.7.14.

105.1.1 Permits required. Permits required by this code shall be obtained from the *fire code official* prior to engaging in the activities or operations for which they are required. Permit fees, if any, ((~~shall~~))may be required to be paid prior to issuance of the permit. Failure to pay the required permit fee may result in cancellation of the permit. Issued permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the *fire code official*.

105.1.2 Types of permits. There shall be ((~~two~~))types of permits as follows:

1. **Operational permit.** An operational permit allows the applicant to conduct an operation or a business for which a permit is required by Section 105.6 for either:
   1.1. A prescribed period.
   1.2. Until renewed or revoked.
2. ((~~Construction~~))**Installation permit.** An installation ((~~construction~~)) permit allows the applicant to install, ((~~or~~))modify, or remove systems and equipment for which a permit is required by Section 105.7.
3. **Temporary permit.** A temporary permit is valid for a period not to exceed 6 months and establishes fire safety controls for:
   3.1. A time-limited activity not specifically regulated, but where regulatory safeguards are necessary because of unusual circumstances; or
   3.2. Interim operation of a regulated activity at reduced scope and/or with temporary fire safeguards until permanent fire prevention features are provided.

* * *

105.2 Application. Application for a permit required by this code shall be made to the *fire code official* in such form and detail as prescribed by the *fire code official*. Applications for permits shall be accompanied by such plans as prescribed by the *fire code official*.

105.2.1 Refusal to issue permit. If the application for a permit describes an activity ((~~use~~)) that does not conform to the requirements of this code and other pertinent laws and ordinances, the *fire code official* ((~~shall~~))may not issue a permit, ((~~but shall~~))and may return the application to the applicant with the refusal to issue such permit. Such refusal shall, when requested, be in writing and shall contain the reasons for refusal.

105.2.2 Inspection authorized. Before a new operational permit is *approved*, the *fire code official* is authorized to inspect the receptacles, vehicles, buildings, devices, premises, storage spaces or areas to be used to determine compliance with this code or any operational constraints required.

((~~**105.2.3 Time limitation of application.** An application for a permit for any proposed work or operation shall be deemed to have been abandoned 180 days after the date of filing, unless such~~

~~application has been diligently prosecuted or a permit shall have been issued; except that the *fire code official* is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.~~))

105.2.3((4)) Action on application. The *fire code official* shall examine or cause to be examined applications for permits and amendments thereto within a reasonable time after filing. If the application or the *construction documents* do not conform to the requirements of pertinent laws, the *fire code official* ((~~shall~~))may reject such application in writing, stating the reasons therefor. If the *fire code official* is satisfied that the proposed work or operation conforms to the requirements of this code and laws and ordinances applicable thereto, the *fire code official* shall issue a permit ((~~therefor~~))as soon as practicable.

105.3 Conditions of a permit. The *fire code official* may condition any permit, increasing or decreasing the scope of activity, and/or specifying fire safety provisions in addition to those established by this code, if the *fire code official* deems such conditions necessary to provide reasonable public safety. A permit shall constitute permission to maintain, store or handle materials; or to conduct processes which produce conditions hazardous to life or property; or to install equipment utilized in connection with such activities; or to install or modify any *fire protection system* or equipment or any other construction, equipment installation or modification in accordance with the provisions of this code where a permit is required by Section 105.6 or 105.7. Such permission shall not be construed as authority to violate, cancel or set aside any of the provisions of this code or other applicable regulations or laws of the jurisdiction.

105.3.1 Expiration. An operational permit shall remain in effect until reissued, renewed, or revoked or for such a period of time as specified in the permit. ((~~Construction permits shall automatically become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. Before such work recommences, a new permit shall be first obtained and the fee to recommence work, if any, shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded one year.~~)) Permits are not transferable and any change in occupancy, operation, tenancy or ownership shall require that a new permit be issued.

((~~**105.3.2 Extensions.** A permittee holding an unexpired permit shall have the right to apply for an extension of the time within which the permittee will commence work under that permit when work is unable to be commenced within the time required by this section for good and satisfactory reasons. The *fire code official* is authorized to grant, in writing, one or more extensions of the time period a permit for periods of not more than 180 days each. Such~~

~~extensions shall be requested by the permit holder in writing and justifiable cause demonstrated.~~))

105.3.((~~3~~))2 Occupancy prohibited before approval. The building or structure shall not be occupied prior to the *fire code official* ((~~issuing a permit and~~)) conducting associated inspections indicating the applicable provisions of this code have been met.

105.3.2 Point of Information

Approval to occupy a building or structure is granted by the Department of Planning and Development through issuance of a Certificate of Occupancy or Temporary Certificate of Occupancy. A Fire Department recommendation to issue an occupancy certificate is conditioned upon applicable provisions of this code being met.

105.3.((4))3 ((~~Conditional~~))Temporary approval to occupy((~~permits~~)). ((~~Where permits are required and upon the request of a permit applicant, t~~))The *fire code official* is authorized to recommend to the *building code official* that a Temporary Certificate of Occupancy be issued granting permission ((~~a conditional permit~~)) to occupy the premises or portion thereof before the entire work or operations on the premises is completed, ((~~provided that~~))but only if such portion or portions will be occupied safely prior to full completion or installation of equipment and operations without endangering life or public welfare. The *fire code official* shall notify the ((~~permit applicant~~))*building code official* in writing of any limitations or restrictions necessary to keep the occupied ((~~permit~~))area safe. The holder of a ((~~conditional permit~~))temporary certificate of occupancy shall proceed only to the point for which approval has been given, at the permit holder's own risk and without assurance that approval for the occupancy or the utilization of the entire premises, equipment or operations will be granted.

105.3.((~~5~~))4 Posting the permit. Issued permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the *fire code official*.

((~~**105.3.6 Compliance with code.** The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on *construction documents* and other data shall not prevent the *fire code official* from requiring the correction of errors in the *construction documents* and other data. Any addition to or alteration of *approved construction documents* shall be *approved* in advance by the *fire code official*, as evidenced by the issuance of a new or amended permit.~~))

105.3.((~~7~~))5 Information on the permit. The *fire code official* shall issue all permits required by this code on an *approved* form furnished for that purpose. The permit shall contain a general description of the operation or occupancy and its location and any other information required by the *fire code official*. Issued permits shall bear the signature of the *fire code official* or other *approved* legal authorization.

105.3.((8))6 Validity of permit. The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinances of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction, other than approved alternate materials and methods in accordance with Section 104.8, approved modifications in accordance with Section 104.9, and mitigation approved by the *fire code official*, shall not be valid. The issuance of a permit based on *construction documents*, operational documents and other data shall not prevent the *fire code official* from requiring correction of errors in the documents or other data. Any addition to or alteration of *approved construction documents* shall be *approved* in advance by the *fire code official*, as evidenced by the issuance of a new or amended permit.

105.3.7 Liability Insurance. If liability insurance is required by any section of this code as a permit condition or for a license, the applicant shall maintain continuously on file with the *fire code official* for the entire period of the licensed or permitted activity, evidence of "Commercial General Liability" ("CGL") insurance coverage with a minimum limit of liability of $2,000,000 combined single limit per occurrence bodily injury and property damage subject to no deductible. Such evidence of insurance coverage shall be provided on an Acord Certificate of Liability Insurance or equivalent ("Certificate") issued to "Seattle Fire Department, 301 2nd Ave S., Seattle, WA 98104." "The City of Seattle" shall be an additional insured under CGL insurance on a primary and non-contributory basis per ISO Endorsement CG 20 26 or equivalent and a copy of the actual CGL policy provision documenting this must be attached to the Certificate. The *fire code official* may increase or decrease the above-stated minimum limits of liability. The purpose of the requirement is to insure that members of the public and the City will be compensated for losses caused by bodily injury or property damage resulting from the negligent acts of the licensees, permittees, or their agents or employees.

If the issuance of a license or permit is conditioned upon obtaining CGL insurance by the applicant for such permit, the policy shall be:
1. Issued by a company or companies authorized to do business as an insurer in Washington State pursuant to the provisions of RCW Title 48;
2. Issued for the purpose of complying with the conditions and requirements of Section 105 of the *Seattle Fire Code* (as amended);
3. Canceled only on at least 30 days prior written notice to the *fire code official,* except 10 days notice cancellation for nonpayment of premium is allowed, or as specified in RCW 48.18.290, if applicable; and

4. Subject to approval as to sufficiency and form by the City's Risk Management Division at the request of the *fire code official.*

105.4 Construction documents. *Construction documents* shall be in accordance with this section.

105.4.1 Submittals. *Construction documents* and supporting data shall be submitted in one((~~two~~)) or more sets with each application for a permit and in such form and detail as required by the *fire code official*. The *construction documents* shall be prepared by a registered design professional where required by the *fire code official* ((~~statutes of the jurisdiction in which the project is to be constructed~~)).

Exception: The *fire code official* is authorized to waive the submission of *construction documents* and supporting data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that review of *construction documents* is not necessary to obtain compliance with this code.

105.4.1.1 Examination of documents. The *fire code official* ((~~shall~~))may examine or cause to be examined the accompanying *construction documents* and shall ascertain by such examinations whether the work indicated and described is in accordance with the requirements of this code.

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105.4.4.1 Phased approval. The *fire code official* is authorized to issue a permit for the construction of part of a structure, system or operation before the *construction documents* for the whole structure, system or operation have been submitted, ((~~provided that~~)) if adequate information and detailed statements have been filed complying with pertinent requirements of this code. The holder of such permit for parts of a structure, system or operation shall proceed at the holder's own risk ((~~with the building operation~~)) and without assurance that a permit for the entire structure, system or operation will be granted.

* * *

((~~**105.4.6 Retention of construction documents.** One set of *construction documents* shall be retained by the *fire code official* for a period of not less than 180 days from date of completion of the permitted work, or as required by state or local laws. One set of *approved construction documents* shall be returned to the applicant, and said set shall be kept on the site of the building or work at all times during which the work authorized thereby is in progress.~~))

105.5 Revocation of permits and certificates. ((~~The *fire code official* is authorized to revoke a permit issued under the provisions of this code when it is found by inspection or otherwise that there has been a false statement or misrepresentation as to the material facts in the application or~~

~~*construction documents* on which the permit or approval was based including, but not limited to, any one of the following:~~
~~1. The permit is used for a location or establishment other than that for which it was issued.~~
~~2. The permit is used for a condition or activity other than that listed in the permit.~~
~~3. Conditions and limitations set forth in the permit have been violated.~~
~~4. There have been any false statements or misrepresentations as to the material fact in the application for permit or plans submitted or a condition of the permit.~~
~~5. The permit is used by a different *person* or firm than the name for which it was issued.~~
~~6. The permittee failed, refused or neglected to comply with orders or notices duly served in accordance with the provisions of this code within the time provided therein.~~
~~7. The permit was issued in error or in violation of an ordinance, regulation or this code.~~))

105.5.1 Nonemergency revocations, suspensions and denials of renewals. In accordance with applicable law, the *fire code official* may revoke or suspend a permit or certificate or deny a request to renew any permit or certificate upon evidence submitted to the *fire code official* that conditions or circumstances have changed so that continued use of the permit or certificate would be unsafe or would violate this code. Such conditions or circumstances include, but are not limited to:
1. The permit has been used by a person other than the person to whom the permit was issued,
2. The permit has been used for a location other than that for which it was issued,
3. Any of the conditions or limitations in the permit or the code have been violated,
4. The permittee failed, refused or neglected to comply within the time provided with orders or notices duly served in accordance with the provisions of this code,
5. There has been a false statement or misrepresentation as to a material fact in the application or plans on which the permit or application was based, or
6. The permit was issued in error or in violation of any code, regulation or other law.

105.5.1.1 Notification. The permit or certificate holder shall be notified in writing no later than five business days prior to the revocation, suspension or denial of a request to renew such permit or certificate.

105.5.1.2 Requesting a hearing. The permit or certificate holder may request in writing a hearing before the *fire code official* for reconsideration of the decision to revoke, suspend or deny renewal. The request shall be filed with the *fire code official* by 5 o'clock p.m. of the second business day following service of the notice.

105.5.1.3 Hearing. The hearing, if one is requested, shall be held no later than one business day after receipt of the written request.

105.5.1.4 Final decision. The *fire code official* shall issue a final decision, in writing, sustaining, modifying or withdrawing the initial decision to revoke, suspend or deny a request to

renew the permit or certificate no later than the next business day following such hearing. Further appeals shall be in accordance with Section 108 of this code.

105.5.2 Emergency Revocations, suspensions and denials of requests to renew. The *fire code official* may revoke, suspend or deny a request to renew a permit or certificate in emergency situations, without providing prior notice to the permit or certificate holder, if an imminent fire, life-safety, or other hazard regulated by this code exists, and failure to take immediate action may cause imminent harm to humans, domestic animals, livestock, wildlife, or to the immediate or neighboring property, lands or premises.

105.5.2.1 Surrendering permits. If such emergency is found to exist and if the fire code official revokes, suspends, or refuses to renew a permit or certificate, all certificates and permits shall be surrendered to the *fire code official* or his/her authorized representative upon demand.

105.5.2.2 Suspending activities. The activities sanctioned by the suspended or revoked certificates or permits shall be suspended until the *fire code official* finds the emergency no longer exists and reinstates the permit or certificate.

105.5.2.3 Requesting an appeal. Persons whose permits or certificates have been revoked or suspended without notice may appeal the fire code official's action by filing a written notice of appeal to the *fire code official* by 5 o'clock p.m. of the next business day following such revocation, suspension or denial or a request to renew a permit or certificate.

105.5.2.4 Hearing. The hearing with the *fire code official* shall be no later than one business day from the receipt of such written appeal.

105.5.2.5 Final decision. The *fire code official* shall issue a final decision in writing, sustaining, modifying or withdrawing the initial decision to revoke, suspend or deny a request to renew the certificate or permit no later than the next business day following such hearing.

105.5.2.6 Further appeals. Further appeals shall be in accordance with Section 108 of this code.

105.6 Required operational and temporary permits. The *fire code official* is authorized to issue operational and/or temporary permits for the operations set forth in Sections 105.6.1 through 105.6.46.

* * *

105.6.3.1 Aviation facilities. An operational permit is required to use a Group H or Group S occupancy for aircraft servicing or repair and aircraft fuel-servicing vehicles. Additional permits required by other sections of this code include, but are not limited to, hot work, hazardous materials and flammable or combustible finishes.

105.6.3.2 Battery systems. An operational permit is required to maintain and operate a stationary storage battery system 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 *legally-required standby power*, emergency power or uninterrupted power supplies.

105.6.3.3 Bonfires. An operational permit is required to ignite a bonfire.

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105.6.7.1 Combustible fibers. An operational permit is required for the storage and handling of *combustible fibers* in quantities greater than 100 cubic feet (2.8 m3).

Exception: A permit is not required for agricultural storage.

105.6.7.2 Combustible storage. An operational permit is required to store in any building or upon any premises in excess of 2,500 cubic feet (71m3) gross volume of combustible empty packing cases, boxes, barrels or similar containers, rubber tires, rubber, cork or similar combustible material.

* * *

105.6.9.1 Covered mall buildings. An operational permit is required for:

1. The placement of retail fixtures and displays, concession equipment, displays of highly combustible goods and similar items in the mall.
2. The display of liquid- or gas-fired equipment in the mall.
3. The use of open-flame or flame-producing equipment in the mall.

105.6.9. 2 Cruise ship hazardous operations.

105.6.9.2.1 An annual operational permit is required to conduct fuel transfers to or from a cruise ship at a passenger terminal.

105.6.9.2.2 A temporary permit is required to conduct hot work on a cruise ship at a passenger terminal.

* * *

105.6.11 Cutting and welding. ((~~An operational permit is required to conduct cutting or welding operations within the jurisdiction.~~))See 105.6.23, Hot work operations.

* * *

105.6.14 Explosives. An operational permit is required for the ((~~manufacture,~~)) storage, handling, sale or use of any quantity of *explosives*, *explosive materials*, fireworks or pyrotechnic special effects within the scope of Chapter 33.

Exceptions: 1. Storage in Group R-3 occupancies of smokeless propellant, black powder and small arms primers for personal use, not for resale and in accordance with Section 3306.
2. Model rocket motors stored in Group R-3 Occupancies meeting the requirements of NFPA 1122, 1125 and 1127 and in accordance with the United States Bureau of Alcohol, Tobacco, Firearms and Explosives.

105.6.14 Point of Information

The manufacture of explosives is prohibited within Seattle City limits.

* * *

105.6.16 Flammable and combustible liquids. An operational permit is required:

1. To use or operate a pipeline for the transportation within facilities of flammable or *combustible liquids*. This requirement shall not apply to the off-site transportation in pipelines regulated by the Department of Transportation (DOTn) nor does it apply to piping systems.
2. To store, handle or use Class I liquids in excess of 5 gallons (19 L) in a building or in excess of 10 gallons (37.9 L) outside of a building, except that a permit is not required for the following:

2.1. The storage or use of Class I liquids in the fuel tank of a motor vehicle, aircraft, motorboat, mobile power plant or mobile heating plant, or storage of approved portable motor boat fuel containers of 6 gallons (22.7 L) or less individual capacity and 12 gallons (45.4 L) aggregate capacity, unless such storage, in the opinion of the *fire code official*, would cause an unsafe condition.

2.2. The storage or use of paints, oils, varnishes or similar flammable mixtures when such liquids are stored for maintenance, painting or similar purposes for a period of not more than 30 days.

3. To store, handle or use Class II or Class IIIA liquids in excess of 25 gallons (95 L) in a building or in excess of 60 gallons (227 L) outside a building, except for fuel oil used in connection with oil-burning equipment.
4. To store, handle or use Class IIIB liquids in tanks or portable tanks for fueling motor vehicles at motor Fuel-dispensing facilities or where connected to fuel-burning equipment. **Exception:** Fuel oil and used motor oil used for space heating or water heating.
5. To remove Class I or II liquids from an underground storage tank used for fueling motor vehicles by any means other than the *approved*, stationary on-site pumps normally used for dispensing purposes.
6. To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and *combustible liquids* are produced, processed, transported, stored, dispensed or used.

7. To place temporarily out of service (for more than 90 days) an underground, protected above-ground or above-ground flammable or *combustible liquid* tank.
8. To change the type of contents stored in a flammable or *combustible liquid* tank to a material that poses a greater hazard than that for which the tank was designed and constructed.
9. To manufacture, process, blend or refine flammable or *combustible liquids*.
10. To engage in the dispensing of liquid fuels into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments.
11. To utilize a site for the dispensing of liquid fuels from tank vehicles into the fuel tanks of motor vehicles, marine craft and other special equipment at commercial, industrial, governmental or manufacturing establishments.
12. To store, handle or use Class III-B liquids in excess of 1,000 gallons (3785 L) not provided for in item 4 above.
13. To engage in the business of removing, abandoning or otherwise disposing of residential heating oil tanks.

* * *

105.6.19 Fumigation and thermal insecticidal fogging. An operational permit is required to operate a business of fumigation or thermal insecticidal fogging and to maintain a room, vault, freight container, or chamber in which a toxic or flammable fumigant is used.

105.6.20.1 Hazardous materials. An operational permit is required to store, transport on site, dispense, use or handle hazardous materials in excess of the amounts listed in Table 105.6.20.

105.6.20.2 Hazardous materials stabilization. A temporary permit is required to stabilize potentially unstable (reactive) hazardous materials.

105.6.21.1 HPM facilities. An operational permit is required to store, handle or use hazardous production materials.

105.6.21.2 Helicopter lifts. A temporary permit is required to move suspended loads via helicopter over populated areas.

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105.6.23 Hot work operations. An operational permit is required for hot work including, but not limited to:

1. Public exhibitions and demonstrations where hot work is conducted.
2. Use of portable hot work equipment. ((~~inside a structure.~~))

Exceptions: ((~~Work that is conducted under a construction permit.~~))
1. Within Group R, Division 3 and Group U Occupancies.

2. Torch assemblies connected for use to an acetylene gas cylinder having a maximum individual capacity of 40 cubic feet (1.13 m3).
3. Approved self-contained torch assemblies or similar appliances using LP-gas in accordance with the following:
a. LP-gas cylinders that comply with UL 147A, Standard for Nonrefillable (Disposable) Type Fuel Gas Cylinder Assemblies.
b. LP-gas cylinders that have a maximum water capacity of 2.7 lb (1.2 kg).
c. The maximum aggregate water capacity of LP-gas cylinders in storage (e.g. not connected for use) and use does not exceed 2.7 lb (1.2 kg) per control area.

3. Fixed-site hot work equipment such as welding booths.
((~~4. Hot work conducted within a wildfire risk area.~~))
4.((~~5.~~)) Application of roof coverings with the use of an open-flame device.
5. Hot work on storage tanks, piping and associated systems containing or previously containing flammable or combustible liquids, or other hazardous materials that could present a fire or explosion hazard.
6. Hot work on *vessels*.
7.((~~6.~~)) When *approved*, the *fire code official* ((~~shall~~))is authorized to issue a permit to carry out a hot work program. This program allows *approved* personnel to regulate their facility's hot work operations. The *approved* personnel shall be trained in the fire safety aspects denoted in this chapter and shall be responsible for issuing permits requiring compliance with the requirements found in Chapter 26. These permits shall be issued only to their employees or hot work operations under their supervision.

* * *

105.6.27 LP-gas. An operational permit is required for:
1. Storage and use of LP-gas.
Exceptions:
1. A permit is not required for individual containers with a ((~~500~~))125-gallon (((~~1893~~))473 L) water capacity or less or multiple containers with an aggregate not exceeding 125 gallons (473) L, serving occupancies in Group R-3.
2. A permit is not required for LP-gas containers having a water capacity not exceeding 48 pounds [nominal 20 pounds (9 kg) LP-gas] connected to a LP-gas grill unless at a public assembly or on, or serving, a public way.
3. A permit is not required for storage of up to three spare forklift containers each having a maximum individual water capacity of 104 pounds (10 gallons LP-gas).

2. Operation of cargo tankers that transport LP-gas.

* * *

105.6.29 Marine terminal. An annual operational permit is required to handle or temporarily locate containers, tanks, or cylinders of hazardous materials at marine terminals located within the Seattle City limits. ((~~**Miscellaneous combustible storage.** An operational permit is required to store in any building or upon any premises in excess of 2,500 cubic feet (71m3) gross volume of combustible empty packing cases, boxes, barrels or similar containers, rubber tires, rubber, cork or similar combustible material.~~))

105.6.30 Open burning. An operational permit is required for the kindling or maintaining of an open fire or a fire on any public street, alley, road, or other public or private ground. Instructions and stipulations of the permit shall be adhered to.

Exception: *Recreational fires and portable outdoor fireplaces.*

105.6.31 Open flames and torches. ((~~An operational permit is required to remove paint with a torch; or to use a torch or open flame device in a wildfire risk area.~~))See Section 105.6.23 Hot work operations.

105.6.32 Open flames and candles. An operational permit is required to use open flames or candles in connection with assembly areas, dining areas of restaurants or drinking establishments.

105.6.32 Point of Information

Open flame and candle permit conditions are included in assembly permits at no additional fee.

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105.6.34.1 ((~~Places of a~~))Assembly occupancy. An operational permit is required to operate an ((~~place of~~))*assembly occupancy* with an occupant load of 100 or more.

105.6.34.2 Temporary assembly occupancy. A temporary assembly occupancy permit is required for any outdoor place to be used for the assembly of more than 100 persons or where temporary alterations are made to the existing means of egress, character, or use of any building or facility used for the gathering of 50 or more people. Plans for such alterations shall be submitted when required by the fire code official.

* * *

105.6.38 Refrigeration equipment. An operational permit is required to operate a mechanical refrigeration unit or system regulated by Chapter 6.

Exception: Refrigeration systems that have a valid annual mechanical permit issued by the Department of Planning and Development.

* * *

105.6.41 Spraying or dipping. An operational permit is required to conduct a spraying or dipping operation utilizing flammable or *combustible liquids* or the application of combustible powders regulated by Chapter 15.

Exception: Mobile spray coaters licensed by, and meeting the requirements of, the Puget Sound Clean Air Agency.

105.6.41.1 Spraying with water-based paints. A no-fee operational permit is required for spraying operations utilizing water-based paints in accordance with Chapter 15.

105.6.42 Storage of tires, scrap tires and tire byproducts. An operational permit is required to establish, conduct or maintain storage of scrap tires and tire byproducts that exceeds 2,500 cubic feet (71m3) of total volume of scrap tires and for indoor storage of tires and tire byproducts. An operational permit is also required for indoor storage of tires and tire byproducts as regulated by Chapter 23.

105.6.43 Temporary membrane structures and tents. See 105.7.14. ((~~An operational permit is required to operate an air-supported temporary membrane structure or a tent having an area in excess of 400 square feet (37 m2).~~

~~**Exceptions:**~~

~~1. Tents used exclusively for recreational camping purposes.~~

~~2. Tents open on all sides, which comply with all of the following:~~

~~2.1. Individual tents having a maximum size of 700 square feet (65 m2).~~

~~2.2. The aggregate area of multiple tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m2) total.~~

~~2.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be provided.~~))

* * *

105.7 Required ((~~construction~~))installation permits. The *fire code official* is authorized to issue ((~~construction~~))installation permits for work as set forth in Sections 105.7.1 through 105.7.14.

105.7 Point of Information

Building permits for construction are issued by the Department of Planning and Development (DPD). The fire code does not require separate Fire Department issued installation permits for the following:
• Automatic fire-extinguishing systems.
• Fire alarm and detection systems and related equipment.
• Standpipe systems.

All fire protection systems must be Confidence tested accordance with this code and Administrative Rule 9.02.09, *Confidence Test Requirements for Life Safety Systems,* and any future revisions of this rule adopted by the *fire code official.*

Fire Department Installation and Operational Permits
If an installation permit is required and an operational permit is also required, the approved installation permit is renewable annually as an operational permit.

105.7.1 Automatic fire-extinguishing systems. See Section 105.7 point of information for Department of Planning and Development required permit. ((~~A construction permit is required for installation of or modification to an automatic fire-extinguishing system. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.~~))

105.7.2 Battery systems. A permit is required to install 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 *legally-required standby power*, emergency power or uninterrupted power supplies.((~~a liquid electrolyte capacity of more than 50 gallons (189 L).~~))

105.7.3 Compressed gases. When the compressed gases in use or storage exceed the amounts listed in Table 105.6.8, an installation ((~~construction~~))permit is required to install, repair damage to, abandon, remove, place temporarily out of service, or close or substantially modify a *compressed gas* system.

Exceptions:
1. Routine maintenance.
2. For emergency repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

105.7.4 Cryogenic fluids. An ((~~construction~~))installation permit is required for installation of or *alteration* to outdoor stationary *cryogenic fluid* storage systems where the system capacity

exceeds the amounts listed in Table 105.6.10. Maintenance performed in accordance with this code is not considered an *alteration* and does not require an((~~construction~~)) installation permit.

105.7.5 Fire alarm and detection systems and related equipment. See Section 105.7 point of information for Department of Planning and Development required permit. ((~~A construction permit is required for installation of or modification to fire alarm and detection systems and related equipment. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.~~))

105.7.6 Fire pumps and related equipment. An installation((~~construction~~)) permit is required for installation of ((~~or modification to fire pumps and related~~)) fuel tanks, jockey pumps, controllers and generators. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

105.7.7 Flammable and combustible liquids. An installation((~~construction~~)) permit is required:

1. To install, repair or modify a pipeline for the transportation of flammable or *combustible liquids*.
2. To install, construct or alter tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and *combustible liquids* are produced, processed, transported, stored, dispensed or used.
3. To install, alter, remove, abandon or otherwise dispose of a flammable or *combustible liquid* tank.

105.7.8 Hazardous materials. An installation ((~~construction~~)) permit is required to install, repair damage to, abandon, remove, place temporarily out of service, or close or substantially modify a storage facility or other area regulated by Chapter 27 when the hazardous materials in use or storage exceed the amounts listed in Table 105.6.20.

Exceptions:

1. Routine maintenance.
2. For emergency repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

105.7.9 Industrial ovens. An installation ((~~construction~~))permit is required for installation of industrial **ovens** covered by Chapter 21.

Exceptions:

1. Routine maintenance.
2. For repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

105.7.10 LP-gas. An installation ((~~construction~~))permit is required for installation of or modification to an LP-gas system.

105.7.11 Refrigeration permit. An installation permit is required to install a mechanical refrigeration unit or system regulated by Chapter 6.((**~~Private fire hydrants.~~** ~~A construction permit is required for the installation or modification of private fire hydrants.~~))

Exception: Refrigeration units or systems that have a valid mechanical permit issued by the Department of Planning and Development.

105.7.12 Spraying or dipping. An installation ((~~construction~~)) permit is required to install or modify a spray room, dip tank or booth.

105.7.13 Standpipe systems. See Section 105.7 point of information for Department of Planning and Development required permit.((~~A construction permit is required for the installation, modification or removal from service of a standpipe system. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.~~))

105.7.14 Temporary membrane structures and tents. An installation ((~~construction~~)) permit is required to erect and maintain a((~~n air-supported~~)) temporary membrane structure or a tent having an area in excess of 400 square feet (37 m2) if all of the following conditions are met:

1. The membrane structure or tent will be erected for a time period not to exceed four weeks,
2. The membrane structure or tent will be located at least 200 feet from shorelines,
3. No stage, platform, bleacher or similar structure greater than 4 feet in height will be installed inside the membrane structure or tent,
4. The membrane structure or tent will not be attached to a building or other permanent structure for support, and
5. The installation permit does not propose foul weather use, or a structure of unusual shape, unusual location or large area or height.

105.7.14 Point of Information

If any one of the above-noted conditions (items 1-5) is not met, a permit for the membrane structure or tent may be required from the Department of Planning and Development.

Exceptions:
1. Tents used exclusively for recreational camping purposes.
2. Funeral tents and curtains or extensions attached thereto, when used for funeral services.

3. Tents and awnings open on all sides which comply with all of the following:
3.1. Individual tents shall have a maximum size of 700 square feet (65 m2).
3.2. The aggregate area of multiple tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m2) total.
3.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be maintained.

* * *

106.2.2 Approval required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the *fire code official*. The *fire code official*, upon notification, shall make the requested inspections and shall either indicate the portion of the ((~~construction~~))work that is satisfactory as completed, or notify the permit holder or his or her agent wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the *fire code official*.

* * *

106.5 Special inspections. The *fire code official* is authorized to appoint qualified persons or agencies having special technical skills as special inspectors or plan reviewers and accept their inspection, plan review and evaluation of specialized fire protection equipment or systems.

106.5.1 Other inspections. The *fire code official* is authorized to accept inspections performed by other jurisdictions and agencies and honor permits and certificates issued by other jurisdictions for activities regulated by this code, upon presentation to the *fire code official* of satisfactory evidence that such inspections, permits and certificates are substantially in accord with the fire safety requirements of this code.

* * *

107.2.1 Test and inspection records. Required test and inspection records shall be available to the *fire code official* at all times or such records as the *fire code official* designates shall be filed with the *fire code official*.

* * *

107.4 Rendering equipment inoperable. Portable or fixed fire-extinguishing systems or devices and fire-warning systems shall not be rendered inoperative or inaccessible except as necessary during emergencies, maintenance, repairs, *alterations*, drills or prescribed testing.
Exception: When approved by the *fire code official*.

* * *

107.6 Overcrowding. Overcrowding or admittance of any *person* beyond the *approved* capacity of a building or a portion thereof shall not be allowed. The *fire code official*, upon finding any overcrowding conditions or obstructions in *aisles*, passageways or other *means of egress*, or upon finding any condition which constitutes a life safety hazard, shall be authorized to direct actions be taken to reduce the overcrowding or to cause the event to be stopped until such condition or obstruction is corrected.

SECTION 108
((~~BOARD OF~~))APPEALS

108 Point of Information

For information on appeals procedures, see Seattle Fire Department Information Bulletin *Requesting a Review by the Seattle Fire Code Appeals Board* at http://www.seattle.gov/fire/FMO/firecode/infobulletins/ fmoBulletins.htm

108.1 Appeals. Appeals from decisions or actions pertaining to the application and interpretation of this Code shall first be addressed to the *fire code official*. If not resolved with the *fire code official*, the appellant may submit a written request to the *fire code official* for a review by the Fire Code Appeals Board in accordance with all applicable by-laws, rules, regulations and ordinances. The result of this review is advisory only, in accordance with City of Seattle Ordinance 119799. Following receipt of the Fire Code Appeals Board recommendation the fire chief, who shall not have acted as the *fire code official* in the first appeal of the application or interpretation of the code, shall issue a final written decision. ((~~**Board of appeals established.** In order to hear and decide appeals of orders, decisions or determinations made by the *fire code official* relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The *fire code official* shall be an ex officio member of said board but shall have no vote on any matter before the board. The board shall adopt rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the *fire code official*.~~))

((~~**108.2 Limitations on authority.** An application for appeal shall be based on a claim that the intent of this code or the rules legally adopted hereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equivalent method of protection or safety is proposed. The board shall have no authority to waive requirements of this code.~~))

((~~**108.3 Qualifications.** The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to hazards of fire, explosions, hazardous conditions or *fire protection systems* and are not employees of the jurisdiction.~~))

SECTION 109
VIOLATIONS

109.1 Unlawful acts. It shall be unlawful for a *person*((~~, firm or Corporation~~)) to erect, construct, alter, repair, remove, demolish or utilize a building, occupancy, premises or system regulated by this code, or cause same to be done, in conflict with or in violation of any of the provisions of this code. It is a violation of the *Seattle Fire Code* for any person to fail to comply with the *Seattle Fire Code* or with any order issued by the fire code official.

109.2 Notice of violation. When the *fire code official* finds a building, premises, vehicle, *vessel*, storage facility or outdoor area that is in violation of this code, the *fire code official* is authorized to ((~~prepare~~))issue a written notice of violation describing the violation((~~conditions deemed unsafe~~)) and, when compliance is not immediate, specifying a time for reinspection. Nothing in this subsection shall be deemed to limit or preclude any other enforcement action or proceeding, and nothing in this section shall be deemed to obligate or require the fire code official to issue a notice of violation prior to the imposition of civil or criminal penalties.

109.2.1 Service. A notice of violation issued pursuant to this code shall be served upon the *owner*, operator, occupant or other *person* responsible for the condition or violation, either by personal service, mail or by delivering the same to, and leaving it with, some *person* of responsibility upon the premises. For unattended or abandoned locations, a copy of such notice of violation shall be posted on the premises in a conspicuous place at or near the entrance to such premises and the notice of violation ((~~shall~~))may be mailed by certified mail with return receipt requested or a certificate of mailing, to the last known address of the *owner*, occupant or both.

109.2.2 Compliance with orders and notices. A notice of violation issued or served as provided by this code shall be complied with by the *owner*, operator, occupant or other *person* responsible for the condition or violation to which the notice of violation pertains.

109.2.3 Prosecution of violations. If the notice of violation is not complied with promptly or by the time specified in the notice, the *fire code official* is authorized to request the legal counsel of the jurisdiction to institute the appropriate legal proceedings at law or in equity to restrain, correct or abate such violation,((~~or~~)) to require removal or termination of the unlawful occupancy of the structure in violation of the provisions of this code or of the order or notice((~~direction made pursuant hereto~~)), or to collect a penalty for violation.

109.2.4 Unauthorized tampering. Signs, tags or seals posted or affixed by the *fire code official* shall not be mutilated, destroyed or tampered with or removed without authorization from the *fire code official*.

109.3 ((~~Violation~~ p)) Penalties.

109.3.1 Alternative civil penalties. Any person ((~~*Persons*~~)) who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the *approved construction or installation documents* or directive of the *fire code official*, or of a permit or certificate used under provisions of this code, shall be subject to a cumulative civil penalty in an amount not to exceed $1,000 per day for each violation from the time the violation occurs or begins until compliance is achieved. The penalty shall be collected by civil action brought in the name of the City. The *fire code official* shall notify the City Attorney in writing of the name of any person, firm or corporation subject to the penalty, and the City Attorney shall, with the assistance of the *fire code official*, take appropriate action to collect the penalty. In any civil action for a penalty, the city has the burden of proving by a preponderance of the evidence that a violation exists or existed. ((~~guilty of a [SPECIFY OFFENSE], punishable by a fine of not more than [AMOUNT] dollars or by imprisonment to exceeding [NUMBER OF DAYS], or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.~~))

109.3.2 Alternative criminal penalty. Any person who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction or installation documents or directive of the *fire code official*, or of a permit or certificate used under provisions of this code, shall be guilty of a gross misdemeanor subject to the provisions of *Seattle Municipal Code* Chapters 12A.02 and 12A.04, except that absolute liability shall be imposed for such a violation or failure to comply and none of the mental states described in Section 12A.04.030 need be proved. The *fire code official* may request the City Attorney prosecute such violations criminally as an alternative to the civil penalties provision. Each day that a violation continues shall be deemed a separate offense.

109.((~~3.1~~))4 Abatement of violation. In addition to the imposition of ((~~the~~)) civil and criminal penalties ((~~herein described~~)), the *fire code official* is authorized to institute appropriate action to prevent unlawful construction; ((~~or~~)) to restrain, correct or abate a violation; ((~~or~~)) to prevent illegal occupancy of a structure or premises; or to stop an illegal act, conduct of business or occupancy of a structure on or about any premises.

SECTION 110
UNSAFE BUILDINGS, PREMISES, MOTOR VEHICLES AND VESSELS

110.1 General. If ((~~during the inspection of~~))a premises, a building or structure or any building system, *motor vehicle* or *vessel*, in whole or in part, endangers any property or the health or safety of the occupants of the property or of neighboring premises, buildings, *motor vehicles*, *vessels*, or the health and safety of the public or fire department personnel((~~constitutes a clear and inimical threat to human life, safety or health,~~))the *fire code official* shall issue such notice or orders to remove or remedy the conditions as shall be deemed necessary in accordance with this section. ((~~and shall~~))The *fire code* official may refer the building to the Department of Planning and Development ((~~building department~~)) for any repairs, *alterations*, remodeling, removing or demolition required.

110.1.1 Unsafe conditions. Structures, premises or existing equipment that are or hereafter become unsafe or deficient because of inadequate *means of egress,* ((~~or which~~))that constitute a fire hazard, ((~~or are otherwise dangerous to human life or the public welfare, or which~~))that involve illegal or improper occupancy or inadequate maintenance, or that are otherwise dangerous to human life or public welfare, shall be deemed an unsafe condition. A vacant structure which is not secured against unauthorized entry as required by Section 311 shall be deemed unsafe.

110.1.2 Structural hazards. When an apparent structural hazard is caused by the faulty installation, operation or malfunction of any of the items or devices governed by this code, the *fire code official* ((~~shall~~))is authorized to immediately notify the building code official in accordance with Section 110.1.

110.2 Evacuation. The *fire code official* or the fire department official in charge of an incident shall be authorized to order the immediate evacuation of any occupied premises, building, *motor vehicle* or *vessel* deemed unsafe when such premises, building, *motor vehicle,* or *vessel* has hazardous conditions that present imminent danger to premises, building, *motor vehicle,* or *vessel* occupants. *Persons* so notified shall immediately leave the structure or premises, *motor vehicle,* or *vessel* and shall not enter or re-enter until authorized to do so by the *fire code official* or the fire department official in charge of the incident.

110.3 Summary abatement. Where conditions exist that are deemed hazardous to life and property, the *fire code official* or fire department official in charge of the incident is authorized to abate summarily such hazardous conditions that are in violation of this code.

110.4 Abatement. The *owner*, operator or occupant of a building or premises deemed unsafe by the *fire code official* shall abate or cause to be abated or corrected such unsafe conditions either by repair, rehabilitation, demolition or other *approved* corrective action.

110.5 Notification. The *fire code official* shall serve the responsible party with a copy of violations, correction letters and orders issued.

SECTION 111
STOP WORK OR USE ORDER

111.1 Order. Whenever the *fire code official* finds any work or use regulated by this code being performed in a manner contrary to the provisions of this code or in a dangerous or unsafe manner, the *fire code official* is authorized to issue a stop work or use order.

111.2 Issuance. A stop work or use order shall be in writing and shall be given to the *owner* of the property, or to the *owner's* agent, or to the *person* doing the work or use. Upon issuance of a stop work or use order, the cited work or use shall immediately cease. The stop work or use order shall state the reason for the order, and the conditions under which the cited work or use is authorized to resume.

111.3 Emergencies. Where an emergency exists, the *fire code official* shall not be required to give a written notice prior to stopping the work or use.

111.4 Failure to comply. It is a violation of this code for ((~~A~~))any *person*((~~who shall~~)) to continue any work or use after having been served with a stop work or use order, except such work or use as that *person* is directed to perform to remove a violation or unsafe condition.((~~, shall be liable to a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars.~~))

* * *

SECTION 113
FEES

113.1 Fees. A permit shall not be issued until the fees have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

Exception: Those permits for which the *fire code official*, pursuant to the annual fee ordinance, authorizes invoices to be sent for the fees after the permits are issued.

113.2 Schedule of permit fees. A fee for each permit shall be paid as required, in accordance with the schedule ((~~as~~))established by the ((~~applicable~~))governing authority.

((~~**113.3 Work commencing before permit issuance.** Any *person* who commences any work, activity or operation regulated by this code before obtaining the necessary permits shall be subject to an additional fee established by the applicable governing authority, which shall be in addition to the required permit fees.~~))

113.((4))3 Related fees. The payment of the fee for the construction, *alteration*, removal or demolition of work done in connection ((~~to~~))or concurrently with the work or activity authorized

by a permit ((~~shall~~))does not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.

113.((~~5~~))4 Refunds. The applicable governing authority is authorized to establish a refund policy.

Section 4. Chapter 2 of the 2009 International Fire Code is amended as follows:

***

201.5 References to other codes. If an International, National or Uniform Code is referenced in this code, it means the edition that is currently in effect of that International, National or Uniform code, along with its adopted Seattle amendments. References to the "Building Code", "Fire Code", "Mechanical Code" and "Plumbing Code" mean the Seattle editions of those codes.

***

SECTION 202
GENERAL DEFINITIONS

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[W] ADULT FAMILY HOME. Means a dwelling, licensed by Washington state, in which a person or persons provide personal care, special care, room and board to more than one but not more than six adults who are not related by blood or marriage to the person or persons providing the services.

***

[W] ALERT SIGNAL. See Section 402.1.

[W] ALERT SYSTEM. See Section 915.

***

BERTH. See Section 9402.1.

***

BOATHOUSE. See Section 9402.1.

***

[B] CHILD CARE FACILITIES. Facilities that provide care on a 24-hour basis to more than five children, 21/2 years of age or less, shall be classified as Group I-2.

[W] CHILD DAY CARE. For the purposes of these regulations is the care of children during any period of a 24-hour day.

[W] CHILD DAY CARE HOME, FAMILY. A child day care facility, licensed by Washington State, located in the dwelling of the person or persons under whose direct care and supervision the child is placed, for the care of twelve or fewer children, including children who reside at the home.

***

CLOSED CONTAINER. See Section 2702.1.

***

COVERED BOAT MOORAGE. See Sections 4502.1 and 9402.1.

***

DESIGNATED HOT WORK FACILITY. See Section 4502.1.

***

ELECTRICAL CODE. The National Electrical Code, promulgated by the National Fire Protection Association, as adopted and amended by this jurisdiction.

***

[B] EMERGENCY POWER SYSTEM. An electrical system that complies with *Seattle Electrical Code* Article 700.

***

FIRE DETECTION SYSTEM. See Section 902.1.

***

[B] FIRE DISTRICT. See Section 2202.1.

***

FLOAT. See Sections 4502.1 and 9402.1.

***

[W] FULL LOCKDOWN. See Section 402.1.

***

HIGH-RISE BUILDING. See Section 902.1.

***

[M] HOOD. ((~~See Section 602.1.~~))
((~~**Type I.** See Section 602.1.~~))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.

Type I. A kitchen hood for collecting and removing grease vapors and smoke generated from medium-duty, heavy-duty, extra-heavy-duty, and some light-duty cooking appliances. Such hoods are equipped with a fire suppression system.
Type II. A general kitchen hood for collecting and removing steam, vapor, heat, odors and products of combustion generated from some light-duty cooking appliances.

***

MOTOR VEHICLE. See Section 2202.1.

MOTOR VEHICLE, UNATTENDED. See Section 2202.1.

***

[W] NIGHTCLUB. An A-2 Occupancy use under the 2006 *International Building Code* in which the aggregate area of concentrated use of unfixed chairs and standing space that is specifically designated and primarily used for dancing or viewing performers exceeds three hundred fifty square feet, excluding adjacent lobby areas. "Nightclub" does not include theaters with fixed seating, banquet halls, or lodge halls.

***

OCCUPANCY CLASSIFICATION. For the purposes of this code, certain occupancies are defined as follows:

***

[W] Day care. The use of a building or structure, or portion thereof, for educational, supervision or personal care services for more than five children older than 21/2 years of age shall be classified as an E occupancy.
Exception: *Family child day care homes* licensed by the state of Washington for the care of twelve or fewer children shall be classified as Group R-3.

***

[W] Group I-1. This occupancy shall include buildings, structures or parts thereof housing more than 16 *persons*, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment that provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This group shall include, but not be limited to, the following:

Alcohol and drug centers
Assisted living facilities
Congregate care facilities
Convalescent facilities
Group homes
Half-way houses

Residential board and care facilities
Social rehabilitation facilities

A facility such as the above with five or fewer *persons* and *adult family homes* licensed by Washington state shall be classified as Group R-3 or shall comply with the *International Residential Code* in accordance with Section 101.2 of the *International Building Code*. ((~~A facility such as above, housing at least six and not more than 16 *persons*, shall be classified as Group R-4.~~))

A facility such as the above providing licensed care to clients in one of the categories listed in the *Seattle Building Code* Section 310.1 licensed by Washington state shall be classified as Group R-2.

[B] Group I-2. This occupancy shall include buildings and structures used for medical, surgical, psychiatric, nursing or custodial care on a 24-hour basis ((~~for~~)) of more than five *persons* who are not capable of self-preservation. This group shall include, but not be limited to, the following:
Child care facilities
Detoxification facilities
Hospice care centers
Hospitals
Mental hospitals
Nursing homes (both intermediate-care facilities and skilled nursing facilities)

[W] A facility such as the above providing licensed care to clients in one of the categories listed in *Seattle Building Code* Section 310.1 licensed by Washington state shall be classified as Group R-2.

[W] A facility such as the above with five or fewer shall be classified as Group R-3 or shall comply with the *Seattle Residential Code*.

***

[W] Adult care facility. A facility that provides accommodations for less than 24 hours for more than five unrelated adults and provides supervision and personal care services shall be classified as Group I-4.
Exception: Where the occupants are capable of responding to an emergency situation without physical assistance from the staff, the facility shall be classified as Group ((~~R~~))A-3.

[W] Child care facility. ((~~Child care~~))A facility((~~ies~~)) that provides supervision and personal care on less than a 24-hour basis for more than five children 21/2 years of age or less shall be classified as Group I-4.
Exceptions:

1. A child day care facility that provides care for more than five but no more than 100 children 21/2 years or less of age, where the rooms in which the children are cared for are located on a *level of exit discharge* serving such rooms and each of these child care rooms has an *exit* door directly to the exterior, shall be classified as Group E.
2. *Family child day care homes* licensed by Washington state for the care of 12 or fewer children shall be classified as Group R-3.

***

[W] Residential Group R. Residential Group R includes, among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classified as an Institutional Group I or when not regulated by the *International Residential Code* in accordance with Section 101.2 of the *International Building Code*. Residential occupancies shall include the following:

R-1 Residential occupancies containing sleeping units where the occupants are primarily transient in nature, including:

Boarding houses (transient) with more than 10 occupants
Hotels (transient)
Motels (transient)
Congregate living facilities (transient) with more than 10 ((~~or fewer~~))occupants ((~~are permitted to comply with the construction requirements for Group R-3.~~))

R-2 Residential occupancies containing *sleeping units* or more than two *dwelling units* where the occupants are primarily permanent in nature, including:

Apartment houses
Boarding homes licensed by Washington state under Chapter 388-78A WAC
Boarding houses (nontransient) with more than 16 occupants
Convents
Dormitories
Fraternities and sororities
Hotels (nontransient)
Live/work units
Monasteries
Motels (nontransient)
Residential treatment facilities as licensed by Washington state under Chapter 246-337 WAC
Vacation timeshare properties
Congregate living facilities (nontransient) with more than 16 occupants ((~~or fewer occupants are permitted to comply with the construction requirements for be classified as Group R-3.~~))

[W] R-3 Residential occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, ((~~R-4~~)) or I, including:

Buildings that do not contain more than two dwelling units.
Adult care facilities that provide accommodations for five or fewer persons of any age for less than 24 hours.
((~~Child care facilities that provide accommodations for five or fewer persons of any age for less than 24 hours.~~))
Congregate living facilities (nontransient) ((~~and *boarding houses*~~))with 16 or fewer ((~~persons~~)) occupants.
Congregate living facilities (transient) with 10 or fewer occupants.
Adult family homes, *family child day care homes*, and adult care and child care facilities that are within a single family home are permitted to comply with the *International Residential Code*.
Foster family care homes licensed by Washington state are permitted, as an accessory use to a dwelling, for six or fewer children including those of the resident family.

((~~**R-4** Residential occupancies shall include buildings arranged for occupancy as residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff. Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code or shall comply with the *International Residential Code,* provided the building is protected by an *automatic sprinkler system* installed in accordance with Section 903.2.8.~~))

[B] Storage Group S. Storage Group S occupancy includes, among others, the use of a building or structure, or a portion thereof, for storage that is not classified as a hazardous occupancy.

Moderate-hazard storage, Group S-1. Buildings occupied for storage uses that are not classified as Group S-2, including, but not limited to, storage of the following:

Aerosols, Levels 2 and 3
Aircraft hangar (storage and repair)
Bags: cloth, burlap and paper
Bamboos and rattan
Baskets
Belting: canvas and leather
Books and paper in rolls or packs
Boots and shoes
Buttons, including cloth covered, pearl or bone
Cardboard and cardboard boxes
Clothing, woolen wearing apparel
Cordage

Dry boat storage (indoor)
Furniture
Furs
Glues, mucilage, pastes and size
Grains
Horns and combs, other than celluloid
Leather
Linoleum
Lumber
Motor vehicle and marine repair garages complying with the maximum allowable quantities of hazardous materials *listed* in Table 2703.1.1(1) (see Section 406.6 of the *International Building Code*)
Photo engravings
Resilient flooring
Silks
Soaps
Sugar
Tires, bulk storage of
Tobacco, cigars, cigarettes and snuff
Upholstery and mattresses
Wax candles

Low-hazard storage, Group S-2. Includes, among others, buildings used for the storage of noncombustible materials such as products on wood pallets or in paper cartons with or without single thickness divisions; or in paper wrappings. Such products are permitted to have a negligible amount of plastic trim, such as knobs, handles or film wrapping. Storage uses shall include, but not be limited to, storage of the following:
Asbestos
Beverages up to and including 16-percent alcohol in metal, glass or ceramic containers
Cement in bags
Chalk and crayons
Covered boat moorage not classified as Group U
Dairy products in nonwaxed coated paper containers
Dry cell batteries
Electrical coils
Electrical motors
Empty cans
Food products
Foods in noncombustible containers
Fresh fruits and vegetables in nonplastic trays or containers
Frozen foods

Glass
Glass bottles, empty or filled with noncombustible liquids
Gypsum board
Inert pigments
Ivory
Meats
Metal cabinets
Metal desks with plastic tops and trim
Metal parts
Metals
Mirrors
Oil-filled and other types of distribution transformers
Parking garages, open or enclosed
Porcelain and pottery
Stoves
Talc and soapstones
Washers and dryers

***

OIL-BURNING EQUIPMENT. See Section 602.1.

***

P_F DEVICE. See Section 2602.1.

***

PIER. See Sections 4502.1 and 9402.1.

***

POWER TAP. See Section 602.1.

***

[W] RECALL SIGNAL. See Section 402.1.

***

SHIPYARD. A pier, wharf or series of piers and wharves and related onshore facilities, designated by the *fire code official*, that by virtue of the pier construction, location, emergency vehicle access, fire protection, hydrant availability and onsite safety personnel in accordance with Seattle Fire Department Administrative Rule 26.02.09, *Designated Hot Work Facilities and Shipyards* and any future revisions of this rule adopted by the *fire code official*, is suitable to permit repairs, including major conversions, on marine vessels of any length.

***

SLIP. See Section 9402.1.

***

[B] STANDBY POWER SYSTEM, LEGALLY REQUIRED. An electrical power system that complies with *Seattle Electrical Code* Article 701, Legally Required Standby Systems.

***

STANDBY FIRE PERSONNEL. Uniformed employees of the Seattle Fire Department.

***

SUBSTRUCTURE. See Section 4502.1.
SUPERSTRUCTURE. See Section 4502.1.

***

VAULT. See Section 3402.1.

***

VESSEL. ((~~See Section 1002.1.~~))A watercraft, other than a seaplane on the water, used or capable of being used as a means of transportation.

***

WHARF. See Sections 4502.1 and 9402.1.

***

Section 5. Chapter 3 of the 2009 International Fire Code is amended as follows:

***

SECTION 302
DEFINITIONS

***

BONFIRE. An outdoor fire utilized for ceremonial or recreational purposes and exceeding the size of a recreational fire.

***

PORTABLE OUTDOOR FIREPLACE. An ((~~portable,~~)) outdoor, solid-fuel-burning fireplace that is easily transported and moved around and that may be constructed of steel, concrete, clay or other noncombustible material. An ((~~portable~~)) outdoor fireplace may be open in design, or may be equipped with a small hearth opening and a short chimney or chimney opening in the top.

***

303.2 Location. Asphalt (tar) kettles shall not be located within 20 feet (6096 mm) of any combustible material, combustible building surface or any building opening and within a controlled area identified by the use of traffic cones, barriers or other *approved* means. Asphalt (tar) kettles and pots shall not be utilized inside or on the roof of a building or structure. Roofing kettles and operating asphalt (tar) kettles shall not block *means of egress*, gates, roadways or entrances.

Exception: If a practical difficulty is satisfactorily demonstrated, tar kettles may be located on a roof. All roof top kettles require a temporary permit.

***

303.10 LPG fuel containers. The maximum individual LPG container capacity and the aggregate quantity of LPG allowed to be used in conjunction with tar kettles shall be in accordance with Chapter 38.

***

304.3 Containers. Combustible rubbish, and waste material kept within or near a structure shall be stored in accordance with Sections 304.3.1 through 304.3.((4))3.

304.3.1 Spontaneous ignition. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a *listed* disposal container. Contents of such containers shall be removed and disposed of daily.

304.3.2 Capacity exceeding 5.33 cubic feet. Containers with a capacity exceeding 5.33 cubic feet (40 gallons) (0.15 m3) shall be provided with lids. Containers and lids shall be constructed of noncombustible materials or of combustible materials with a peak rate of heat release not exceeding 300 kW/m2 when tested in accordance with ASTM E 1354 at an incident heat flux of 50 kW/m2 in the horizontal orientation.

Exceptions:

1. Wastebaskets in Group I-3 occupancies shall comply with Section 808.1.
2. Waste accumulated for collection by the City's solid waste utility shall be stored in containers (to include recycling containers) specified in the City's solid waste collection contracts authorized by ordinance.
3. Containers in areas protected by an *approved automatic sprinkler system* installed throughout in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.

~~((**304.3.3 Capacity exceeding 1.5 cubic yards.** Dumpsters and containers with an individual capacity of 1.5 cubic yards [40.5 cubic feet (1.15 m3)] or more shall not be stored in buildings or placed within 5 feet (1524 mm) of combustible walls, openings or combustible roof eave lines.~~

~~**Exceptions:**~~

~~1. Dumpsters or containers in areas protected by an *approved automatic sprinkler system* installed throughout in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.~~

~~2. Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10 feet (3048 mm) from other buildings and used exclusively for dumpster or container storage.~~))

304.3.3((4)) Capacity of 1 cubic yard or more. Dumpsters with an individual capacity of 1.0 cubic yard [200 gallons (0.76 m3)] or more shall not be stored in buildings or placed within 5 feet (1524 mm) of combustible walls, openings or combustible roof eave lines unless the dumpsters are constructed of noncombustible materials or of combustible materials with a peak rate of heat release not exceeding 300 kW/m2 when tested in accordance with ASTME 1354 at an incident heat flux of 50 kW/m2 in the horizontal orientation.

Exceptions:

1. Dumpsters in areas protected by an *approved automatic sprinkler system* installed throughout in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.
2. Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10 feet (3048 mm) from other buildings and used exclusively for dumpster or container storage.

***

306.1.1 Fire extinguishers. Two approved fire extinguishers with a minimum 10-B:C rating shall be installed and maintained ready for use in projection rooms.

***

SECTION 307
OPEN BURNING, BONFIRES, RECREATIONAL FIRES AND PORTABLE OUTDOOR FIREPLACES

307.1 General. ((~~A person shall not kindle or maintain or authorize to be kindled or maintained any *open burning* unless conducted and *approved* in accordance with this section.~~))*Open burning* is prohibited in the City of Seattle. *Bonfires*, use of *portable outdoor fireplaces* and *recreational fires* shall be in accordance with Section 307.

((~~**307.1.1 Prohibited open burning.** *Open burning* that is offensive or objectionable because of smoke emissions or when atmospheric conditions or local circumstances make such fires hazardous shall be prohibited.~~))

307.2 Permit required. A permit shall be obtained from the *fire code official* in accordance with Section 105.6 prior to kindling ((~~a fire for recognized silvicultural or range or wildlife management practices, prevention or control of disease or pests, or~~))a *bonfire*. ((~~Application for such approval shall only be presented by and permits issued to the *owner* of the land upon which the fire is to be kindled.~~))

307.2.1 Authorization. Where required by state or local law or regulations, *open burning* shall only be permitted with prior approval from the state or local air and water quality management authority, provided that all conditions specified in the authorization are followed.

307.3 Extinguishment authority. The *fire code official* is authorized to order the extinguishment by the permit holder, another person responsible or the fire department of *open burning*((~~ that creates or adds to a hazardous or objectionable situation~~)).

((~~**307.4 Location.** The location for *open burning* shall not be less than 50 feet (15 240 mm) from any structure, and provisions shall be made to prevent the fire from spreading to within 50 feet (15 240 mm) of any structure.~~

~~**Exceptions:**~~

~~1. Fires in *approved* containers that are not less than 15 feet (4572 mm) from a structure.~~

~~2. The minimum required distance from a structure shall be 25 feet (7620 mm) where the pile size is 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height.~~))

307.4((~~.1~~)) Bonfires. A bonfire is not allowed except by permit from the *fire code official.* ((~~shall not be conducted within 50 feet (15 240 mm) of a structure or combustible material unless the fire is contained in a barbecue pit. Conditions which could cause a fire to spread within 50 feet (15 240 mm) of a structure shall be eliminated prior to ignition.~~))

307.5((~~4.2~~)) Recreational fires. *Recreational fires* shall not be conducted within 25 feet (7620 mm) of a structure or combustible material. Conditions which could cause a fire to spread within 25 feet (7620 mm) of a structure shall be eliminated prior to ignition.

307.6((~~4.3~~)) Portable outdoor fireplaces. *Portable outdoor fireplaces* shall be used in accordance with the manufacturer's instructions and shall not be operated within 15 feet (3048 mm) of a structure or combustible material.
Exception: *Portable outdoor fireplaces* used at one- and two-family *dwellings*.

307.7((~~5~~)) Attendance. ((~~*Open burning*, b~~))Bonfires, *recreational fires* and use of portable outdoor fireplaces shall be constantly attended until the fire is extinguished. A minimum of one portable fire extinguisher complying with Section 906 with a minimum 4-A rating or other *approved* on-site fire-extinguishing equipment, such as dirt, sand, water barrel, garden hose or water truck, shall be available for immediate utilization.

307.8 General burning prohibitions Trash, yard waste, rubbish and paper are prohibited as fuel for bonfires, recreational fires and fires in outdoor fireplaces. Smoke or odor emissions from bonfires, recreational fires and use of outdoor fireplaces that make such fires hazardous shall be

prohibited. The fire code official is authorized to order the extinguishment of a bonfire, recreational fire or fire in an outdoor fireplace which creates or adds to a hazardous situation.

307.8 Point of Information

Hazards from *bonfires, recreational fires*, and fires in outdoor fireplaces may include but are not limited to smoke or odor emissions causing potential for false alarms, medical alarms, hazards to health, and exposure to other structures from fire.

If conducting a bonfire or recreational fire or if using an outdoor fireplace, fire extinguishing equipment in accordance with SFC 307.7 shall be available for immediate use. For additional regulations and information pertaining to outdoor fires and burning, see RCW 70.94. Go to www.pscleanair.org for information on how to register an air quality complaint with the Puget Sound Clean Air Agency.

See *SFD Information Bulletin Recreational and Cooking Fire Regulations* at www.seattle.gov/fire. For air quality and burn ban status information and regulations contact the Puget Sound Clean Air Agency referenced above.

SECTION 308
OPEN FLAMES

308.1 General. Open flame, fire and burning on all premises shall be in accordance with Sections 308.1.1 through 308.4.1 and with other applicable sections of this code.

Exception: *Bonfires, recreational fires* and use of *portable outdoor fireplaces* shall be in accordance with Section 307.

***

~~((**308.1.4 Open-flame cooking devices.** Charcoal burners and other open-flame cooking devices shall not be operated on combustible balconies or within 10 feet (3048 mm) of combustible construction.~~

~~**Exceptions:**~~
~~1. One- and two-family *dwellings*.~~
~~2. Where buildings, balconies and decks are protected by an *automatic sprinkler system*.~~
~~3. LP-gas cooking devices having LP-gas container with a water capacity not greater than 21/2 pounds [nominal 1 pound (0.454 kg) LP-gas capacity].~~))

308.1.((~~5~~))4 Location near combustibles. Open flames such as from candles, lanterns, kerosene heaters and gas-fired heaters shall not be located on or near decorative material or similar combustible materials.

308.1.((~~6~~))5 Open-flame devices. Torches and other devices, machines or processes liable to start or cause fire shall not be operated or used in or upon wildfire risk areas, except by a permit in accordance with Section 105.6 secured from the *fire code official.*

Exception: Use within inhabited premises or designated campsites which are a minimum of 30 feet (9144 mm) from grass-, grain-, brush- or forest-covered areas.

308.1.((~~6~~))5.1 Signals and markers. Flame-employing devices, such as lanterns or kerosene road flares, shall not be operated or used as a signal or marker in or upon wildfire risk areas.

Exception: The proper use of fuses at the scenes of emergencies or as required by standard railroad operating procedures.

308.1.((~~6~~))5.2 Portable fueled open-flame devices. Portable open-flame devices fueled by flammable or combustible gases or liquids shall be enclosed or installed in such a manner as to prevent the flame from contacting combustible material.

Exceptions:

1. LP-gas-fueled devices used for sweating pipe joints or removing paint in accordance with Chapter 38.
2. Cutting and welding operations in accordance with Chapter 26.
3. Torches or flame-producing devices in accordance with Section 308.((4))1.3 and 308.1.5.
4. Candles and open-flame decorative devices in accordance with Section 308.((~~3~~))1.4 and 308.1.9.

308.1.((~~7~~))6 Religious ceremonies. ((~~When, in the opinion of the *fire code official*, adequate safeguards have been taken, participants in religious ceremonies are allowed to carry hand-held candles.~~))Participants in religious ceremonies shall not be precluded from carrying hand-held candles. Hand-held candles shall not be passed from one *person* to another while lighted. A competent adult shall remain within 15 feet (4572 mm) of a child carrying a hand-held candle at all times, unless an alternative equivalent safety standard is approved.

((~~**308.1.7.1 Aisles and exits.** Candles shall be prohibited in areas where occupants stand, or in an *aisle* or *exit.*~~))

308.1.((~~8~~))7 Flaming food and beverage preparation. The preparation of flaming foods or beverages in places of assembly and drinking or dining establishments shall be in accordance with Sections 308.1.((~~8~~))7.1 through 308.1.((~~8~~))7.5.

308.1.((8))7.1 Dispensing. Flammable or *combustible liquids* used in the preparation of flaming foods or beverages shall be dispensed from one of the following:
1. A 1-ounce (29.6 ml) container; or
2. A container not exceeding 1-quart (946.5 ml) capacity with a controlled pouring device that will limit the flow to a 1-ounce (29.6 ml) serving.

308.1.((8))7.2 Containers not in use. Containers shall be secured to prevent spillage when not in use.

308.1.((8))7.3 Serving of flaming food. The serving of flaming foods or beverages shall be done in a safe manner and shall not create high flames. The pouring, ladling or spooning of liquids is restricted to a maximum height of 8 inches (203 mm) above the receiving receptacle.

308.1.((8))7.4 Location. Flaming foods or beverages shall be prepared only in the immediate vicinity of the table being serviced. They shall not be transported or carried while burning.

308.1.((8))7.5 Fire protection. The *person* preparing the flaming foods or beverages shall have a wet cloth towel immediately available for use in smothering the flames in the event of an emergency.

308.1.8 Aisles and exits. Candles shall be prohibited in areas where occupants stand, or in an *aisle* or *exit*.

Exception: Candles used in religious ceremonies. See Section 308.1.6.

308.1.9 Open-flame decorative devices. Open-flame decorative devices used in assembly areas, dining areas of restaurants or drinking establishments shall comply with all of the following restrictions:

1. Class I and Class II liquids and LP-gas shall not be used.
2. Liquid- or solid-fueled lighting devices containing more than 8 ounces (237 ml) of fuel must self-extinguish and not leak fuel at a rate of more than 0.25 teaspoon per minute (1.26 ml per minute) if tipped over.
3. The device or holder shall be constructed to prevent the spillage of liquid fuel or wax at the rate of more \ than 0.25 teaspoon per minute (1.26 ml per minute) when the device or holder is not in an upright position.
4. The device or holder shall be designed so that it will return to the upright position after being tilted to an angle of 45 degrees from vertical.

Exception: Devices that self-extinguish if tipped over and do not spill fuel or wax at the rate of more than 0.25 teaspoon per minute (1.26 ml per minute) if tipped over.

5. The flame shall be enclosed except where openings on the side are not more than 0.375 inch (9.5 mm) diameter or where openings are on the top and the distance to the top is such that a piece of tissue paper placed on the top will not ignite in 10 seconds.
6. Chimneys shall be made of noncombustible materials and securely attached to the open-flame device.
   Exception: A chimney is not required to be attached to any open-flame device that will self-extinguish if the device is tipped over.
7. Fuel canisters shall be safely sealed for storage.
8. Storage and handling of *combustible liquids* shall be in accordance with Chapter 34.
9. Shades, where used, shall be made of noncombustible materials and securely attached to the open flame device holder or chimney.
10. Candelabras with flame-lighted candles shall be securely fastened in place to prevent overturning, and shall be located away from occupants using the area and away from possible contact with drapes, curtains or other combustibles.

308.2 Permits required. Permits shall be obtained from the *fire code official* in accordance with Section 105.6 prior to engaging in the following activities involving open flame, fire and burning:
1. Use of a torch or flame-producing device to remove paint from a structure.
2. Use of open flame, fire or burning in connection with Group A or E occupancies.
3. Use or operation of torches and other devices, machines or processes liable to start or cause fire in or upon wildfire risk areas.

308.3 Group A occupancies. Open-flame devices shall not be used in a Group A occupancy.
Exceptions:
1. Open-flame devices are allowed to be used in the following situations, provided *approved* precautions are taken to prevent ignition of a combustible material or injury to occupants:
   1.1. Where necessary for ceremonial or religious purposes in accordance with Section 308.1.((~~7~~))6.
   1.2. On stages and platforms as a necessary part of a performance in accordance with Section 308.3.((~~2~~))1.
   1.3. Where candles on tables are securely supported on substantial noncombustible bases and the candle flames are protected.
2. Heat-producing equipment complying with Chapter 6 and the *International Mechanical Code*.
3. Gas lights are allowed to be used provided adequate precautions satisfactory to the *fire code official* are taken to prevent ignition of combustible materials.

((~~**308.3.1 Open-flame decorative devices.** Open-flame decorative devices shall comply with all of the following restrictions:~~
~~1. Class I and Class II liquids and LP-gas shall not be used.~~

~~2. Liquid- or solid-fueled lighting devices containing more than 8 ounces (237 ml) of fuel must self-extinguish and not leak fuel at a rate of more than 0.25 teaspoon per minute (1.26 ml per minute) if tipped over.~~

~~3. The device or holder shall be constructed to prevent the spillage of liquid fuel or wax at the rate of more \ than 0.25 teaspoon per minute (1.26 ml per minute) when the device or holder is not in an upright position.~~

~~4. The device or holder shall be designed so that it will return to the upright position after being tilted to an angle of 45 degrees from vertical.~~

~~**Exception:** Devices that self-extinguish if tipped over and do not spill fuel or wax at the rate of more than 0.25 teaspoon per minute (1.26 ml per minute) if tipped over.~~

~~5. The flame shall be enclosed except where openings on the side are not more than 0.375 inch (9.5 mm) diameter or where openings are on the top and the distance to the top is such that a piece of tissue paper placed on the top will not ignite in 10 seconds.~~

~~6. Chimneys shall be made of noncombustible materials and securely attached to the open-flame device.~~

~~**Exception:** A chimney is not required to be attached to any open-flame device that will self-extinguish if the device is tipped over.~~

~~7. Fuel canisters shall be safely sealed for storage.~~

~~8. Storage and handling of *combustible liquids* shall be in accordance with Chapter 34.~~

~~9. Shades, where used, shall be made of noncombustible materials and securely attached to the open flame device holder or chimney.~~

~~10. Candelabras with flame-lighted candles shall be securely fastened in place to prevent overturning, and shall be located away from occupants using the area and away from possible contact with drapes, curtains or other combustibles.~~))

308.3.((~~2~~))1 Theatrical performances. Where *approved*, open-flame devices used in conjunction with theatrical performances are allowed to be used when adequate safety precautions have been taken in accordance with NFPA 160.

308.4 Group R occupancies. Open flame, fire and burning in Group R occupancies shall comply with the requirements of Sections 308.1 through 308.1.((~~6~~))5.2 and 308.4.1.

***

310.3 "No Smoking" signs. The *fire code official* is authorized to order the posting of "No Smoking" signs in a conspicuous location in each structure or location in which smoking is prohibited. The content, lettering, size, color and location of required "No Smoking" signs shall be *approved*.

310.3 Point of Information

See *Seattle Municipal Code* 10.64 for requirements for posting "no smoking" signs in public places.

***

311.1.1 Abandoned premises. Buildings, structures and premises ((~~for which an *owner* cannot be identified or located by dispatch of a certificate of mailing to the last known or registered address,~~)) which persistently or repeatedly become unprotected or unsecured, which have been occupied by unauthorized *persons* or for illegal purposes, or which present a danger of structural collapse or fire spread to adjacent properties ((~~shall~~))may be considered abandoned, declared unsafe and abated by demolition or rehabilitation in accordance with the ((~~*International Property Maintenance Code* and the~~)) *International Building Code and Seattle Municipal Code*.

***

311.2.2 Fire protection. Fire alarm, sprinkler and standpipe systems shall be maintained in an operable condition at all times.

Exceptions:

1. When the premises have been cleared of all combustible materials and debris and, in the opinion of the *fire code official*, the type of construction, *fire separation distance* and security of the premises do not create a fire hazard.
2. Where *approved* by the *fire code official*((~~chief~~)), buildings that will not be heated and where *fire protection systems* will be exposed to freezing temperatures, fire alarm and sprinkler systems are permitted to be placed out of service and standpipes are permitted to be maintained as dry systems (without an automatic water supply), provided the building has no contents or storage, and windows, doors and other openings are secured to prohibit entry by unauthorized *persons*.

***

311.3 Removal of combustibles. *Persons* owning, or in charge or control of, a vacant building or portion thereof, shall remove therefrom all accumulations of combustible materials, flammable or combustible waste or rubbish and shall securely lock or otherwise secure doors, windows and other openings to prevent entry by unauthorized *persons*. The premises shall be maintained clear of waste or hazardous materials.

Exception((~~s~~)):

((~~1.~~))Buildings or portions of buildings undergoing additions, *alterations*, repairs or change of occupancy in accordance with the *International Building Code*, where waste is controlled and removed as required by Section 304.

((~~2. Seasonally occupied buildings.~~))

***

311.5 Placards. ((~~A~~))If any vacant or abandoned buildings or structures are determined to be unsafe pursuant to Section 110 of this code relating to structural or interior hazards the fire code

official shall be authorized to require marking((~~shall be marked~~)) as required by Sections 311.5.1 through 311.5.5.

***

SECTION 313
FUELED EQUIPMENT

313.1 General. Fueled equipment including, but not limited to, ((~~motorcycles, mopeds~~)) lawn-care equipment, portable generators and portable cooking equipment, shall not be stored, operated or repaired within a building.

Exceptions:

1. Buildings or rooms constructed for such use in accordance with the *International Building Code*.
2. If a temporary permit for exhibits, trade shows or special events has been issued in accordance with section 105.6.13. ((~~Where allowed by Section 314.~~))
3. Storage of equipment utilized for maintenance purposes is allowed in *approved* locations when the aggregate fuel capacity of the stored equipment does not exceed 10 gallons (38 L) and the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1.

313.2 Fueled motor vehicles and watercraft. Fueled motor vehicles and watercraft, including but not limited to motorcycles, mopeds, and motor boats, shall not be stored, operated or repaired within a building.

Exceptions:

1. Buildings or rooms constructed for such use in accordance with the *International Building Code*.
2. If under a temporary permit for exhibits, trade shows, or special events in accordance with Section 106.6.14.

313.3((~~1.1~~)) Removal. The *fire code official* is authorized to require removal of fueled equipment, motor vehicles or watercraft from locations where the presence of such equipment, motor vehicles or watercraft is determined by the *fire code official* to be hazardous.

313.4((~~2~~)) Group R occupancies. Motor ((~~V~~))vehicles and watercraft powered by flammable liquids, Class II *combustible liquids* or compressed flammable gases shall not be stored within the living space of Group R buildings.

***

315.2.2.1 Storage under stairways. Storage is prohibited under exit stairways.
Exception: Enclosures under stairways in accordance with Section 1009.6.3.

***

315.2.5 Storage arrangements. Storage shall be within 20 feet (6096mm) of the two aisles each at least 44 inches (13411mm) wide. No block pile shall exceed 40 feet by 40 feet (12192mm by 12192mm) unless approved by the *fire code official*. No dead-end aisle shall be longer than 10 times the width. All storage in unsprinklered areas shall be within 150 feet (45720mm) aisle travel of fire department exterior access openings. Storage shall not obstruct access to extinguishers, standpipe outlets, sprinkler control shut down and safety controls or fire department access openings (for high-piled storage, see Chapter 23).

***

SECTION 318
FIXED GUIDEWAY TRANSIT AND PASSENGER RAIL SYSTEMS

318.1 Fixed guideway transit and passenger rail systems. Fixed guideway transit and passenger rail systems shall be in accordance with NFPA 130 as amended.

318 Point of Information

Adopted local amendments to NFPA 130 can be accessed at http://www.seattle.gov/fire/FMO/firecode/nfpaAmendments.htm

SECTION 319
ROAD TUNNELS, BRIDGES AND OTHER LIMITED ACCESS HIGHWAYS

319.1 Road tunnels, bridges and other limited access highways. Road tunnels, bridges, and other limited access highways shall be in accordance with NFPA 502 as amended.

319 Point of Information

Adopted local amendments to NFPA 502 can be accessed at http://www.seattle.gov/fire/FMO/firecode/nfpaAmendments.htm

Section 6. Chapter 4 of the 2009 International Fire Code is amended as follows:

***

[W] 401.2 Approval. Where required by ((~~this code~~))the *fire code official*, fire safety plans, emergency procedures and employee training programs shall be *approved*((~~ by the *fire code official*~~)).

***

401.3.2 Alarm activations. Upon activation of a fire or emergency alarm signal, employees or staff shall immediately notify the fire department.

***

401.9 Evacuation required. In the event of activation of a fire or emergency alarm, occupants of the building or portion of the building in which the alarm is activated shall make a safe and orderly evacuation out of the building, or as provided in the building's fire safety and evacuation plan.

Exceptions:

1. Where the occupant's physical or other disability makes the occupant unable to evacuate without assistance and no assistance is immediately available; or
2. Where the presence of smoke, fire, structural collapse or other hazard or obstruction in the occupant's means of egress makes evacuation unsafe.

***

SECTION 402
DEFINITIONS

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

[W] ALARM SIGNAL. See Section 902.1.

[W] ALERT SIGNAL. A distinctive signal indicating the need for trained personnel and occupants to initiate a specific action, such as lockdown or shelter-in-place.

EMERGENCY ((~~EVACUATION~~))DRILL. An exercise performed to train staff and occupants and to evaluate their efficiency and effectiveness in carrying out emergency procedures.

LOCKDOWN. An emergency situation, in other than a Group I-3 occupancy, requiring that the occupants be sheltered and secured in place within a building when normal evacuation would put occupants at risk.

[W] **FULL LOCKDOWN.** Occupants remain out of sight and as quiet as possible, with only limited authorized entry, exit, or movement within the building. Occupants in corridors, common areas, or unsecured areas move quickly to the nearest secured area.

[W] **MODIFIED LOCKDOWN**. Occupants of a facility are isolated from potential outside threats by remaining within a building with exterior doors and other exits secured, and that entry and exit from the building is limited to that which is authorized. During a modified lockdown, interior movement and other activities within the building may be allowed or restricted in accordance to the lockdown plan.

[W] **SHELTER-IN-PLACE.** An emergency response used to minimize exposure of facility occupants to chemical or environmental hazards by taking refuge in predetermined interior rooms or areas where actions are taken to isolate the interior environment from the exterior hazard.

[W] **RECALL SIGNAL.** An electrically or mechanically operated signal used to recall occupants after an emergency drill or to terminate a lockdown or shelter-in-place event that shall be distinct from any alarm or alert signal used to initiate an emergency plan, or other signals.

SECTION 403
PUBLIC ASSEMBLAGES AND EVENTS

403.1 Fire watch and standby fire personnel. When, in the opinion of the *fire code official*, it is essential for public safety in a place of assembly or any other place where people congregate, because of the number of *persons*, or the nature of the performance, exhibition, display, contest or activity, the *owner*, agent or lessee shall provide, at no cost to the jurisdiction, one or more fire watch personnel or *standby fire personnel*, as required and *approved*, to remain on duty during the times such places are open to the public, or when such activity is being conducted.

403.1.1 Duties. Fire watch personnel shall keep diligent watch for fires, obstructions to *means of egress* and other hazards during the time such place is open to the public or such activity is being conducted and take prompt measures for remediation of hazards, extinguishment of fires that occur and assist in the evacuation of the public from the structures. *Fire watch* personnel and *standby fire personnel* are subject to the *fire code official's* orders at all times; shall remain on duty during the times such places are open to the public, or as otherwise required by *fire code official;* and shall not be required or permitted, while on duty, to perform any duties other than those specified by the *fire code official.*

Where a *fire protection system* is out of service, the procedures detailed in Administrative Rule 9.06.07, *Out-Of-Service Fire and Life Safety Systems* and any future revisions of this rule adopted by the *fire code official* shall be implemented.

***

[W] SECTION 404
FIRE SAFETY AND ((~~EVACUATION~~))EMERGENCY PLANS

[W] 404.1 General. Fire safety, evacuation, shelter-in-place and lockdown plans and associated drills shall comply with the requirements of Sections 404.2 through 404.5.1.

[W] 404.2 Fire safety and evacuation plans. Fire safety and evacuation plans shall comply with the requirements of Sections 404.2.1 through 404.2.2.2.

[W] 404.2.1 Where required. A((~~n *approved*~~)) fire safety and evacuation plan shall be prepared and maintained for the following occupancies and buildings.

1. Group A((~~, other than Group A occupancies used exclusively for purposes of religious worship that have an occupant load less than 2,000~~))having an *occupant load* of 100 or more.
2. Group B buildings having an *occupant load* of 500 or more *persons* or more than 100 *persons* above or below the lowest *level of exit discharge*.
3. Group E.
4. Group F buildings having an *occupant load* of 500 or more *persons* or more than 100 *persons* above or below the lowest *level of exit discharge*.
5. Group H.
6. Group I.
7. Group R-1.
8. Group R-2 college and university buildings((~~.~~)) and boarding homes, group homes and residential treatment facilities licensed by the State of Washington.

((~~9. Group R-4.~~))
((~~10.~~))9. High-rise buildings.
((~~11.~~))10. Group M buildings having an *occupant load* of 500 or more *persons* or more than 100 *persons* above or below the lowest *level of exit discharge*.
((~~12.~~))11. Covered malls exceeding 50,000 square feet (4645 m2) in aggregate floor area.
((~~13.~~))12. Underground buildings.
((~~14.~~))13. Buildings with an atrium and having an occupancy in Group A, E or M.

404.2.1 Point of Information

The State of Washington does not adopt Group R-4 occupancies. Group R-4 occupancies are considered "Group R-2 occupancies licensed by the State of Washington". Special provisions may apply.

[W] 404.((3))2.2 Contents. Fire evacuation and safety plan contents shall be in accordance with Sections 404.2.2.1 and 404.2.2.2.

[W] 404.((3))2.2.1 Fire evacuation plans. Fire evacuation plans shall include the following:

1. Emergency egress or escape routes and whether evacuation of the building is to be complete or, where *approved*, by selected floors or areas only.
2. Procedures for employees who must remain to operate critical equipment before evacuating.
3. Procedures for assisted rescue for *persons* unable to use the general *means of egress* unassisted.
4. Procedures for accounting for employees and occupants after evacuation has been completed.
5. Identification and assignment of personnel responsible for rescue or emergency medical aid.
6. The preferred and any alternative means of notifying occupants of a fire or emergency.
7. The preferred and any alternative means of reporting fires and other emergencies to the fire department or designated emergency response organization.
8. Identification and assignment of personnel who can be contacted for further information or explanation of duties under the plan.
9. A description of the emergency voice/alarm communication system alert tone and preprogrammed voice messages, where provided.

[W] 404.((3))2.2.2 Fire safety plans. Fire safety plans shall include the following:

1. The procedure for reporting a fire or other emergency.

2. The life safety strategy and procedures for notifying, relocating or evacuating occupants, including occupants who need assistance.

3. Site plans indicating the following:
   3.1. The occupancy assembly point.
   3.2. The locations of fire hydrants.
   3.3. The normal routes of fire department vehicle access.

4. Floor plans identifying the locations of the following:
   4.1. Exits.
   4.2. Primary evacuation routes.
   4.3. Secondary evacuation routes.
   4.4. Accessible egress routes.
   4.5. Areas of refuge.
   4.6. Exterior areas for assisted rescue.
   4.7. Manual fire alarm boxes.
   4.8. Portable fire extinguishers.
   4.9. Occupant-use hose stations.
   4.10. Fire alarm annunciators and controls.

5. A list of major fire hazards associated with the normal use and occupancy of the premises, including maintenance and housekeeping procedures.

6. Identification and assignment of personnel responsible for maintenance of systems and equipment installed to prevent or control fires.

7. Identification and assignment of personnel responsible for maintenance, housekeeping and controlling fuel hazard sources.

[W] 404.3 Shelter-in-place and lockdown plans. Shelter-in-place and lockdown plans shall comply with the requirements of Sections 404.3.1 through 404.3.3.

[W] 404.3.1 Where required. A shelter-in-place and lockdown plan shall be prepared and maintained for all Group E occupancies.

Exception: Daycares not collocated on a Group E campus.

[W] 404.3.2 Shelter-in-place plan contents. Shelter-in-place plans shall include the following:

1. Identification of the procedures for initiating the shelter-in-place plan throughout the facility or campus.
2. Identification of prearranged alert and recall signals to notify all occupants.
3. Identification of procedures for reporting the facility is sheltering-in-place to the local emergency dispatch center.
4. A means of two-way communication between a central location and each secure area.
5. Identification of protective security measures.
6. Location of emergency supplies.
7. Accountability procedures for staff to report the presence or absence of occupants.

8. Identification of crisis response team members in accordance with the National Incident Management System.
9. Actions to be taken in the event of a fire or medical emergency while sheltering-in-place.

((**404.3.3 Lockdown plans.** Where facilities develop a lockdown plan, the lockdown plan shall be in accordance with Sections 404.3.3.1 through 404.3.3.3.))

[W] 404.3.3((~~.1~~)) Lockdown plan contents. Lockdown plans shall ((~~be *approved* by the *fire code official* and shall~~))include the following:

1. Identification of the procedures of initiating the lockdown plan throughout the facility or campus.
2. Identification of prearranged alert and recall signals to notify all occupants.
3. Identification of procedures for access to the facility for emergency responders.
4. Identification of procedures for reporting the facility is in lockdown to the local emergency dispatch center.
5. A means of two-way communication between a central location and each secure area.
6. Identification of protective security measures.
7. Location of emergency supplies.
8. Accountability procedures for staff to report the presence or absence of occupants.
9. Identification of crisis response team members in accordance with the National Incident Management System emergency while in lockdown.
10. Actions to be taken in the event of a fire or medical emergency while in lockdown.

((~~1. Initiation. The plan shall include instructions for reporting an emergency that requires a lockdown.~~
~~2. Accountability. The plan shall include accountability procedures for staff to report the presence or absence of occupants.~~
~~3. Recall. The plan shall include a prearranged signal for returning to normal activity.~~
~~4. Communication and coordination. The plan shall include an *approved* means of two-way communication between a central location and each secured area.~~))

((~~**404.3.3.2 Training frequency.** The training frequency shall be included in the lockdown plan. The lockdown drills shall not substitute for any of the fire and evacuation drills required in Section 405.2.~~))
((~~**404.3.3.3 Lockdown notification.** The method of notifying building occupants of a lockdown shall be included in the plan. The method of notification shall be separate and distinct from the fire alarm signal.~~))

404.4 Maintenance. Fire safety ((~~and~~)), evacuation, shelter-in-place and lockdown plans shall be reviewed or updated annually or as necessitated by changes in staff assignments, occupancy or the physical arrangement of the building.

404.5 Availability. Fire safety ((~~and~~)), evacuation, shelter-in-place and lockdown plans shall be available in the workplace for reference and review by employees, and copies shall be furnished to the *fire code official* for review upon request.

***

[W] SECTION 405
EMERGENCY ((~~EVACUATION~~))DRILLS

[W] 405.1 General. Emergency ((~~evacuation~~))drills complying with the provisions of this section shall be conducted at least annually in the occupancies listed in Section 404.2.1 or when required by the *fire code official*. Drills shall be designed in cooperation with the local authorities.

[W] 405.2 Frequency. Required emergency ((~~evacuation~~))drills shall be held at the intervals specified in Table 405.2 or more frequently where necessary to familiarize all occupants with the drill procedure.

405.2.1 Group E Occupancies. At a minimum the following drills shall be conducted during each year.

1. One drill using the school mapping information system
   Exception: Daycares not co-located on a school campus.
2. Six fire evacuation drills
3. One shelter-in-place drill
4. One lockdown drill

TABLE 405.2
((~~FIRE AND EVACUATION~~))EMERGENCY DRILL FREQUENCY AND PARTCIPATION

GROUP OR OCCUPANCY	FREQUENCY	PARTICIPATION
Group A	Quarterly	Employees
Group B[c]	Annually	Employees
Group E	Monthly[a,e]	All occupants
Group F	Annually	Employees
Group I	Quarterly on each shift	Employees((~~b~~))

Group R-1	Quarterly on each shift	Employees
Group R-2[f]	Quarterly on each shift	Employees
Group R-2[d]	Four Annually	All occupants
((~~Group R-4~~))	((~~Quarterly on each shift~~))	((~~Employees~~[b]))
High-rise buildings	Annually	((~~Employees~~))All occupants[b]

a. The frequency ((~~shall~~))may be allowed to be modified in accordance with Section 408.3.2.

b. ((~~Fire and evacuation drills in residential care assisted living facilities shall include complete evacuation of the premises in accordance with Section 408.10.5. Where occupants receive habilitation or rehabilitation training, fire prevention and fire safety practices shall be included as part of the training program.~~))Jail inmates, hospital patients, hotel guests and occupants of apartment or residential condominium units are not required to participate, unless the jail inmate, hospital patient, hotel guest, or occupant of an apartment or residential condominium is also a member of the high-rise building staff.

c. Group B buildings having an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge.

d. Applicable to Group R-2 college and university buildings in accordance with Section 408.3.

e. Daycares collocated on a Group E campus shall participate in emergency drills occurring on the campus.

f. Boarding homes, group homes, and residential treatment facilities licensed by the state of Washington.

Table 405.2 Point of Information

The State of Washington does not adopt Group R-4 occupancies. Group R-4 occupancies are considered "Group R-2 occupancies licensed by the state of Washington". Special provisions may apply.

***

[W] 405.5 Record keeping. Records shall be maintained of required emergency evacuation drills and include the following information:

1. Identity of the *person* conducting the drill.
2. Date and time of the drill.
3. Notification method used.
4. Staff members on duty and participating.
5. Number of occupants ((~~evacuated~~))participating.
6. Special conditions simulated.
7. Problems encountered and corrective actions taken.
8. Weather conditions when occupants were evacuated.
9. Time required to accomplish complete evacuation, lockdown, or shelter-in-place.

[W] 405.6 Notification. Where required by the *fire code official*, prior notification of emergency ((~~evacuation~~))drills shall be given to the *fire code official*.

[W] 405.7 Initiation. Emergency drills shall be initiated in accordance with Sections 405.7.1 through 405.7.3.

405.7.1 Fire evacuation drills. Where a fire alarm system is provided, emergency evacuation drills shall be initiated by activating the fire alarm system. The fire alarm monitoring company shall be notified prior to the activation of the fire alarm system for a proposed drill and again at the conclusion of the transmission and restoration of the fire alarm system to normal mode.

Exception: Evacuation drills conducted between the hours of 9 p.m. and 6 a.m. in Group R-2 boarding homes, group homes, and residential treatment facilities licensed by the State of Washington are not required to be initiated by the fire alarm system.

[W] 405.7.2 Shelter-in-place drills. Shelter-in-place drills shall be initiated by the shelter-in-place alert signal, generated by the alerting system in accordance with Section 915.

[W] 405.7.3 Lockdown drills. Lockdown drills shall be initiated from the lockdown alert signal.

[W] 405.8 Accountability. As building occupants arrive at the assembly point, efforts shall be made to determine if all occupants have been successfully evacuated, locked down or sheltered-in-place have been accounted for.

[W] 405.9 Recall and reentry. ((~~An electrically or mechanically operated signal used to recall occupants after an evacuation shall be separate and distinct from the signal used to initiate the evacuation.~~))The recall signal initiation means shall be manually operated and under the control of the *person* in charge of the premises or the official in charge of the incident. No one shall reenter the premises until authorized to do so by the official in charge.

SECTION 406

EMPLOYEE TRAINING AND RESPONSE PROCEDURES

406.1 General. Employees in the occupancies listed in Section 404.2.1 shall be trained in the ((~~fire~~))emergency procedures described in their ((~~fire evacuation and fire safety~~)) emergency plans. Training shall be based on the matters contained in the plans required and ((~~these plans and as~~))described in Sections 404.2 and 404.3.

[W] 406.2 Frequency. Employees shall receive training in the contents of the ((~~fire safety and evacuation~~))emergency plans and their duties as part of new employee orientation and at least annually thereafter. Records shall be kept and made available to the *fire code official* upon request.

[W] 406.3 Employee training program. Employees shall be trained in fire prevention, evacuation, sheltering-in-place, lockdown and fire safety in accordance with Sections 406.3.1 through 406.3.4.

***

[W] 406.3.3 Emergency shelter-in-place and lockdown training. Where a facility has a shelter-in-place or lockdown plan, employees shall be trained on the alert and recall signals, communication system, location of emergency supplies, the use of the incident notification and alarm system and their assigned duties and procedures in the event of an ((~~emergency lockdown~~))alarm or emergency.

***

407.2 Material Safety Data Sheets. Material Safety Data Sheets (MSDS) for all hazardous materials shall be either readily available on the premises as a paper copy, or where *approved*, shall be ((~~permitted to be~~))readily retrievable by electronic access.

***

407.7 Facility closure plans. When required by the *fire code official*, t((~~T~~))he permit holder or applicant shall submit to the *fire code official* a facility closure plan in accordance with Section 2701.6.3 to terminate storage, dispensing, handling or use of hazardous materials.

***

[W] 408.10 Group R-4 occupancies. This section is not adopted. ((~~Group R-4 occupancies shall comply with the requirements of Sections 408.10.1 through 408.10.5 and Sections 401 through 406.~~))

((~~**408.10.1 Fire safety and evacuation plan.** The fire safety and evacuation plan required by Section 404 shall include special staff actions, including fire protection procedures necessary for residents, and shall be amended or revised upon admission of a resident with unusual needs.~~

~~**408.10.2 Staff training.** Employees shall be periodically instructed and kept informed of their duties and responsibilities under the plan. Such instruction shall be reviewed by the staff at least every two months. A copy of the plan shall be readily available at all times within the facility.~~

~~**408.10.3 Resident training.** Residents capable of assisting in their own evacuation shall be trained in the proper actions to take in the event of a fire. The training shall include actions to take if the primary escape route is blocked. Where the resident is given rehabilitation or habilitation training, training in fire prevention and actions to take in the event of a fire shall be a part of the rehabilitation training program. Residents shall be trained to assist each other in case of fire to the extent their physical and mental abilities permit them to do so without additional personal risk.~~

~~**408.10.4 Drill frequency.** Emergency evacuation drills shall be conducted at least six times per year, two times per year on each shift. Twelve drills shall be conducted in the first year of operation. Drills are not required to comply with the time requirements of Section 405.4.~~

~~**408.10.5 Resident participation.** Emergency evacuation drills shall involve the actual evacuation of residents to a selected assembly point and shall provide residents with experience in exiting through all required exits. All required exits shall be used during emergency evacuation drills.~~
~~**Exception:** Actual exiting from windows shall not be required. Opening the window and signaling for help shall be an acceptable alternative.~~))

408.10 Point of Information

The State of Washington does not adopt Group R-4 occupancies. Group R-4 occupancies are considered "Group R-2 occupancies licensed by the State of Washington". Special provisions may apply.

***

408.11.1.1 Submittal((~~Approval~~)). The lease plan shall be submitted to the *fire code official* when required, and shall be maintained on site for immediate reference by responding fire service personnel.

***

Section 7. Chapter 5 of the 2009 International Fire Code is amended as follows:

***

SECTION 502
DEFINITIONS

***

FIRE DEPARTMENT MASTER KEY. A limited issue key of special or controlled design to be carried by fire department officials in command which will open key boxes on specified properties.

502.1 Point of Information

The *fire code official* has approved the "KnoxBox" as the access key box for use in the City of Seattle.

***

503.1 Where required. Fire apparatus access roads shall be provided and maintained in accordance with Sections 503.1.1 through 503.1.3 and Appendix D as amended.

***

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), exclusive of shoulders, except for *approved* security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than ((~~13 feet 6 inches (4115 mm)~~)) 14 feet.

Exceptions:

1. Access roads serving not more than two Group R-3 or U occupancies shall have an unobstructed width of not less than 12 feet.
2. Public streets shall be in accordance with Seattle Right of Way Improvements Manual.

***

503.2.4 Turning radius. The required turning radius of a fire apparatus access road shall be ((~~determined by the *fire code official*.~~))25 feet minimum inside curb and 50 feet minimum outside curb.

Exception: Turnarounds in accordance with Appendix D as amended.

503.2.5 Dead ends. Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) in length shall be provided with a turnaround in accordance with Appendix D as amended.((~~an *approved* area for turning around fire apparatus.~~))

503.2.6 Bridges and elevated surfaces. Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with the Seattle Right of Way Improvements Manual. ((~~AASHTO HB 17.~~)) Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges when required by the *fire code official.* Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, *approved* barriers, *approved* signs or both shall be installed and maintained when required by the *fire code official.*

503.2.7 Grade. The grade of the fire apparatus access road shall be in accordance with Appendix D as amended. ((~~within the limits established by the *fire code official* based on the fire department's apparatus.~~))

503.2.8 Angles of approach and departure. The angles of approach and departure for fire apparatus access roads shall be in accordance with the Seattle Right of Way Improvements manual. ((~~within the limits established by the *fire code official* based on the fire department's apparatus.~~))

503.3 Marking. Where required by the *fire code official*, *approved* signs or other *approved* notices or markings that include the words NO PARKING—FIRE LANE shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. The ((~~means~~))signs, notices and markings by which *fire lanes* are designated shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.

***

503.6 Security gates. The installation of security gates across a fire apparatus access road shall be *approved* by the *fire code official*((~~chief~~)). Where security gates are installed, they shall have an *approved* means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times. Electric gate operators, where provided, shall be *listed* in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

***

505.1 Address identification. New and existing buildings shall have *approved* address numbers, building numbers or *approved* building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall be a minimum of 4 inches (101.6 mm) high for Group R occupancies and a minimum of 5 inches for other occupancies with a minimum stroke width of 0.5 inch (12.7 mm). Where access is by

means of a private road and the building cannot be viewed from the *public way*, a monument, pole or other sign or means shall be used to identify the structure.

505.2 Street or road signs. Streets and roads shall be identified with *approved* signs. Temporary signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles. Signs shall be of an *approved* size, weather resistant and be maintained until replaced by permanent signs.

505.2 Point of Information

Where marking is required, the signs shall be posted by the Seattle Department of Transportation for city streets and right-of-ways, and by the owners for private property.

***

506.1 Where required. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the *fire code official* is authorized to require a key box to be installed in an *approved* location. The key box shall be of an *approved* type and shall contain keys to gain necessary access as required by the *fire code official*.

506.1 Point of Information

The *fire code official* has approved the "KnoxBox" as the access key box for use in the City of Seattle. For more information see Seattle Fire Department Information Bulletin #965 Key Boxes for Emergency Access.

***

506.3 Elevator key box. An elevator key box locked and keyed to the standard city elevator access key shall be provided. The elevator key box shall meet the following standards:

1. Dimensions – 6.5 inches (165 mm) high, 6 inches (152 mm) wide and 2 inches (50 mm) deep.
2. Material – 16 gauge steel welded.
3. Color – red unless located in the main lobby above the call button, six feet nominal above the floor, in which case any color is approved.
4. Labeling – "FOR EMERGENCY USE."

5. Lock – Ace 1-inch (25 mm) cylinder cam lock key #39504.

The elevator key box is to be installed at the designated recall floor above the Phase I recall switch or in the main lobby above the hall call button when no recall feature exists. The elevator key box is to be mounted 6 feet (1829 mm) nominal above the floor. Other locations may be approved by the building official upon request, with notification to the *fire code official.*

506.3.1 Elevator keys. Keys for access to and for the operation of elevator equipment shall be tagged, labeled and retained in the key box. The elevator key box shall contain fire emergency service keys (Phase I and II, one key for each switch). The elevator key box may, in addition, contain keys for any or all of the following:

1. Machine room door;
2. Secondary level door;
3. Pit door;
4. Roof door;
5. Independent, hospital emergency and/or attendant operation;
6. Hoistway access;
7. Mechanical hoist access devices (broken arm, lunar, etc.);
8. Miscellaneous switch keys;
9. Fire alarm panel room;
10. Sprinkler valve control room

506.3.1 Point of Information

Due to security consideration, elevator key boxes should not contain master keys to tenant spaces. Keys in elevator key boxes should be limited to those for access of the building systems and equipment listed in *Seattle Fire Code*, Section 506.3.1.

SECTION 507
FIRE PROTECTION WATER SUPPLIES

507.1 Required water supply. An *approved* water supply capable of supplying the required fire flow for fire protection shall be provided to premises upon which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction, and for buildings undergoing a substantial alteration as determined by the Department of Planning and Development.

***

507.3 Fire flow. Fire flow requirements for buildings or portions of buildings and facilities shall be in accordance with Appendix B.((~~determined by an *approved* method.~~))

Exceptions:

1. Fire flow requirements for shipyards and designated marine hot work facilities shall be in accordance with Administrative Rule 26.02.09 and any future revisions to this rule adopted by the *fire code official.*
2. Fire flow requirements for new and existing covered marinas shall be in accordance with Chapters 45 and 94 respectively.

***

507.5.1 Where required. Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 500 feet (152 m) ((~~400 feet (122 m)~~)) from a hydrant on a fire apparatus access road, as measured by an *approved* route around the exterior of the facility or building, on site fire hydrants and mains shall be provided where required by the *fire code official.*

Exceptions:

1. For Group R-3 and Group U occupancies, the distance requirement shall be 600 feet (183 m).
2. For buildings equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet (183 m).

***

507.5.6 Physical protection. Where fire hydrants are subject to impact by a motor vehicle, guard posts or other *approved* means shall comply with Section 312. Any horizontal, lateral or diagonal elements that are a part of the protection for a fire hydrant shall not interfere with the ability to freely access and safely operate the hydrant.

***

508.1.5 Required features. The *fire command center* shall comply with NFPA 72 and shall contain the following features:

1. The emergency voice/alarm communication system control unit.
2. The fire department communications system.
3. Fire detection and alarm system annunciator.
4. Annunciator unit visually indicating the location of the elevators and whether they are operational.
5. Status indicators and controls for air distribution systems.
6. The fire-fighter's control panel required by Section 909.16 for smoke control systems installed in the building.
7. Controls for unlocking *stairway* doors simultaneously.

8. Sprinkler valve and water-flow detector display panels.
9. Emergency and standby power status indicators.
10. A telephone for fire department use with controlled access to the public telephone system.
11. Fire pump status indicators.
12. Schematic building plans indicating the typical floor plan and detailing the building core, *means of egress*, *fire protection systems*, fire-fighting equipment and fire department access, and the location of *fire walls*, *fire barriers*, *fire partitions*, *smoke barriers* and smoke partitions.
13. Work table.
((~~14. Generator supervision devices, manual start and transfer features.~~))
14. Public address system, where specifically required by other sections of this code.
15. Elevator fire recall switch in accordance with ASME A17.1.
16. Elevator emergency or standby power selector switch(es), where emergency or *legally-required standby power* is provided.
17. On-site fire protection water tank fill valve control switch, tank level indicators, tank low level alarm, and tank fill signal.

***

510.1 Emergency responder radio coverage in buildings. All buildings shall have *approved* radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communication systems. The system shall meet the requirements of Appendix J of this code.

Exceptions:
1. Where *approved* by the building official and the *fire code official*, a wired communication system in accordance with Section 907.2.13.2 shall be permitted to be installed or maintained in lieu of an *approved* radio coverage system.
2. Where it is determined by the *fire code official* that the radio coverage system is not needed.
3. One and two family dwellings and townhouses.
4. Buildings constructed primarily of wood-frame (Type V) construction without below grade storage or parking areas.
5. Buildings that are 35 feet high (as defined by the *Seattle Building Code* Section 502) or less without below grade storage or parking areas.

((~~**510.2 Radio signal strength.** The building shall be considered to have acceptable emergency responder radio coverage when signal strength measurements in 95 percent of all areas on each floor of the building meet the signal strength requirements of Sections 510.2.1 and 510.2.2.~~))

((~~**510.2.1 Minimum signal strength into the building.** A minimum signal strength of -95 dBm shall be receivable within the building.~~))

((~~**510.2.2 Minimum signal strength out of the building.** A minimum signal strength of -100 dBm shall be received by the agency's radio system when transmitted from within the building.~~))

510.((~~3~~))2 Emergency responder radio coverage in existing buildings. Existing buildings that do not have approved radio coverage for emergency responders within the building shall be equipped with such coverage in accordance with Section 4603.8. ((~~according to one of the following:~~))
((~~1. Wherever existing wired communication system cannot be repaired or is being replaced, or where not *approved* in accordance with Section 510.1, Exception 1.~~))
((~~2. Within a time frame established by the adopting authority.~~))

Section 8. Chapter 6 of the 2009 International Fire Code is amended as follows:

***

601.1 Scope. The provisions of this chapter shall apply to the installation, operation and maintenance of fuel-fired appliances and heating systems, emergency and *legally required standby power systems*, electrical systems and equipment, mechanical refrigeration systems, elevator recall, stationary storage battery systems and commercial kitchen hoods.

601.2 Permits. Permits shall be obtained for refrigeration systems, ((~~and~~))battery systems and fuel tanks connected to emergency and *legally required standby power systems* as set forth in Sections 105.6 and 105.7.

***

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

***

[M] 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((~~.~~))generated from medium-duty, heavy-duty, extra-heavy-duty, and some light-duty cooking appliances. Such hoods are equipped with a fire suppression system.

Type II. A general kitchen hood for collecting and removing steam, vapor, heat, odors and products of *combustion* generated from some light-duty cooking appliances.

***

603.1 Installation. The installation of nonportable fuel gas appliances and systems shall comply with the *International Fuel Gas Code*. The installation and/or use of all other fuel-fired appliances, ((~~other than internal combustion engines,~~))oil lamps and portable devices such as blow torches, melting pots and weed burners, shall comply with this section and the *International Mechanical Code*.

***

603.1.3 Electrical wiring and equipment. Electrical wiring and equipment used in connection with ((~~oil-burning equipment~~))fuel fired appliances shall be installed and maintained in accordance with Section 605 and NFPA 70.

***

603.1.6 Testing, diagrams and instructions. After installation of the fuel fired appliance((~~oil-burning equipment~~)), operation and combustion performance tests shall be conducted to determine that the appliance ((~~burner~~))is in proper operating condition and that all accessory equipment, controls, and safety devices function properly.

603.1.6.1 Diagrams. Contractors installing Industrial fuel fired appliances((~~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 fuel fired appliance((~~oil-burning equipment~~)) and another at an *approved* location that will be accessible in case of emergency.

***

603.1.7 Clearances. Working clearances between ((~~oil~~))fuel-fired appliances and electrical panel boards and equipment shall be in accordance with NFPA 70. ((~~Clearances between oil-fired equipment and oil supply tanks shall be in accordance with NFPA 31.~~))A minimum 5-foot (1524 mm) separation shall be maintained between fuel-fired appliances and equipment and fuel-oil supply tanks.

***

603.3 Fuel oil storage systems. Fuel oil storage systems shall be installed in accordance with Chapter 34 of this code. Fuel oil piping systems shall be installed in accordance with the *International Mechanical Code*.

***

[W] 603.4 Portable unvented heaters. Portable unvented fuel-fired heating equipment shall be prohibited in occupancies in Groups A, E, I, R-1, R-2, and R-3((~~and R-4~~)).

Exceptions:

1. *Listed* and *approved* unvented fuel-fired heaters, including portable outdoor gas-fired heating appliances, in one- and two-family *dwellings*.

2. Portable outdoor gas-fired heating appliances shall be allowed in accordance with Section 603.4.2.

***

603.4.2.1.1 Prohibited locations. The storage or use of portable outdoor gas-fired heating appliances is prohibited in any of the following locations:
1. Inside of any occupancy when connected to the fuel gas container.
2. Inside of tents, canopies and membrane structures.
3. On exterior balconies.

Exception: As allowed in Section 6.1((~~7~~))9 of NFPA 58.

***

603.4.2.2.5 Ignition sources. Smoking and open-flame devices (e.g., candles, flaming food or beverage preparation) are prohibited within 5 feet (1524 mm) of any gas-fired heating appliance. "No Smoking" signs shall be posted at affected areas.

603.4.2.2.6 Fire extinguishers. At least one portable fire extinguisher having a minimum rating of 2A:40BC shall be provided and mounted with the top located no higher than 5 feet (1524 mm) above grade. Travel distance to the extinguisher shall not exceed 50 feet (15 240 mm).

603.4.2.2.7 Leaking gas. In the event of a gas leak or suspected leak, the container shall be immediately removed from the premises. Periodic leak tests (with the use of soapy water) shall be conducted by trained personnel to ensure the container and fittings are tight.

603.4.2.2.8 Means of egress. Drinking and dining areas where portable gas-fired heating appliances are used shall be provided with at least two means of egress.

603.4.2.3 Gas containers. Fuel gas containers for portable outdoor gas-fired heating appliances shall comply with Sections 603.4.2.3.1 through 603.4.2.3.((4))5.

***

603.4.2.3.5 Outdoor Storage. Gas containers shall be located outside within lockable, ventilated metal storage lockers or racks in accordance with Sections 603.4.2.3.5.1 through 603.4.2.3.5.4.

603.4.2.3.5.1 Storage locker location. Ventilated metal storage lockers or racks shall be located at least 20 feet (6096 mm) from exits, building openings, public ways and designated smoking areas.

Exception: For a Group A occupancy, the storage locker or rack may be located in accordance with Table 3809.12 but not less than 20 feet from the Group A occupancy.

603.4.2.3.5.2 Security of storage locker. Ventilated metal storage lockers or racks shall be secured against unauthorized entry.

603.4.2.3.5.3 Vehicle protection. Ventilated metal storage lockers for gas containers shall be protected from vehicular impact in accordance with Section 312 if subject to possible vehicle impact.

603.4.2.3.5.4 Container position. Gas containers shall be stored in an upright position such that the pressure relief valve is in direct contact with the vapor phase of the container.

***

SECTION 604
EMERGENCY AND LEGALLY REQUIRED STANDBY POWER SYSTEMS

604.1 Installation. Except for the 2-hour on-premises fuel supply required for high-rise buildings in 604.2.14.1.1, ((E))emergency and *legally required standby power systems* required by this code or the *International Building Code* shall be installed in accordance with this code, NFPA 110 and NFPA 111. Existing installations shall be maintained in accordance with the original approval.

***

604.2 Where required. Emergency and *legally required standby power systems* shall be provided where required by Sections 604.2.1 through 604.2.18.4.

***

604.2.2 Smoke control systems. ((~~Standby~~))Emergency power shall be provided for smoke control systems in accordance with Section 909.11.
Exception: *Legally required standby power* is acceptable for shaft pressurization systems in low-rise buildings in accordance with Section 909.22.

***

604.2.5 Accessible means of egress elevators. *Legally required ((~~S~~))standby power* shall be provided for elevators that are part of an accessible *means of egress* in accordance with Section 1007.4.

604.2.6 Accessible means of egress platform lifts. *Legally required ((~~S~~))standby power* in accordance with this section or ASME A18.1 shall be provided for platform lifts that are part of an accessible *means of egress* in accordance with Section 1007.5.

604.2.7 Horizontal sliding doors. *Legally required((S))standby power* shall be provided for horizontal sliding doors in accordance with Section 1008.1.4.3.

***

604.2.9 Membrane structures. Emergency power shall be provided for *exit* signs in temporary tents and membrane structures in accordance with Section 2403.12.6.1. *Legally required((S))standby power* shall be provided for auxiliary inflation systems in permanent membrane structures in accordance with the *International Building Code*.

604.2.10 Hazardous materials. Emergency or *legally required standby power* shall be provided in occupancies with hazardous materials in accordance with Sections 2704.7 and 2705.1.5.

***

604.2.12 Organic peroxides. *Legally required ((S))standby power* shall be provided for occupancies with organic peroxides in accordance with Section 3904.1.11.

604.2.13 Covered mall buildings. Covered mall buildings exceeding 50,000 square feet (4645 m2) shall be provided with *legally required standby power* systems which are capable of operating the emergency voice/alarm communication.

604.2.14 High-rise buildings. ((Standby p))Power, light and emergency systems in high-rise buildings shall comply with the requirements of Sections 604.2.14.1 through 604.2.14.3.

604.2.14.1 ((Standby)) Emergency power. An ((standby)) emergency power system shall be provided. Where the ((standby)) emergency system is a generator set inside a building, the system shall be located in a separate room enclosed with 2-hour *fire barriers* constructed in accordance with Section 707 of the *International Building Code* or *horizontal assemblies* constructed in accordance with Section 712 of the *International Building Code*, or both. System supervision with manual start and transfer features shall be provided at the *fire command center*.
Exception: A generator set with a fuel tank system not exceeding 660 gallons (2498.3 L) is not required to be located in a rated room if installed in a sprinklered parking garage of type I or II construction, unless a 1-hour separation is required to separate control areas in accordance with Table 2703.1.1(1).

604.2.14.1.1 Fuel supply. An on-premises fuel supply, sufficient for not less than 2-hour full-demand operation of the system, shall be provided.
((**Exception:** When *approved*, the system shall be allowed to be supplied by natural gas pipelines.))

604.2.14.1.2 Capacity. The ((~~standby~~))emergency system shall have a capacity and rating that supplies all equipment required to be operational at the same time. The generating capacity is not required to be sized to operate all of the connected electrical equipment simultaneously.

604.2.14.1.3 Emergency Power Loads. The following are classified as emergency power loads: ((~~**Connected facilities.** Power and lighting facilities for the *fire command center* and elevators specified in Sections 403.9 and 403.10 of the *International Building Code*, as applicable, shall be transferable to the standby source. Standby power shall be provided for at least one elevator to serve all floors and be transferable to any elevator.~~))

1. Exit signs and means of egress illumination required by Chapter 10.
2. Elevator car lighting.
3. Emergency voice/alarm communications systems.
4. Automatic fire detection systems.
5. Fire alarm systems.
6. Power and lighting for the fire command center.
7. Lighting for mechanical rooms.
8. Electrically powered fire pumps.
9. Ventilation and automatic fire detection equipment for pressurized stairways.
10. Smoke control systems.
11. A selected elevator in each bank in accordance with *Seattle Building Code* Section 3016.7. A bank of elevators is a group of elevators or a single elevator controlled by a common operating system—all elevators that respond to a single call button constitute a bank of elevators. All elevators shall be transferable to emergency power.

((~~**604.2.14.2 Separate circuits and luminaires.** Separate lighting circuits and luminaires shall be required to provide sufficient light with an intensity of not less than 1 foot-candle (11 lux) measured at floor level in all *means of egress corridors*, *stairways*, smokeproof enclosures, elevator cars and lobbies, and other areas that are clearly a part of the escape route.~~

~~**604.2.14.2.1 Other circuits.** Circuits supplying lighting for the *fire command center* and mechanical equipment rooms shall be transferable to the standby source.~~

~~**604.2.14.3 Emergency systems.** *Exit* signs, *exit* illumination as required by Chapter 10, electrically powered fire pumps required to maintain pressure, and elevator car lighting are classified as emergency systems and shall operate within 10 seconds of failure of the normal power supply and shall be capable of being transferred to the standby source.~~

~~**Exception:** *Exit* sign, *exit* and *means of egress* illumination are permitted to be powered by a standby source in buildings of Group F and S occupancies.~~))

604.2.15 Underground buildings. Emergency and legally required standby power systems in underground buildings covered in Chapter 4 of the *International Building Code* shall comply with Sections 604.2.15.1((~~ and 604.2.15.2~~)).

604.2.15.1 ((~~Standby~~)) Emergency power. An ((~~standby~~)) emergency power system complying with this section and NFPA 70 shall be provided for ((~~standby~~)) emergency power loads as specified in Section 604.2.15.1.1.

[B] 604.2.15.1.1 ((~~Standby~~)) Emergency power loads. The following loads are classified as ((~~standby~~)) emergency power loads:
1. Smoke control system.
2. **Ventilation and automatic fire detection equipment for ((~~smokeproof enclosures~~))pressurized stairways**.
3. Fire pumps.
4. ((~~Standby~~))Emergency power shall be provided for elevators in accordance with Section 3003 of the *International Building Code* and escalators in accordance with NFPA 130.
5. Emergency voice/alarm communication systems.
6. Fire alarm systems.
7. Automatic fire detection systems.
8. Elevator car lighting.
9. Means of egress lighting and exit sign illumination as required by Chapter 10.

((~~**[B] 604.2.15.1.2 Pickup time.** The standby power system shall pick up its connected loads within 60 seconds of failure of the normal power supply.~~

~~**604.2.15.2 Emergency power.** An emergency power system complying with this code and NFPA 70 shall be provided for emergency power loads as specified in Section 604.2.15.2.1.~~

~~**604.2.15.2.1 Emergency power loads.** The following loads are classified as emergency power loads:~~
~~1. Emergency voice/alarm communication systems.~~
~~2. Fire alarm systems.~~
~~3. Automatic fire detection systems.~~
~~4. Elevator car lighting.~~
~~5. *Means of egress* lighting and *exit* sign illumination as required by Chapter 10.~~))

***

604.2.17 Airport traffic control towers. A legally required standby power system shall be provided in airport traffic control towers more than 65 feet (19 812 mm) in height. Power shall be provided to the following equipment:
1. Pressurization equipment, mechanical equipment and lighting.

2. Elevator operating equipment.
3. Fire alarm and smoke detection systems.

604.2.18 Elevators. In buildings and structures where ((~~standby~~)) emergency power is required or furnished to operate an elevator, the operation shall be in accordance with Sections 604.2.18.1 through 604.2.18.4 and *Seattle Building Code,* Section 3016.6.

604.2.18.1 Manual transfer. ((~~Standby~~)) Emergency power shall be manually transferable to all elevators in each bank.

604.2.18.2 One elevator. Where only one elevator is installed, the elevator shall automatically transfer to ((~~standby~~)) emergency power within 60 seconds after failure of normal power.

604.2.18.3 Two or more elevators. Where two or more elevators are controlled by a common operating system, all elevators shall automatically transfer to ((~~standby~~))emergency power within 60 seconds after failure of normal power where the ((~~standby~~))emergency power source is of sufficient capacity to operate all elevators at the same time. Where the ((~~standby~~)) emergency power source is not of sufficient capacity to operate all elevators at the same time, all elevators shall transfer to ((~~standby~~))emergency power in sequence, return to the designated landing and disconnect from the ((~~standby~~))emergency power source. After all elevators have been returned to the designated level, at least one elevator shall remain operable from the ((~~standby~~))emergency power source.

604.2.18.4 Venting. Where ((~~standby~~))emergency power is connected to elevators, the machine room ventilation or air conditioning shall be connected to the ((~~standby~~))emergency power source.

604.2.19 Refrigeration systems. If treatment, detection, continuous ventilation, or alarm systems are required for refrigeration systems, such systems shall be connected to a legally-required standby source of power to supply electrical power in the event of loss from the primary source.

604.3 Maintenance. Emergency and *legally required standby power* systems shall be maintained in accordance with NFPA 110 and NFPA 111 such that the system is capable of supplying service within the time specified for the type and duration required.

604.3.1 Schedule. Inspection, testing and maintenance of emergency and *legally required standby power* systems shall be 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 maintenance of emergency and *legally required standby 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. Such records shall be kept on the premises served by the emergency or *legally required standby power* system and ((~~be available for inspection by~~))shall be submitted to the *fire code official* in accordance with Administrative Rule 9.02.09, *Confidence Test Requirements for Life Safety Systems* and any future revisions of this rule adopted by the *fire code official*.

604.3.3 Switch maintenance. Emergency and *legally required standby power* system transfer switches shall be included in the inspection, testing and maintenance schedule required by Section 604.3.1. 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 Operational inspection and testing. Emergency power systems, including all appurtenant components shall be inspected and tested under load in accordance with NFPA 110 and NFPA 111.

> **Exception:** Where the emergency power system is used for *legally required standby power* or peak load shaving, such use shall be recorded and shall be allowed to be substituted for scheduled testing of the generator set, provided that appropriate records are maintained.

***

606.8 Refrigerant detector. Refrigeration machinery rooms required by the *Seattle Mechanical Code* shall contain a refrigerant detector with an audible and visual alarm. 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. The alarm shall be actuated at a value not greater than the corresponding TLV-TWA values shown in the ((~~*International*~~))*Seattle Mechanical Code* for the refrigerant classification. Detectors and alarms shall be placed in *approved* locations. The detector shall transmit a signal to an approved location.

The system shall also comply with the mechanical ventilation requirements for emergency conditions in accordance with *Seattle Mechanical Code* Section 1105.6.4.

***

606.12.5 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. Standby fuel, such as LP gas, and *legally required standby power* shall have the capacity to

operate for one and one-half the required time for complete incineration of refrigerant in the system.

***

606.17 Standby source of power required. When treatment, detection, continuous ventilation or alarm systems are required, such systems shall be connected to a legally-required standby source of power to supply electrical power in the event of loss of power from the primary source. See Section 604.2 and the *Seattle Electrical Code* Article 701.

SECTION 607
ELEVATOR RECALL AND MAINTENANCE

607.1 Emergency operation. Existing elevators with a travel distance of 25 feet (7620 mm) or more shall comply with the requirements in Chapter 46. New elevators shall be provided with Phase I emergency recall operation and Phase II emergency in-car operation in accordance with ASME A17.1.

Phase I recall shall be initiated on any activation of the building's fire alarm system.

***

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

***

[W] [M] 609.2 Where required. A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors.
Exception: A Type I hood is not required to be installed in R-2 occupancies licensed by the State of Washington.

[W] 609.3 Operations and maintenance. Commercial cooking systems shall be operated and maintained in accordance with Sections 609.3.1 through 609.3.4 and Chapter 11 of NFPA 96.

***

Section 9. Chapter 8 of the 2009 International Fire Code is amended as follows:

***

801.1 Scope. The provisions of this chapter shall govern interior finish, interior trim, furniture, furnishings, decorative materials and decorative vegetation in buildings. Existing buildings shall

comply with Sections 803 through 808. New buildings shall comply with Sections 804 through 808 of this code and Section 803 of the *International Building Code*.

***

[W] 806.1.1 Restricted occupancies. Natural cut trees shall be prohibited in Group ((~~A, E,~~)) I-1, I-2, I-3, I-4, ((~~M, R-1,~~)) and R-2 ((~~and R-4~~))occupancies((~~.~~)) providing licensed care to clients in one of the categories listed in Section 310.1 of the *International Building Code* regulated by either the Washington Department of Health or the Department of Social and Health Services.

((~~**Exceptions:**~~

~~1. Trees located in areas protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 shall not be prohibited in Groups A, E, M, R-1 and R-2.~~

~~2. Trees shall be allowed within dwelling units in Group R-2 occupancies.~~))

[W] 806.1.2 Support devices. The support device that holds the tree in an upright position shall be of a type that is stable and that meets all of the following criteria:

1. The device shall hold the tree securely and be of adequate size to avoid tipping over of the tree.
2. The device shall be capable of containing a minimum ((~~two-day~~)) supply of water in accordance with Table 806.1.2.
3. The water level, when full, shall cover the tree stem at least 2 inches (51 mm). The water level shall be maintained above the fresh cut and checked at least once daily.

[W] TABLE 806.1.2
SUPPORT STAND WATER CAPACITY

TREE STEM DIAMETER (inches)	MINIMUM SUPPORT STAND WATER CAPACITY (gallons)	TYPICAL DAILY WATER EVAPORATION AMOUNT (gallons)
Up to 4	1	1/4 to 1
4 to 6	1 1/2	1 1/4 to 1 1/2
7 to 8	2	1 3/4 to 2
9 to 12	3	2 1/4 to 3
13 and over	4	Over 3

806.1.3 Dryness. The tree shall be removed from the building whenever the needles or leaves fall off readily when a tree branch is shaken or if the needles are brittle and break when bent between the thumb and index finger or whenever determined necessary by the *fire code official*. The tree shall be checked daily for dryness.

***

807.2 Acceptance criteria and reports. Where required to be flame resistant, decorative materials shall be tested by an *approved* agency and meet the flame propagation performance criteria of NFPA 701 or other *approved* standard, or such materials shall be noncombustible. Reports of test results shall be prepared in accordance with NFPA701 and furnished to the *fire code official* upon request.

807.2 Point of Information

Acceptable flame certificates for decorative materials include:
1. Certificates indicating compliance with NFPA 701.
2. Certificates verifying approval through the California State Fire Marshal.
3. Certificates indicating compliance with CPAI-84 (*Canvas Products Association International*).

***

SECTION 809
DECORATIVE MATERIALS USED
IN TEMPORARY ASSEMBLY OCCUPANCIES

809.1 General. Combustible decorative materials used in temporary assembly occupancies shall be flame resistant as determined by the *fire code official*.

Exceptions:
1. The display of salable goods.
2. Educational materials and product brochures that are stored, distributed and maintained in an approved manner.
3. Live vegetation of an *approved* type.

***

Section 10. Chapter 9 of the 2009 International Fire Code is amended as follows:

***

901.4.5 Certification. Individuals who install, inspect, test or maintain *fire protection systems* shall obtain the proper certificate from the *fire code official* in accordance with Administrative Rule 9.01.09, *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* and any future revisions of this rule adopted by the fire code official.

Exception: Individuals who install, inspect, test, or maintain single and multiple station smoke alarms.

***

901.5.1 Occupancy. It shall be unlawful to occupy any portion of a building or structure until the systems required ((~~fire detection, alarm and suppression systems~~))by this chapter have been tested and *approved*. For additional details see Administrative Rule 9.07.07, *Partial / Phased Occupancy, Occupancy during Construction and Temporary Certificates of Occupancy* and any future revisions of this rule adopted by the *fire code official.*

901.6 Inspection, testing and maintenance. Fire detection((~~, alarm and extinguishing systems~~)) and alarm systems, fire-extinguishing systems, fire hydrant systems, fire standpipe systems, fire pump systems, private fire service mains and all other *fire protection systems* and appurtenances thereto shall be maintained in an operative condition at all times, and shall be replaced or repaired where defective. Nonrequired *fire protection systems* and equipment shall be inspected, tested and maintained or, when approved by the *fire code official,* removed.

901.6.1 Confidence Test: All *Fire protection systems,* including nonrequired systems, shall be confidence tested in accordance with the Administrative Rule 9.02.09 *Confidence Test Requirements for Life Safety Systems* and any future revisions of this rule adopted by the *fire code official.*

Exceptions:
1. NFPA 13D sprinkler systems
2. Single and multiple station smoke alarms
3. Fire hydrants and fire service mains

901.6.2((~~1~~)) Standards. *Fire protection systems* shall be inspected, tested and maintained in accordance with the referenced standards *listed* in Table 901.6.2((~~1~~)).

901.6.3((~~2~~)) Records. Records of all system inspections, tests and maintenance required by the referenced standards shall be maintained on the premises for a minimum of three years and shall be copied to the *fire code official* upon request. Confidence test documentation shall be submitted to the fire code official in accordance with Administrative Rule 9.02.09, *Confidence Test Requirements for Life Safety Systems* and any future revisions of this rule adopted by the *fire code official.*

901.6.3((2)).1 Records information. Initial records shall include the name of the installation contractor, type of components installed, manufacturer of the components, location and number of components installed per floor. Records shall also include the manufacturers' operation and maintenance instruction manuals. Such records shall be maintained on the premises.

901.7 Systems out of service. Where a ((~~required~~))*fire protection system* is out of service, the procedures detailed in Administrative Rule 9.06.07, *Out-Of-Service Fire and Life Safety Systems* and any future revisions of this rule adopted by the *fire code official* shall be implemented. ((~~the fire department and the *fire code official* shall be notified immediately and, where required by the *fire code official*, the building shall either be evacuated or an *approved* fire watch shall be provided for all occupants left unprotected by the shutdown until the *fire protection system* has been returned to service.~~

~~Where utilized, fire watches shall be provided with at least one *approved* means for notification of the fire department and their only duty shall be to perform constant patrols of the protected premises and keep watch for fires.~~))

***

901.10 Cabinets. Cabinets containing fire-fighting equipment, such as standpipes, fire hose, fire extinguishers or fire department valves, shall not be blocked from use or obscured from view.

901.10.1 Cabinet equipment identification. Cabinets shall be identified in an *approved* manner by a permanently attached sign with letters not less than 2 inches (51 mm) high in a color that contrasts with the background color, indicating the equipment contained therein.

Exceptions:

1. Doors not large enough to accommodate a written sign shall be marked with a permanently attached pictogram of the equipment contained therein.
2. Doors that have either an *approved* visual identification clear glass panel or a complete glass door panel.

901.10.2 Locking cabinet doors. Cabinets shall be unlocked.

Exceptions:

1. Visual identification panels of glass or other *approved* transparent frangible material that is easily broken and allows access.
2. *Approved* locking arrangements.
3. Group I-3 occupancies.

***

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

***

FIRE DETECTION SYSTEM. A system of smoke or heat detectors monitored at an approved central station, with no requirement for notification appliances in the building.

***

HIGH-RISE BUILDING. Buildings having occupied floors located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

***

PORTABLE SCHOOL CLASSROOM. A structure, transportable in one or more sections, that requires a chassis to be transported, and that is designed to be used as an educational space with or without a permanent foundation. The structure shall be trailerable and capable of being demounted and relocated to other locations as needs arise.

***

903.2.1.2 Group A-2. An *automatic sprinkler system* shall be provided for Group A-2 occupancies where one of the following conditions exists:

1. The *fire area* exceeds 5,000 square feet (464m2).
2. The *fire area* has an *occupant load* of 100 or more.
3. The *fire area* is located on a floor other than a *level of exit discharge* serving such occupancies.

Exception: Item 3 above does not apply to fire areas that include space located one floor above the level of exit discharge if the occupant load of the upper floor is less than 50.

***

903.2.1.6 Nightclub. An automatic sprinkler system shall be provided throughout *nightclubs*. Any space to be constructed for, used for, or converted to, occupancy as a *nightclub* shall provide an automatic sprinkler system as required by this section.

***

903.2.3 Group E. An *automatic sprinkler system* shall be provided for Group E occupancies. ((~~as follows:~~

~~1. Throughout all Group E *fire areas* greater than 12,000 square feet (1115 m2) in area.~~

~~2. Throughout every portion of educational buildings below the lowest *level of exit discharge*~~ **serving** ~~that portion of the building.~~

~~**Exception:** An *automatic sprinkler system* is not required in any area below the lowest *level of exit discharge* serving that area where every classroom throughout the building has at least one exterior *exit* door at ground level.~~))

Exceptions:

1. Portable school classrooms, if the aggregate area of any cluster of portable school classrooms does not exceed 5,000 square feet (1465 m2); and clusters of portable school classrooms shall be separated as required in Chapter 5 of the *Seattle Building Code*.
2. Group E occupancies with an occupant load of 50 or less.

***

903.2.7 Group M. An *automatic sprinkler system* shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:

1. A Group M *fire area* exceeds 12,000 square feet (1115 m2).
2. A Group M *fire area* is located more than three stories above grade plane.
3. The combined area of all Group M *fire areas* on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m2).
4. A Group M occupancy that is used for the display and sale of mattresses and upholstered furniture and the display area exceeds 5,000 square feet (464 m^2).

***

903.2.8 Group R. An *automatic sprinkler system* installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R *fire area*.

Exception: Buildings complying with the *Seattle Residential Code* and Chapter 5 of this code are not required to be sprinklered.

***

903.2.9.3 Liquor Warehouses. An automatic sprinkler system shall be installed in liquor warehouses.

903.2.9.3 Point of Information

Stockrooms of retail liquor sales outlets are not liquor warehouses.

***

903.2.11.7 Basement storage and sale of combustible materials. An automatic sprinkler system shall be installed throughout basements that are not stories above grade plane that are used for storage or sale of combustible materials.

Exceptions:
1. Sprinklers are not required in portions of the basement not containing combustible materials and protected by a fire barrier with at least a one-hour fire-resistance rating.

2. Sprinklers are not required in storage rooms meeting the following criteria:
   2.1. The area of the room does not exceed 500 square feet (46.5 m2);
   2.2. The room is protected by a fire barrier with at least a one-hour fire-resistance rating;
   2.3. The room contains no material classified as a flammable liquid, hazardous material or highly combustible material;
   2.4. The room is served by exterior fire access or interior access by a one-hour fire-resistance rated corridor;
   2.5. No more than three such rooms are permitted in any one basement.

903.2.11.8 Covered boat moorage. Automatic sprinklers shall be provided for covered boat moorage exceeding 500 square feet (46.5m^2) in projected roof area per pier, wharf or float. The sprinkler system shall be designed and installed in accordance with NFPA 13 for Extra Hazard Group 2 occupancy. If sprinklers are required by this section for covered moorage, any other structure exceeding 500 square feet (46.5 m^2) in projected roof area on the pier, wharf or float is also required to be sprinklered.

***

903.3.1 Standards. Sprinkler systems shall be designed and installed in accordance with Sections 903.3.1.1 unless otherwise permitted by Sections((~~,~~)) 903.3.1.2 or 903.3.1.3.

903.3.1.1 NFPA 13 sprinkler systems. Where the provisions of this code require that a building or portion thereof be equipped throughout with an *automatic sprinkler system* in accordance with this section, sprinklers shall be installed throughout in accordance with NFPA 13 except as provided in Section 903.3.1.1.1 and Administrative Rule 9.03.09, *Automatic Sprinkler and Standpipe Systems,* and any future revisions of this rule adopted by the *fire code official*.

903.3.1.1.1 Exempt locations. Automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an *approved* automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from any room merely because it is damp, of fire-resistance rated construction or contains electrical equipment.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard, if *approved* by the *fire code official.*
2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, when *approved* by the *fire code official*.
3. ((~~Generator and t~~)) Transformer vaults((~~rooms~~)) separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a *fire-resistance rating* of not less than 3((~~2~~)) hours.

4. Rooms or areas that are of noncombustible construction with wholly noncombustible contents.
5. Fire service access elevator machine rooms and machinery spaces.

903.3.1.1.2 High-rise building sprinkler system design. In high-rise buildings, combination standpipe/sprinkler risers using 6 inch pipe minimum shall be used with the sprinkler system connected between standpipe risers. Shut-off valves, water-flow devices and check valves (or pressure reducing valves) shall be provided on each floor at the sprinkler system connection to each standpipe. Two four-way fire department connections serving the combination system shall be provided on separate streets well separated from each other. At least one of the fire department connections shall be connected to the riser above a riser isolation valve. Also see section 905.3.6.

When a mid-level fire pump is required by NFPA 14 two pumps with the same rating shall be installed.

Dry-pipe sprinkler systems serving parking garages may use a single supply and one separate two-way fire department connection. The dry-pipe sprinkler system shall be supplied by the on-site water tank.

903.3.1.2 NFPA 13R sprinkler systems. ((~~Where allowed in buildings of Group R, up to and including four stories in height, a~~))*Automatic sprinkler systems* in Group R occupancies up to and including four stories in height ((~~shall~~))may be installed throughout in accordance with NFPA 13R and Administrative Rule 9.03.09, *Automatic Sprinkler and Standpipe Systems* and any future revisions of this rule adopted by the *fire code official*. NFPA 13R sprinkler systems are not allowed in mixed use residential buildings unless the only other occupancy is parking associated with the residential use or the non-residential use is separated in accordance with the *Seattle Building Code* to create a separate building.

***

903.3.1.3 NFPA 13D sprinkler systems. ((~~Where allowed, a~~))*Automatic sprinkler systems* ((~~installed~~)) in one and two-family *dwellings* and if approved by the *fire code official, townhouses*, ((~~shall~~))may be installed throughout in accordance with NFPA 13D and Administrative Rule 9.03.09 *Automatic Sprinkler and Standpipe Systems* and any future revisions of this rule adopted by the *fire code official*.

***

903.3.3 Obstructed locations. Automatic sprinklers shall be installed in accordance with NFPA 13 obstruction criteria and the listing requirements of the sprinkler head.((~~with due regard to obstructions that will delay activation or obstruct the water distribution pattern.~~)) Automatic sprinklers shall be installed in or under covered kiosks, displays, booths, concession stands or equipment that exceeds 4 feet (1219 mm) in width and depth. Not less than a 3-foot (914 mm)

clearance shall be maintained between automatic sprinklers and the top of piles of *combustible fibers*.

Exception: Kitchen equipment under exhaust hoods protected with a fire-extinguishing system in accordance with Section 904.

903.3.4 Actuation. *Automatic sprinkler systems* shall be automatically actuated unless specifically provided for in this code.

Exception: Elevator machine rooms and machinery spaces in accordance with Administrative Rule 9.08.05, *Sprinkler Systems and Fire Alarms for Elevator Machinery Rooms, Hoist Ways and Pits* and any future revisions of this rule adopted by the *fire code official.*

***

903.3.5.1 Domestic services. Both NFPA 13R and NFPA 13D sprinkler systems can be supplied by a domestic service((~~Where the domestic service can provides the water supply for the automatic sprinkler system, the supply shall be~~)) in accordance with this section.

***

903.3.5.2((~~1 Residential e~~))Combination fire/domestic services. A single combination water supply shall be allowed for all types of sprinkler systems ((~~provided that~~))if the domestic demand is added to the sprinkler demand. ((~~as required by NFPA 13R.~~))

903.3.5.3 Fire Service A fire service shall be allowed for all types of sprinkler systems.

903.3.5.4((~~2~~)) Secondary water supply. A secondary on-site water supply providing the lesser of a net volume of 33,000 gallons or an amount equal to the hydraulically calculated sprinkler demand, including the hose stream requirement in NFPA 13, shall be provided for all high-rise buildings((~~in Seismic Design Category C, D, E or F as determined by the International Building Code~~)). The secondary water supply shall have a duration of not less than 30 minutes as determined by the occupancy hazard classification in accordance with NFPA 13.

Exception: Existing buildings, including those undergoing a substantial renovation.

***

903.4 Sprinkler system supervision and alarms. All valves controlling the water supply for *automatic sprinkler systems*, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a *listed* fire alarm control unit.

Exceptions:

1. *Automatic sprinkler systems* protecting one- and two family *dwellings* and, if *approved* by the *fire code official, townhouses.*
2. Limited area systems serving fewer than 20 sprinklers.

3. *Automatic sprinkler systems* installed in accordance with NFPA 13R where a common supply main is used to supply both domestic water and the *automatic sprinkler system*, and a separate shutoff valve for the *automatic sprinkler system* is not provided.
4. Jockey pump control valves that are sealed or locked in the open position.
5. Control valves to commercial kitchen hoods, paint spray booths or dip tanks that are sealed or locked in the open position.
6. Valves controlling the fuel supply to fire pump engines that are sealed or locked in the open position.
7. Trim valves to pressure switches in dry, preaction and deluge sprinkler systems that are sealed or locked in the open position.

903.4.1 Monitoring. Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to a central station service that is listed in the current edition of the Underwriters Laboratories FIRE PROTECTION EQUIPMENT DIRECTORY under the category Central Station (UUFX) as a Full Service Company or as a Monitoring Company.

Fire alarm systems in high-rise buildings and Group I and Group A occupancies (other than A-5) shall be monitored by a central station service that is listed in the current edition of the Underwriters Laboratories FIRE PROTECTION EQUIPMENT DIRECTORY under the category Central Station (UUFX) as a Full Service Company or as a Fire Alarm Service–Local Company that subcontracts the monitoring, retransmission and associated record keeping and reporting to a listed Full Service Company or Monitoring Company. The listing shall indicate that the Full Service Company or Fire Alarm Service – Local Company provides service to the Seattle area. ((~~an approved central station, remote supervising station or proprietary supervising station as defined in NFPA 72 or, when approved by the fire code official, shall sound an audible signal at a constantly attended location.~~))

Exceptions:
1. Underground key or hub valves in roadway boxes or any valve in underground vaults provided by the municipality or public utility are not required to be monitored.
2. Backflow prevention device test valves located in limited area sprinkler system supply piping shall be locked in the open position. In occupancies required to be equipped with a fire alarm system, the backflow preventer valves shall be electrically supervised by a tamper switch installed in accordance with NFPA 72 and separately annunciated.

***

903.4.3 Floor control valves. *Approved* supervised indicating control valves shall be provided at the point of connection to the riser on each floor in high-rise buildings, and at the point of connection to the riser on any combination sprinkler/standpipe riser in any building.

***

903.6.3 Nightclub. Existing *nightclubs* shall be provided with an automatic sprinkler system as required by Section 4603.4.3.

***

905.2 Installation standard. Standpipe systems shall be installed in accordance with this section and NFPA 14, and Administrative Rule 9.03.09, *Automatic Sprinklers and Standpipes* and any future revisions of this rule adopted by the *fire code official*.

905.3 Required installations. Standpipe systems shall be installed where required by Sections 905.3.1 through 905.3.7 and in the locations indicated in Sections 905.4, 905.5 and 905.6. Standpipe systems are allowed to be combined with *automatic sprinkler systems*.

Exception: Standpipe systems are not required in Group R-3 occupancies and townhouses.

***

((~~**905.3.2 Group A.** Class I automatic wet or manual standpipes shall be provided in nonsprinklered Group A buildings having an occupant load exceeding 1,000 persons.~~))
~~**Exceptions:**~~
~~1. Open-air seating spaces without enclosed spaces.~~
~~2. Class I automatic dry and semiautomatic dry standpipes or manual wet standpipes are allowed in buildings where the highest floor surface used for human occupancy is 75 feet (22 860 mm) or less above the lowest level of fire department vehicle access.~~))

905.3.2((~~3~~)) Covered mall buildings. A covered mall building shall be equipped throughout with a Class I standpipe system with ((~~standpipe system where required by Section 905.3.1. Covered mall buildings not required to be equipped with a standpipe system by Section 905.3.1 shall be equipped with Class I hose connections connected to the *automatic sprinkler system* sized to deliver water at 250 gallons per minute (946.4 L/min) at the most hydraulically remote hose connection while concurrently supplying the *automatic sprinkler system* demand. The standpipe system shall be designed not to exceed a 50 pounds per square inch (345 kPa) residual pressure loss with a flow of 250 gallons per minute (946.4 L/min) from the fire department connection to the hydraulically most remote hose connection. H~~))hose connections ((~~shall be~~)) provided at each of the following locations:

1. Within the mall at the entrance to each *exit* passageway or *corridor*.
2. At each floor-level landing within enclosed *stairways* opening directly on the mall.
3. At exterior public entrances to the mall.
4. At other locations as necessary so that the distance to reach all portions of a tenant space does not exceed 200 feet (60 960 mm) from a hose connection.

((~~**905.3.4 Stages.** Stages greater than 1,000 square feet (93 m2) in area shall be equipped with a Class III wet standpipe system with 11/2 inch and 21/2 inch (38 mm and 64 mm) hose connections on each side of the stage.~~

~~**Exception:** Where the building or area is equipped throughout with an *automatic sprinkler system*, a 11/2 inch (38 mm) hose connection shall be installed in accordance with NFPA 13 or in accordance with NFPA 14 for Class II or III standpipes.~~

~~**905.3.4.1 Hose and cabinet.** The 11/2 inch (38 mm) hose connections shall be equipped with sufficient lengths of 11/2 inch (38 mm) hose to provide fire protection for the stage area. Hose connections shall be equipped with an *approved* adjustable fog nozzle and be mounted in a cabinet or on a rack.~~))

905.3.3((~~5~~)) Underground buildings. Underground buildings shall be equipped throughout with a Class I automatic wet or manual wet standpipe system.

905.3.4((~~6~~)) Helistops and heliports. Buildings with a helistop or heliport that are equipped with a standpipe shall extend the standpipe to the roof level on which the helistop or heliport is located in accordance with Section 1107.5.

905.3.5((~~7~~)) Marinas and boatyards. Standpipes in marinas and boatyards shall be installed in accordance ((~~comply~~)) with Chapter 45.

905.3.6 High-rise building standpipes. Standpipe risers in high-rise buildings shall be combination standpipe/sprinkler risers using a minimum pipe size of 6 inches (152 mm). Two 21/2-inch (64 mm) hose connections shall be provided on every floor level landing in every required stairway. If pressure reduction valves (prv) are required, each hose connection shall be provided with its own prv. The system shall be designed to provide a minimum flow of 300 gpm (19 L/s) at a minimum pressure of 150 psi (1034 kPa) [maximum 205 psi (1379 kPa)] at each standpipe connection, in addition to the flow and pressure requirements contained in NFPA 14. Also see section 903.3.1.1.2

905.4 Location of Class I standpipe hose connections. Class I standpipe hose connections shall be provided in all of the following locations:

1. In every required *stairway*, a hose connection shall be provided for each floor level above or below grade. Hose connections shall be located at an intermediate floor level landing between floors, or the main floor landing, but must be consistent throughout a building. ((~~unless otherwise approved by the fire code official.~~))

2. On each side of the wall adjacent to the *exit* opening of a horizontal *exit*.

Exception: Where floor areas adjacent to a horizontal *exit* are reachable from *exit stairway* hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30 480 mm) of hose, a hose connection shall not be required at the horizontal *exit*.

3. In every *exit* passageway, at the entrance from the exit passageway to other areas of a building.

Exception: Where floor areas adjacent to an exit passageway are reachable from *exit stairway* hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30 480 mm) of hose, a hose connection shall not be required at the entrance from the exit passageway to other areas of the building.

4. In covered mall buildings, adjacent to each exterior public entrance to the mall, ((~~and~~)) adjacent to each entrance from an *exit* passageway or *exit corridor* to the mall, at each floor-level landing within enclosed *stairways* opening directly on the mall, and at other locations as necessary so that the distance to reach all portions of a tenant space does not exceed 200 feet (60 960 mm) from a hose connection.

5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-percent slope), ((~~each~~)) at least one standpipe shall be provided with a hose connection located either on the roof or at the highest landing of a *stairway* with stair access to the roof. ((~~An a~~)) Additional hose connections shall be provided so that all portions of the roof are within 200 feet of hose travel distance from a standpipe hose connection. ((~~at the top of the most hydraulically remote standpipe for testing purposes.~~)) The hose connection(s) shall be at least 10 feet (3048 mm) from the roof edge, skylight, light well or other opening, unless protected by a 42-inch-high (1067 mm) guardrail or equivalent.

6. Where the most remote portion of a nonsprinklered floor or story is more than 150 feet (45 720 mm) of hose travel distance from a hose connection or the most remote portion of a sprinklered floor or story is more than 200 feet (60 960 mm) of hose travel distance from a hose connection, additional hose connections shall be provided that are accessed through protected enclosures. The protected enclosure shall be a corridor constructed as a smoke barrier from the exit enclosure to the standpipe connection. Additional hose connections in parking garages are not required to be accessed through or located in protected enclosures. ((~~the *fire code official* is authorized to require that additional hose connections be provided in *approved* locations.~~))

***

((~~**905.5.1 Groups A-1 and A-2.** In Group A-1 and A-2 occupancies with *occupant loads* of more than 1,000, hose connections shall be located on each side of any stage, on each side of the rear of the auditorium, on each side of the balcony, and on each tier of dressing rooms.~~))

905.5.1 ((~~2~~)) Protection. Fire-resistance-rated protection of risers and laterals of Class II standpipe systems is not required.

905.5.2 ((3)) Class II system 1-inch hose. A minimum 1-inch (25 mm) hose shall be allowed to be used for hose stations in light-hazard occupancies where investigated and *listed* for this service and where *approved* by the *fire code official*.

***

((**905.7 Cabinets.** Cabinets containing fire-fighting equipment, such as standpipes, fire hose, fire extinguishers or fire department valves, shall not be blocked from use or obscured from view.

905.7.1 Cabinet equipment identification. Cabinets shall be identified in an *approved* manner by a permanently attached sign with letters not less than 2 inches (51 mm) high in a color that contrasts with the background color, indicating the equipment contained therein.

Exceptions:

1. Doors not large enough to accommodate a written sign shall be marked with a permanently attached pictogram of the equipment contained therein.
2. Doors that have either an *approved* visual identification clear glass panel or a complete glass door panel are not required to be marked.

905.7.2 Locking cabinet doors. Cabinets shall be unlocked.

Exceptions:

1. Visual identification panels of glass or other *approved* transparent frangible material that is easily broken and allows access.
2. *Approved* locking arrangements.
3. Group I-3 occupancies.))

905.7 ((8)) Dry standpipes. Dry standpipes shall not be installed.

Exception: Where subject to freezing and in accordance with NFPA 14.

905.8 ((9)) Valve supervision. Valves controlling water supplies shall be supervised in the open position so that a change in the normal position of the valve will generate a supervisory signal at the supervising station required by Section 903.4. Where a fire alarm system is provided, a signal shall also be transmitted to the control unit.

Exceptions:

1. Valves ((to underground key or hub valves in roadway boxes)) provided by the municipality or public utility do not require supervision.
2. Valves locked in the normal position and inspected as provided in this code in buildings not equipped with a fire alarm system and/or not provided with monitoring by a central station service.

905.9 ((10)) During construction. Standpipe systems required during construction and demolition operations shall be provided in accordance with Section 1413.

905.10 ((~~11~~)) Existing buildings. Where required in Chapter 46, existing structures shall be equipped with standpipes installed in accordance with Section 905.

SECTION 906
PORTABLE FIRE EXTINGUISHERS

906.1 Where required. Portable fire extinguishers shall be installed in the following locations.

1. In new and existing Group A, B, E, F, H, I, M, R-1, R-2, ((~~R-4~~))and S occupancies. ((~~**Exception:** In new and existing Group A, B and E occupancies equipped throughout with quick response sprinklers, portable fire extinguishers shall be required only in locations specified in Items 2 through 6.~~))

2. Within 30 feet (9144 mm) of commercial cooking equipment.
3. In areas where flammable or *combustible liquids* are stored, used or dispensed.
4. On each floor of structures under construction, except Group R-3 occupancies, in accordance with Section 1415.1.
5. Where required by the sections indicated in Table 906.1.
6. Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the *fire code official.*

906.2 General requirements. Portable fire extinguishers shall be selected, installed and maintained in accordance with this section and NFPA 10 by individuals who possess the proper certificate from the fire code official in accordance with Administrative Rule 9.01.09 *Certification for Installing, Maintaining and Testing Life Safety Systems and Equipment* and any future revisions of this rule adopted by the *fire code official.*

Exceptions:

1. The travel distance to reach an extinguisher shall not apply to the spectator seating portions of Group A-5 occupancies.
2. Thirty-day inspections shall not be required and maintenance shall be allowed to be once every three years for dry-chemical or halogenated agent portable fire extinguishers that are supervised by a *listed* and *approved* electronic monitoring device, provided that all of the following conditions are met:
   - 2.1. Electronic monitoring shall confirm that extinguishers are properly positioned, properly charged and unobstructed.
   - 2.2. Loss of power or circuit continuity to the electronic monitoring device shall initiate a trouble signal.
   - 2.3. The extinguishers shall be installed inside of a building or cabinet in a noncorrosive environment.

2.4. Electronic monitoring devices and supervisory circuits shall be tested every three years when extinguisher maintenance is performed.

2.5. A written log of required hydrostatic test dates for extinguishers shall be maintained by the *owner* to verify that hydrostatic tests are conducted at the frequency required by NFPA 10.

3. In Group I-3, portable fire extinguishers shall be permitted to be located at staff locations.

***

SECTION 907
FIRE ALARM AND DETECTION SYSTEMS

907.1 General. This section covers the application, installation, performance and maintenance of fire alarm systems and their components in new and existing buildings and structures
The requirements of Section 907.2 are applicable to new buildings and structures. The requirements of Section 907.3 are applicable to existing buildings and structures. All fire alarm and fire detection systems shall be designed, installed and maintained in accordance with the requirements of NFPA 72, except for the locations of initiating devices which shall comply with Section 907 of the *Seattle Fire Code.* For the purposes of this section, fire walls not located on a property line shall not constitute a separate building.

Buildings required by this section to be provided with a fire alarm system shall be provided with a single fire alarm system.

Exception: A single system is not required in existing buildings that are being increased in size and the existing fire alarm system is unable to expand into the new space. In those cases multiple systems shall be arranged as described below for nonrequired fire alarm systems.

Buildings not required by this section to be provided with a fire alarm system may be provided with multiple partial fire alarm systems if:

1. The systems are connected so that all systems simultaneously activate alarm notification appliances upon a signal from any of the fire alarm systems in the building, and
2. The location of each system's annunciator panel (or main panel) is also provided with annunciator panels with reset capability for every other system in the building.

***

907.2.2 Group B. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group B occupancies where one of the following conditions exists:

1. The combined Group B *occupant load* of all floors is 500 or more.

2. The Group B *occupant load* is more than 100 *persons* above or below the lowest *level of exit discharge*.

3. The Group B *fire area* contains a Group B ambulatory health care facility.

Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

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((~~**907.2.7.1 Occupant notification.** During times that the building is occupied, the initiation of a signal from a manual fire alarm box or from a water flow switch shall not be required to activate the alarm notification appliances when an alarm signal is activated at a constantly attended location from which evacuation instructions shall be initiated over an emergency voice/alarm communication system installed in accordance with Section 907.6.2.2.~~))

[W] 907.2.8 Group R-1. Fire alarm systems ((~~and~~)), smoke alarms, and carbon monoxide alarms shall be installed in Group R-1 occupancies as required in Sections 907.2.8.1 through 907.2.8.((~~3~~))4.

907.2.8.1 Manual fire alarm system. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group R-1 occupancies.

Exception((~~s~~)):

((~~1.~~))A manual fire alarm system is not required in buildings not more than two stories in height where all individual *sleeping units* and contiguous attic and crawl spaces to those units are separated from each other and public or common areas by at least 1-hour *fire partitions* and each individual *sleeping unit* has an *exit* directly to a *public way*, *exit court* or yard.

((~~2. Manual fire alarm boxes are not required throughout the building when the following conditions are met:~~

~~2.1. The building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2;~~

~~2.2. The notification appliances will activate upon sprinkler water flow; and~~

~~2.3. At least one manual fire alarm box is installed at an *approved* location.~~))

907.2.8.2 Automatic ((~~smoke~~)) detection system. An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.6 shall be installed throughout all interior *corridors* serving *sleeping units*. Automatic heat detectors shall be provided in any unsprinklered interior areas outside guestrooms other than attics and crawl spaces.

Exception: An automatic smoke detection system is not required in buildings that do not have interior *corridors* serving *sleeping units* and where each *sleeping unit* has a *means of egress* door opening directly to an *exit* or to an exterior *exit access* that leads directly to an *exit*.

907.2.8.3 Smoke alarms. Single- and multiple-station smoke alarms shall be installed in accordance with Section 907.2.11.

907.2.8.4 Carbon monoxide alarms. For new construction, an approved carbon monoxide alarm shall be installed by January 1, 2011, outside of each separate sleeping area in the immediate vicinity of the bedroom in dwelling and sleeping units. For studio type units that do not have a bedroom or a sleeping area separate from the unit itself, the carbon monoxide alarm shall be placed inside the sleeping or dwelling unit in the vicinity of the sleeping area. In a building where a tenancy exists, the tenant shall maintain the CO alarm as specified by the manufacturer including replacement of the batteries.

[W] 907.2.8.4.1 Existing sleeping units. Existing sleeping units shall be equipped with carbon monoxide alarms by July 1, 2011.

907.2.8.4.2 Alarm requirements. Single station carbon monoxide alarms listed as complying with UL 2034 shall be installed in accordance with NFPA 720, *Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment* and the manufacturer's installation instructions.

907.2.9 Group R-2. Fire alarm systems, ((~~and~~))smoke alarms, automatic heat detection systems, and carbon monoxide alarms shall be installed in Group R-2 occupancies as required in Section 907.2.9.1 ((~~and~~)) through 907.2.9.((~~2~~))4.

907.2.9.1 Manual fire alarm system. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group R-2 occupancies where:

1. Any *dwelling unit* or *sleeping unit* is located three or more stories above the lowest *level of exit discharge*;
2. Any *dwelling unit* or *sleeping unit* is located more than one story below the highest *level of exit discharge* of *exits* serving the *dwelling unit* or *sleeping unit*; or
3. The building contains more than 16 *dwelling units* or *sleeping units*.

[W] 4. The building contains a boarding home licensed by the state of Washington.

Exceptions:

1. A fire alarm system is not required in buildings not more than two stories in height where all *dwelling units* or *sleeping units* and contiguous attic and crawl spaces are separated from each

other and public or common areas by at least 1-hour *fire partitions* and each *dwelling unit* or *sleeping unit* has an *exit* directly to a *public way*, *exit court* or yard.

2. A fire alarm system is not required in townhouses if approved by the *fire code official.* ((~~Manual fire alarm boxes are not required where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2 and the occupant notification appliances will automatically activate throughout the notification zones upon a sprinkler water flow.~~))

3. A fire alarm system is not required in buildings that do not have interior *corridors* serving *dwelling units* and are protected by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, provided that *dwelling units* either have a *means of egress* door opening directly to an exterior *exit access* that leads directly to the *exits* or are served by open-ended *corridors* designed in accordance with Section 1026.6, Exception 4.

[W] 4. In boarding homes licensed by the state of Washington, manual fire alarm boxes in resident sleeping areas are not required at exits if located at all constantly attended staff locations, if such staff locations are visible, continuously accessible, located on each floor, and positioned so no portion of the story exceeds a horizontal travel distance of 200 feet to a manual fire alarm box.

907.2.9.2 Smoke alarms. Single- and multiple-station smoke alarms shall be installed in accordance with Section 907.2.11.

907.2.9.3 Automatic heat detection. An automatic heat detection system that activates the occupant notification system in accordance with Section 907.6 shall be installed throughout all unsprinklered interior areas outside dwelling units other than attics and crawl spaces.

[W] 907.2.9.4 Carbon monoxide alarms. For new construction, an approved carbon monoxide alarm shall be installed by January 1, 2011, outside of each separate sleeping area in the immediate vicinity of the bedroom in dwelling and sleeping units. For studio type units that do not have a bedroom or a sleeping area separate from the unit itself, the carbon monoxide alarm shall be placed inside the sleeping or dwelling unit in the vicinity of the sleeping area. In a building where a tenancy exists, the tenant shall maintain the CO alarm as specified by the manufacturer including replacement of the batteries.

[W] 907.2.9.4.1 Existing dwelling units. Existing dwelling units shall be equipped with carbon monoxide alarms by July 1, 2011.

[W] 907.2.10 Group R-3. Carbon monoxide alarms shall be installed in Group R-3 occupancies as required in Sections 907.2.10.1 through 907.2.10.3.

[W] 907.2.10.1 Carbon monoxide alarms. For new construction, an approved carbon monoxide alarm shall be installed by January 1, 2011, outside of each separate sleeping area in

the immediate vicinity of the bedroom in dwelling units. In a building where a tenancy exists, the tenant shall maintain the CO alarm as specified by the manufacturer including replacement of the batteries.

[W] 907.2.10.2 Existing dwelling units. Existing dwelling units shall be equipped with carbon monoxide alarms by July 1, 2011. Exception: Owner-occupied Group R-3 residences legally occupied prior to July 1, 2010.

907.2.10.3 Alarm requirements. Single station carbon monoxide alarms listed as complying with UL 2034 shall be installed in accordance with NFPA 720, *Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment* and the manufacturer's installation instructions.

~~((**R-4.** Fire alarm systems and smoke alarms shall be installed in Group R-4 occupancies as required in Sections 907.2.10.1 through 907.2.10.3.~~

~~**907.2.10.1 Manual fire alarm system.** A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group R-4 occupancies.~~

~~**Exceptions:**~~

~~1. A manual fire alarm system is not required in buildings not more than two stories in height where all individual *sleeping units* and contiguous attic and crawl spaces to those units are separated from each other and public or common areas by at least 1-hour *fire partitions* and each individual *sleeping unit* has an *exit* directly to a *public way*, *exit court* or yard.~~

~~2. Manual fire alarm boxes are not required throughout the building when the following conditions are met:~~

~~2.1. The building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2;~~

~~2.2. The notification appliances will activate upon sprinkler water flow; and~~

~~2.3. At least one manual fire alarm box is installed at an *approved* location.~~

~~3. Manual fire alarm boxes in resident or patient sleeping areas shall not be required at *exits* where located at all nurses' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.5.2.1 are not exceeded.~~

~~**907.2.10.2 Automatic smoke detection system.** An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.6 shall be installed in *corridors*, waiting areas open to *corridors* and *habitable spaces* other than *sleeping units* and kitchens.~~

~~**Exceptions:**~~

~~1. Smoke detection in *habitable spaces* is not required where the facility is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1.~~

~~2. An automatic smoke detection system is not required in buildings that do not have interior *corridors* serving *sleeping units* and where each *sleeping unit* has a *means of egress* door opening directly to an *exit* or to an exterior *exit access* that leads directly to an exit.~~

~~**907.2.10.3 Smoke alarms.** Single- and multiple-station smoke alarms shall be installed in accordance with Section 907.2.11.~~))

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907.2.11.2 Groups R-2, R-3, ((~~R-4~~)) and I-1. Single or multiple-station smoke alarms shall be installed and maintained in Groups R-2, R-3,((~~R-4~~)) and I-1 regardless of *occupant load* at all of the following locations:

1. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms.
2. In each room used for sleeping purposes.

Exception: Single- or multiple-station smoke alarms in Group I-1 shall not be required where smoke detectors are provided in the sleeping rooms as part of an automatic smoke detection system.

3. In each story within a *dwelling unit*, including *basements* but not including crawl spaces and uninhabitable attics. In *dwellings* or *dwelling units* with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

907.2.11.3 Interconnection. Where more than one smoke alarm is required to be installed within an individual *dwelling unit* or *sleeping unit* in Group R-1, R-2((~~,~~)) or R-3((~~or R-4~~)), the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

***

907.2.13 High-rise buildings. Buildings with a floor used for human occupancy located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access shall be provided with an automatic smoke detection system in accordance with Section 907.2.13.1, a fire department communication system in accordance with Section 907.2.13.2 and an emergency voice/alarm communication system in accordance with Section 907.6.2.2.

Exceptions:

1. Airport traffic control towers in accordance with Section 907.2.22 and Section 412 of the *International Building Code.*
2. Open parking garages in accordance with Section 406.3 of the *International Building Code.*
3. Buildings with an occupancy in Group A-5 in accordance with Section 303.1 of the *International Building Code.*
4. Low-hazard special occupancies in accordance with Section 503.1.1 of the *International Building Code.*
((~~5. Buildings with an occupancy in Group H-1, H-2 or H-3 in accordance with Section 415 of the *International Building Code.*~~))
5.((~~6.~~)) In Group I-1 and I-2 occupancies, the alarm shall sound at a constantly attended location and general occupant notification shall be broadcast by the emergency voice/alarm communication system.

907.2.13.1 Automatic smoke detection. Automatic smoke detection in high-rise buildings shall be in accordance with Sections 907.2.13.1.1 and 907.2.13.1.2.

907.2.13.1.1 Area smoke detection. Area smoke detectors shall be provided in accordance with this section. Smoke detectors shall be connected to an automatic fire alarm system. The activation of any detector, other than duct smoke detectors, required by this section shall operate the emergency voice/alarm communication system in accordance with Section 907.6.2.2. Smoke detectors shall be located as follows:

1. In each mechanical equipment, electrical, transformer, telephone equipment or similar room which is not provided with sprinkler protection.
2. In each elevator machine room and in elevator lobbies.
3. Within 5 feet (1524 mm) of doors exiting into stairways that are smokeproof enclosures, or that are pressurized stairways.
Exception: If such locations are within parking garages, smoke detectors are not required.

907.2.13.1.2 Duct smoke detection. Duct smoke detectors complying with Section 907.4.1 shall be located as follows:

1. In the main return air and exhaust air plenum of each air-conditioning system having a capacity greater than 2,000 cubic feet per minute (cfm) (0.94 m3/s). Such detectors shall be located in a serviceable area downstream of the last duct inlet.
2. At each connection to a vertical duct or riser serving two or more stories from a return air duct or plenum of an air-conditioning system. In Group R-1 and R-2 occupancies, a smoke detector is allowed to be used in each return air riser carrying not more than 5,000 cfm (2.4 m3/s) and serving not more than 10 air-inlet openings.

3. Two smoke detectors are required for stair and elevator shaft pressurization air intakes arranged to automatically shut down the pressurization fans only when both detectors activate. The detectors shall be located downstream of each fan and shall be connected to the fire alarm as a supervisory signal.

907.2.13.2 Fire department communication system. Where a wired communication system is *approved* in lieu of a radio coverage system in accordance with Section 510, the wired fire department communication system shall be designed and installed in accordance with NFPA 72 and shall operate between a *fire command center* complying with Section 508, elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed *exit stairways*. The fire department communication device shall be provided at each floor level within the enclosed *exit stairway*. Eight portable handsets for the communication system shall be provided in the *fire command center.*

***

907.2.18.1 Smoke detectors. A minimum of one smoke detector *listed* for the intended purpose shall be installed in the following areas:

1. Mechanical equipment, electrical, transformer, telephone equipment, elevator machine or similar rooms.
2. Elevator lobbies.
3. The main return and exhaust air plenum of each air-conditioning system serving more than one story and located in a serviceable area downstream of the last duct inlet.
4. Each connection to a vertical duct or riser serving two or more floors from return air ducts or plenums of heating, ventilating and air-conditioning systems, except that in Group R occupancies, a *listed* smoke detector is allowed to be used in each return air riser carrying not more than 5,000 cfm (2.4 m3/s) and serving not more than 10 air inlet openings.
5. Within 5 feet (1524 mm) of doors exiting into staiways that are smokeproof enclosures, or that are pressurized stairways.

Exception: If such locations are within parking garages, smoke detectors are not required.

6. Two smoke detectors are required for stair and elevator shaft pressurization air intakes, arranged to automatically shut down the pressurization fans only when both detectors activate. The detectors shall be located downstream of each fan and shall be connected to the fire alarm as a supervisory signal.

***

907.4.1 Duct smoke detectors. Smoke detectors installed in ducts shall be *listed* for the air velocity, temperature and humidity present in the duct. Duct smoke detectors shall be connected to the building's fire alarm control unit when a fire alarm system is required by Section 907.2. Activation of a duct smoke detector shall initiate a visible and audible supervisory signal at a

constantly attended location and shall perform the intended fire safety function in accordance with this code and the *International Mechanical Code*. Duct smoke detectors shall not be used as a substitute for required open area detection and shall not activate the occupant notification system.

Exceptions:

1. The supervisory signal at a constantly attended location is not required where duct smoke detectors activate the building's alarm notification appliances.
2. In occupancies not required to be equipped with a fire alarm system, actuation of a smoke detector shall activate a visible and an audible signal in an *approved* location. Smoke detector trouble conditions shall activate a visible or audible signal in an *approved* location and shall be identified as air duct detector trouble.

***

907.4.3 Elevator emergency operation. Automatic fire detectors installed for elevator emergency operation shall be installed in accordance with the provisions of ((~~ASME A17.1 and NFPA 72.~~)) Administrative Rule 9.08.05, *Sprinkler Systems and Fire Alarms for Elevator Machinery Rooms, Hoist Ways and Pits* and any future revisions of this rule adopted by the *fire code official.*

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907.6 Occupant notification systems. A fire alarm system shall annunciate at the panel and shall initiate occupant notification upon activation, in accordance with Sections 907.6.1 through 907.6.2.3.4. Where a fire alarm system is required by another section of this code, it shall be activated by:

1. Automatic fire detectors, other than duct smoke detectors and smoke alarms located inside dwelling units and sleeping units.
2. Sprinkler waterflow devices.
3. Manual fire alarm boxes.
4. Automatic fire-extinguishing systems.

Exception: Where notification systems are allowed elsewhere in Section 907 to annunciate at a constantly attended location.

***

907.6.2.1.1 Average sound pressure. The audible alarm notification appliances shall provide a sound pressure level of 15 decibels (dBA) above the average ambient sound level or 5 dBA above the maximum sound level having a duration of at least 60 seconds, whichever is greater, in every occupiable space within the building, or in the case of a partial alarm system, throughout the space that is being provided with the fire alarm system. The minimum sound pressure levels shall be: 75 dBA in occupancies in Groups R and I-1; 90 dBA in mechanical equipment rooms; and 60 dBA in other occupancies. In assembly occupancies with high sound levels such as nightclubs and bars, an interface shall be provided between the fire alarm system and the noise source to eliminate the noise source upon activation of the fire alarm system.

Exceptions:

1. Private mode signaling in accordance with NFPA 72 is allowed in areas of Group I-2 and I -3 occupancies if occupants are not expected to self evacuate.
2. Audibility is not required for fire detection systems monitored by an approved central station in buildings not required by this section to be provided with a fire alarm system.

***

907.6.2.2 Emergency voice/alarm communication systems. Emergency voice/alarm communication systems required by this code shall be designed and installed in accordance with NFPA 72. The operation of any automatic fire detector, sprinkler waterflow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving *approved* information and directions for a general or staged evacuation in accordance with the building's fire safety and evacuation plans required by Section 404. In high-rise buildings, the system shall operate on a minimum of the alarming floor, the floor above and ((~~the~~)) two floors below. For purposes of this section a floor is defined as all floors interconnected by open stairwells, escalators or atriums without approved automatic opening protectives in accordance with Section 715 of the *Seattle Building Code.* Speakers shall be provided throughout the building by paging zones. At a minimum, paging zones shall be provided as follows:

1. Elevator groups.
2. Each ((~~E~~))*exit stairway((~~s~~))*.
3. Each floor.
4. *Areas of refuge* as defined in Section 1002.1.

Exception: In Group I-1 and I-2 occupancies, the alarm shall sound in a constantly attended area and a general occupant notification shall be broadcast over the overhead page.

***

907.6.2.3 Visible alarms. Visible alarm notification appliances shall be provided in accordance with Sections 907.6.2.3.1 through 907.6.2.3.4, and Administrative Rule 9.09.07, *Visible Alarm Notification Devices* and any future revisions of this rule adopted by the *fire code official.*

Exceptions:

1. Visible alarm notification appliances are not required in *alterations*, except where an existing fire alarm system is upgraded or replaced, or a new fire alarm system is installed.

907.6.2.3 Point of Information

See Administrative Rule 9.09.07, *Visible Alarm Notification Devices* and any future revisions of this rule adopted by the *fire code official* for clarification of terms upgraded and replaced.

2. Visible alarm notification appliances shall not be required in *exits* as defined in Section 1002.1.
3. Visible alarm notification appliances shall not be required in elevator cars.

***

907.7.3.1 ((~~Zoning indicator~~)) Annunciator panel. ((~~A zoning indicator panel and the associated controls shall be provided in an *approved* location.~~)) All fire alarm systems in buildings without a fire command center shall be provided with an annunciator panel (or the main fire alarm control panel) located inside the building at the main building entrance. The visual zone indication on the annunciator panel shall lock in until the system is reset and shall not be canceled by the operation of an audible alarm-silencing switch.

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907.7.5 Monitoring. Fire alarm systems required by this chapter or by the *International Building Code* shall be monitored by an *approved* supervising station in accordance with NFPA 72.

Exception: Monitoring by a supervising station is not required for:

1. Single- and multiple-station smoke alarms required by Section 907.2.11.
2. Smoke detectors in Group I-3 occupancies.
3. *Automatic sprinkler systems* in one- and two-family dwellings and *townhouses*.

***

907.8 Acceptance tests and completion. Upon completion of the installation, and after the electrical inspector has signed-off the installation, the fire alarm system and all fire alarm components shall be tested in accordance with NFPA 72, in the presence of the *fire code official*, by individuals who possess the proper certificate from the *fire code official* in accordance with Administrative Rule 9.01.09 *Certification for Installing Maintaining, and Testing Life Safety Systems and Equipment* and any future revisions of this rule adopted by the *fire code official*.

907.8.1 Single- and multiple-station alarm devices. When the installation of the alarm devices is complete, each device and interconnecting wiring for multiple-station alarm devices shall be tested in accordance with the smoke alarm provisions of NFPA 72.

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907.10 Resetting fire alarm equipment. Fire alarm equipment shall be reset upon activation only by fire department personnel.

Exception: If approved by the *fire code official.*

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909.11 Power systems. The smoke control system shall be supplied with two sources of power. Primary power shall be from the normal building power systems. Secondary power shall be from an *approved* emergency ((~~standby~~)) source complying with Section 604 and NFPA70. The emergency ((~~standby~~)) power source and its transfer switches shall be in a room separate from the normal power transformers and switch gears and ventilated directly to and from the exterior. The room shall be enclosed with not less than 1-hour *fire barriers* constructed in accordance with Section 707 of the *International Building Code* or horizontal assemblies constructed in accordance with Section 712 of the *International Building Code*, or both.

Exception: A generator set with a diesel fuel tank system exceeding 660 gallons is not required to be located in a rated room if installed in a sprinklered parking garage of type I or II construction, unless a 1-hour separation is required to separate control areas in accordance with Table 2703.1.1(3).

***

909.11.2 Wiring. In addition to meeting requirements of the *Seattle Electrical Code,* all wiring regardless of voltage, shall have fire-resistance-rated protection of at least two hours or as required in rules promulgated by the building official.

Exception: Subject to the approval of the building official, fire-resistance rating is not required for wiring located in a parking garage.

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909.12.1 Wiring. See section 909.11.2. ((~~In addition to meeting requirements of NFPA 70, all wiring, regardless of voltage, shall be fully enclosed within continuous raceways.~~))

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909.16 Fire-fighter's smoke control panel. A fire-fighter's smoke control panel for fire department emergency response purposes only shall be provided and shall include manual control or override of automatic control for mechanical smoke control systems. The panel shall be located in a *fire command center* complying with Section 508 in high-rise buildings or buildings with smoke-protected assembly seating. In all other buildings, the fire-fighter's smoke control panel shall be installed in an *approved* location adjacent to the fire alarm control panel. The fire-fighter's smoke control panel shall comply with Sections 909.16.1 through 909.16.3. The smoke control panel for high rise buildings shall include a visual depiction of the building showing typical floor plan(s) with locations of exit enclosures and elevator shafts. The panel shall also include section views of the building to show the extent of travel for each exit

enclosure and elevator. Exit enclosures and elevator shafts shall be labeled on the plan section views to match the labeling used in the building itself.

909.16.1 Smoke control systems. Fans within the building shall be shown on the fire-fighter's control panel. Fan control switches shall be located on the panel in the vicinity of the location where the shaft supplied by each fan is depicted. A clear indication of the direction of airflow and the relationship of components shall be displayed. Status indicators shall be provided for all smoke control fans, ((~~equipment,~~))annunciated by fan and zone and by pilot-lamp-type indicators as follows:

1. Fans in a ready/non-operating status ((~~, dampers and other operating equipment in their normal status~~))—WHITE.
2. Fans ((~~, dampers and other operating equipment~~)) in their off or closed status—RED.
3. Fans in operation ((~~, dampers and other operating equipment in their on or open status~~))—GREEN.
4. Fans ((~~, dampers and other operating equipment in a fault status~~)) in a fault condition—YELLOW/AMBER.

909.16.2 Smoke control panel. The fire-fighter's control panel shall provide control capability over the complete smoke-control system equipment within the building as follows:

1. ON-AUTO-OFF control over each shaft pressurization fan. ((~~individual piece of operating smoke control equipment that can also be controlled from other sources within the building. This includes *stairway* pressurization fans; smoke exhaust fans; supply, return and exhaust fans; elevator shaft fans; and other operating equipment used or intended for smoke control purposes.~~))

2. AUTO-OFF-POSITIVE PRESSURE-NEGATIVE PRESSURE control of each smoke control zone designed with such features. Individual control of each damper and fan used to achieve the positive or negative pressure condition is not required. ((~~OPEN-AUTO-CLOSE control over individual dampers relating to smoke control and that are also controlled from other sources within the building.~~))

3. AUTO-EXHAUST-OFF control of each smoke exhaust zone using the exhaust method of smoke control.((~~ON-OFF or OPEN-CLOSE control over smoke control and other critical equipment associated with a fire or smoke emergency and that can only be controlled from the fire-fighter's control panel.~~))

Exception((s)):
1. Complex exhaust systems using multiple exhaust fans and/or zones may require individual fan control if required by the *fire code official*.((~~Complex systems, where *approved*, where the~~

~~controls and indicators are combined to control and indicate all elements of a single smoke zone as a unit.~~

~~2. Complex systems, where *approved*, where the control is accomplished by computer interface using *approved*, plain English commands.~~))

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909.18.8 Special inspections for smoke control. Smoke control systems shall be tested by a special inspector for compliance with the *approved* plans.

909.18.8.1 Scope of testing. Special inspections shall be conducted in accordance with the following:

((~~1. During erection of ductwork and prior to concealment for the purposes of leakage testing and recording of device location.~~))

1((~~2~~)). Prior to occupancy and after sufficient completion for the purposes of pressure-difference testing, flow measurements, and detection and control verification.

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[B] 909.21 Smokeproof enclosures. Where required by Section 1022.9, a smokeproof enclosure shall be constructed in accordance with Sections 909.10 through 909.21. A smokeproof enclosure shall consist of an enclosed interior *exit stairway* that conforms to Section 1022.1 and is pressurized according to the requirements of this section. Where access to the roof is required by this code, such access shall be from the smokeproof enclosure where a smokeproof enclosure is required.

[B] 909.21.1 Stairway pressurization *Exit stairways* shall be pressurized to a minimum of 0.10 inches of water (25 Pa) and a maximum of 0.35 inches of water (87 Pa) in the shaft relative to the building measured with all *stairway* doors closed under maximum anticipated conditions of stack effect and wind effect. The pressure differential shall be measured between the exit enclosure and the adjacent area. In residential buildings, the pressure differential is permitted to be measured between the exit enclosure and the dwelling units.

Exception: The pressure differential is permitted to be measured relative to outdoor atmosphere on floors other than the following:

1. the fire floor,
2. the two floors immediately below the fire floor, and
3. the floor immediately above the fire floor.

[B] 909.21.1.1 Supply Air. Air for stairway pressurization shall be supplied at intervals sufficient to maintain the required pressure throughout the exit enclosure.

Note: The performance goal for Section 909.21.1.1 is compliance with minimum and maximum

pressures at all levels of the shaft, and to ensure upward flow of air and smoke.

[B] 909.21.1.2 Supply air. Supply air shall be taken directly from an outside, uncontaminated source at least 20 feet (6096 mm) from any air exhaust system or outlet. The supply air intake shall be located at the exterior of the building. The intake shall be continuous to the exterior of the building. The fan system shall be equipped with two smoke detectors located in the duct in accordance with NFPA 72 arranged to automatically shut down the fan system only when both smoke detectors activate. The detectors shall be located downstream of the fan and shall be connected to the fire alarm as a supervisory signal.

[B] 909.21.1.3 Dampered relief opening. The exit enclosure shall be equipped with a relief opening at the top. The relief opening shall be equipped with a barometric relief damper and a motorized damper that complies with the *Washington State Energy Code with Seattle Amendments*. The motorized damper shall be of the normally open type (open with the power off). Activation of the damper shall be initiated by the building fire alarm system and by actuation of the automatic sprinkler system.
The pressurization system shall be capable of maintaining the differential pressure required by Section 909.21.1 while discharging 2,500 cubic feet per minute (1180 L/s) of air through the relief opening. The relief outlet shall be located at least 20 feet from elevator hoistway and stairway pressurization system supply air intake locations.

[B] 909.21.2 Pressurization equipment. The pressurization equipment required by Section 909.21.1 shall be activated by a fire alarm signal origination anywhere in the building. Smoke detectors shall be installed in accordance with Section 907.3.

[B] 909.21.2.1 Pressurization systems. Stairway pressurization systems shall be independent of other building ventilation systems.

Exception: Ventilation systems other than exit enclosure supply air systems are permitted to be used to exhaust air from adjacent space when necessary to maintain the differential pressure relationships. Ventilation systems used to achieve stairway pressurization are not required to comply with Section 909.

The equipment, control wiring, power wiring and ductwork shall comply with one of the following:

1. Equipment, control wiring, power wiring and ductwork shall be located exterior to the building and directly connected to the exit enclosure or connected to the exit enclosure by ductwork enclosed by *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712 of the *Seattle Building Code*, or both, with a fire-resistance rating not less than that required for the exit enclosure.

2. Equipment, control wiring, power wiring and ductwork shall be located within the exit enclosure with intake or exhaust directly from and to the outside or through ductwork enclosed by *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712 of the *Seattle Building Code*, or both, with a fire-resistance rating not less than that required for the exit enclosure.

3. Equipment, control wiring, power wiring and ductwork shall be located within the building if separated from the remainder of the building, including other mechanical equipment, by *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712 of the *Seattle Building Code*, or both, with a fire-resistance rating not less than that required for the exit enclosure.

Exceptions:

1. Control wiring and power wiring utilizing a 2-hour rated cable or cable system.
2. Where encased with not less than 2 inches (51 mm) of concrete.

DPD Interpretation I909.21: Dampers other than motorized dampers required by the *Washington State Energy Code with Seattle Amendments* are not permitted in stairway pressurization system air supply unless approved by the building official.

[B] 909.21.2.2 Emergency power systems. Stairway pressurization systems and automatic fire detection systems shall be powered by an *approved* emergency power system conforming to Section 403.4.8 and Chapter 27 of the *Seattle Building Code*.

[B] 909.21.2.3 Rational analysis. A rational analysis complying with Section 909.4 shall be submitted with the construction documents.

[B] 909.21.2.4 Special inspection and acceptance testing. Special inspection and acceptance testing shall comply with Section 909.18 and 909.19.

[B] 909.22 Pressurization for low-rise buildings. Where stairway pressurization is provided in accordance with Section 1021.2.1 item 3 or with Section 509.2 item 11 of the *Seattle Building Code*, the pressurization system shall comply with the following:

1. Stairways shall be pressurized to a minimum positive pressure of 0.15 inch of water column (37 Pa) relative to the main occupied area on each floor, and a maximum pressure that complies with Section 1008.1.3;
2. The stairway pressurization shall be activated by a fire alarm originating anywhere in the building. Smoke detectors shall be installed within 5 feet (1524 mm) of doors exiting into pressurized stairways;
3. Pressurization equipment and its duct work located within the building shall be separated from other portions of the building by construction equal to that required for the exit enclosure;

4. Supply air shall be taken directly from an outside, uncontaminated source at least 20 feet (6096 mm) from any air exhaust system or outlet. Air ducts shall be continuous to the exterior of the building. Two smoke detectors shall be located in the duct in accordance with NFPA 72 arranged to automatically shut down the fan system only when both smoke detectors activate. The detectors shall be located downstream of the fan and shall be connected to the fire alarm as a supervisory signal;
5. A *legally required standby* power system shall be provided for the pressurization system according to *Seattle Electrical Code* Section 701.11. A connection ahead of the service disconnecting means shall be permitted as the sole source of power to the pressurization system.
6. Other measures to prevent loss of pressurization shall be provided in the design and construction of exit enclosures, such as doors and door closers, quality of workmanship, and caulking of penetrations and joints.
7. A rational analysis complying with Section 909.4 is not required for stairway pressurization systems in low-rise buildings.
8. Special inspection and acceptance testing shall comply with Section 909.18 and 909.19.

***

914.3 High-rise buildings. High-rise buildings shall comply with Sections 914.3.1 through 914.3.5. See sections 903.3.1.1.2 and 905.3.6 for additional requirements.

***

((~~**914.3.1.1 Number of sprinkler risers and system design.** Each sprinkler system zone in buildings that are more than 420 feet (128 m) in height shall be supplied by a minimum of two risers. Each riser shall supply sprinklers on alternate floors. If more than two risers are provided for a zone, sprinklers on adjacent floors shall not be supplied from the same riser.~~

~~**914.3.1.1.1 Riser location.** Sprinkler risers shall be placed in stair enclosures which are remotely located in accordance with Section 1015.2.~~

~~**914.3.1.2 Water supply to required fire pumps.** Required fire pumps shall be supplied by connections to a minimum of two water mains located in different streets. Separate supply piping shall be provided between each connection to the water main and the pumps. Each connection and the supply piping between the connection and the pumps shall be sized to supply the flow and pressure required for the pumps to operate.~~
~~**Exception:** Two connections to the same main shall be permitted provided the main is valved such that an interruption can be isolated so that the water supply will continue without interruption through at least one of the connections.~~))

***

914.3.5 ((~~Fire department communication system.~~ ~~A two-way fire department communication system shall be provided for fire department use in accordance with Section~~

~~907.2.13.2.~~))**Emergency responder radio coverage.** Emergency responder radio coverage shall be provided in accordance with Section 510.

***

914.4.1 Automatic sprinkler system. An *approved automatic sprinkler system* shall be installed throughout the entire building.

Exceptions:

1. That area of a building adjacent to or above the atrium need not be sprinklered, provided that portion of the building is separated from the atrium portion by not less than a 2-hour *fire barrier* constructed in accordance with Section 707 of the *International Building Code* or *horizontal assemblies* constructed in accordance with Section 712 of the *International Building Code*, or both.
2. Where the ceiling of the atrium is more than 55 feet (16 764 mm) above any floor open to the atrium ((~~the floor~~)), sprinkler protection at the ceiling of the atrium is not required.

***

SECTION 915
ALERTING SYSTEMS

915.1 General. An approved *alerting system* in accordance with Sections 915.2 through 915.6 shall be provided in all Group E occupancies.

Exception: Approved *alerting systems* in existing buildings, structures or occupancies.

[W] 915.2 Power source. *Alerting systems* shall be provided with power supplies in accordance with Section 4.4.1 of NFPA 72 and circuit disconnecting means identified as "EMERGENCY ALERTING SYSTEM."

Exception: Systems that do not require electrical power to operate.

[W] 915.3 Duration of operation. The *alerting system* shall be capable of operating under nonalarm condition (quiescent load) for a minimum of 24 hours and then shall be capable of operating during an emergency condition for a period of 15 minutes at maximum connected load.

[W] 915.4 Combination system. *Alerting system* components and equipment shall be allowed to be used for other purposes.

[W] 915.4.1 System priority. The *alerting system* use shall take precedence over any other use.

[W] 915.4.2 Fire alarm system. Fire alarm systems sharing components and equipment with *alerting systems* shall be in accordance with Section 6.8.4 of NFPA 72.

[W] 915.4.2.1 Signal priority. Recorded or live *alert signals* generated by an *alerting system* that shares components with a fire alarm system shall, when actuated, take priority over fire alarm messages and signals.

[W] 915.4.2.2 Temporary deactivation. Should the fire alarm system be in the alarm mode when such an *alerting system* is actuated, it shall temporarily cause deactivation of all fire alarm-initiated audible messages or signals during the time period required to transmit the *alert signal.*

[W] 915.4.2.3 Supervisory signal. Deactivation of fire alarm audible and visual notification signals shall cause a supervisory signal for each notification zone affected in the fire alarm system.

915.5 Audibility. Audible characteristics of the *alert signal* shall be in accordance with Section 7.4.1 of NFPA 72 throughout the area served by the *alerting system.*

Exception: Areas served by approved visual or textual notification, if the visible notification appliances are not also used as a fire alarm signal.

[W] 915.6 Visibility. Visible and textual notification appliances are permitted in addition to *alert signal* audibility.

***

Section 11. Chapter 10 of the 2009 International Fire Code is amended as follows:

CHAPTER 10
MEANS OF EGRESS

***

SECTION 1002
DEFINITIONS

1002.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

***

EXIT. That portion of a *means of egress* system which is separated from other interior spaces of a building or structure ((~~by fire-resistance-rated construction and opening protectives as required to provide~~)) providing a protected path of egress travel between the *exit access* and the *exit discharge*, and includes required fire-resistance-rated construction and opening protectives. Exits include exterior exit doors at the *level of exit discharge*, vertical *exit enclosures*, *exit passageways*, *exterior exit stairways*, exterior *exit ramps* and *horizontal exits*.

***

EXIT ENCLOSURE. An *exit* component that ((~~is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and~~)) provides for a protected path of egress travel in a vertical or horizontal direction to the *exit discharge* or the *public way*.

***

EXIT PASSAGEWAY. An *exit* component that ((~~is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and~~)) provides for a protected path of egress travel in a horizontal direction to the exit discharge or the public way.

EXIT PLACARD. A non-illuminated sign or a sign painted on a wall indicating the direction of egress.

***

SUITE. A group of patient treatment rooms or patient sleeping rooms within Group I-2 occupancies where staff are in attendance within the *suite*, for supervision of all patients within the suite and the suite is in compliance with the requirements of Sections 1014.2.2 through ((~~1014.2.7~~)) 1014.2.2.5.4.

***

SECTION 1003
GENERAL MEANS OF EGRESS

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1003.2 Ceiling height. The *means of egress* shall have a ceiling height of not less than 7 feet 6 inches (2286 mm).

Exceptions:

1. ((~~Sloped ceilings~~)) Ceilings in accordance with Section 1208.2 of the *International Building Code*.

((~~2. Ceilings of dwelling units and sleeping units within residential occupancies in accordance with Section 1208.2.~~))

((~~3~~))2. Allowable projections in accordance with Section 1003.3.

((~~4~~))3. Stair headroom in accordance with Section 1009.2.

((~~5~~))4. Door height in accordance with Section 1008.1.1.

((~~6~~))5. Ramp headroom in accordance with Section 1010.5.2.

((~~7~~))6. The clear height of floor levels in vehicular and pedestrian traffic areas in parking garages in accordance with Section 406.2.2 of the *International Building Code*.

((~~8~~))7. Areas above and below *mezzanine* floors in accordance with Section 505.1 of the *International Building Code*.

***

SECTION 1004
OCCUPANT LOAD

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TABLE 1004.1.1
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

FUNCTION OF SPACE	FLOOR AREA IN SQ. FT. PER OCCUPANT
Accessory storage areas, mechanical equipment room[1]	300 gross
Agricultural building	300 gross
Aircraft hangars	500 gross
Airport terminal	
Baggage claim	20 gross
Baggage handling	300 gross
Concourse	100 gross
Waiting areas	15 gross
Assembly	
Gaming floors (keno, slots, etc.)	11 gross
Assembly with fixed seats	See Section 1004.7
Assembly without fixed seats	
Concentrated (chairs only—not fixed)	7 net
Standing space	5 net
Unconcentrated (tables and chairs)	15 net
Bowling centers, allow 5 persons for each lane including 15 feet of runway, and for additional areas	7 net
Business areas	
without sprinkler protection	100 gross
with sprinkler protection	130 gross
Commercial laboratories	100 gross
Courtrooms—other than fixed seating areas	40 net
Day care	35 net
Dormitories	50 gross
Educational	
Classroom area	20 net
Shops, laboratories and other vocational room areas	50 net
Exercise rooms	50 gross
H-5 Fabrication and manufacturing areas	200 gross
Industrial areas	100 gross
Institutional areas	

Inpatient treatment areas	240 gross
Outpatient areas	100 gross
Sleeping areas	120 gross
Kitchens, commercial	200 gross
Library	
Reading rooms	50 net
Stack area	100 gross
Locker rooms	50 gross
Mercantile	60 gross
Areas on other floors	30 gross
Basement and grade floor areas	300 gross
Storage, stock, shipping areas	
Parking garages	200 gross
Residential	200 gross
Skating rinks, swimming pools	
Rink and pool	50 gross
Decks	15 gross
Stages and platforms	15 net
Warehouses	500 gross

For SI: 1 square foot = 0.0929 m^2.

1. For electrical equipment areas, see also Sections 110.26 and 110.32 through 110-34 of the *Seattle Electrical Code.*

***

SECTION 1005
EGRESS WIDTH

1005.1 Minimum required egress width. The *means of egress* width shall not be less than required by this section. The total width of *means of egress* in inches (mm) shall not be less than the total *occupant load* served by the *means of egress* multiplied by 0.3 inches (7.62 mm) per occupant for stairways and by 0.2 inches (5.08 mm) per occupant for other egress components. The width shall not be less than specified elsewhere in this code. In high-rise buildings for other than H and I-2 occupancies, the total width of means of egress in inches (mm) shall not be less than the total occupant load served by the means of egress multiplied by 0.2 inches (5.1 mm) per occupant for stairways and by 0.15 inches (3.8 mm) per occupant for other egress components in buildings that are provided with sprinkler protection in accordance with 903.3.1.1 or 903.3.1.2. The width at any point in the path of egress travel shall not be less than the width required for doors in Section 1008. Multiple *means of egress* shall be sized such that the loss of any one *means of egress* shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any *story* of a building shall be maintained to the termination of the *means of egress*.

Exceptions:

1. *Means of egress* complying with Section 1028.