ORDINANCE O-4899

AN ORDINANCE OF THE CITY OF KIRKLAND RELATING TO THE INTERNATIONAL FIRE CODE AND FIRE-EXTINGUISHING SYSTEMS AND AMENDING CHAPTER 21.20 AND CHAPTER 21.33 OF THE KIRKLAND MUNICIPAL CODE.

WHEREAS, on January 7, 2025, the City Council adopted Ordinance O-4889, which adopted the 2021 International Fire Code with amendments and made other changes to chapter 21.20 and chapter 21.33 of the Kirkland Municipal Code; and

WHEREAS, in reviewing the code reviser's updates, staff discovered that the adopted Ordinance O-4889 inadvertently omitted several provisions that were intended to be included, and staff also found minor changes that should be updated, including formatting, verbiage, grammatical errors, changes to subtitles, and changes to code references; and

WHEREAS, the City Council finds that these further amendments to chapter 21.20 and chapter 21.33 of the Kirkland Municipal Code are necessary to protect the public health, safety, and welfare of the community.

NOW, THEREFORE, the City Council of the City of Kirkland does ordain as follows:

Section 1. Section 21.20.030 of the Kirkland Municipal Code (KMC) is amended to read as follows, with additions in underline and deletions in ~~strikethrough~~:

21.20.030 Amendments to the International Fire Code – Chapter 1, Scope and Administration.

The following local amendments to Chapter 1 of the International Fire Code, entitled "Scope and Administration," including all amendments enacted by the state of Washington, are hereby adopted and incorporated into the International Fire Code as follows:

A. *Scope and General Requirements -- Title.* Section 101 of the International Fire Code entitled "Scope and General Requirements" is amended by substituting subsection 101.1 with the following:

101.1 Title. These regulations shall be known as the Fire Code of the City of Kirkland, hereinafter referred to as "this code."

B. *Applicability – Referenced codes and standards.* Section 102 of the International Fire Code entitled "Applicability" is amended by substituting subsection 102.7 with the following:

102.7 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 80. Such codes and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference as determined or modified by the *fire code official.* Where differences occur between the provisions of this code and the referenced standards, the provisions of this code shall apply. When allowed by the *Fire Code Official*, newer editions of standards not herein referenced may be used provided the entire standard is utilized.

C. *Code Compliance Agency* – Section 103 of the International Fire Code entitled "Code Compliance Agency" is amended by substituting subsection 103.1 with the following:

> 103.1 *Designation of agency*. The Kirkland Fire Prevention Bureau is identified as the City's code compliance agency and the official in charge thereof shall be known as the *fire code official*. The function of the agency shall be the implementation, administration, and enforcement of the provisions of this code.

D. ~~*General authority and responsibilities – Indigent Housing Guidelines*~~ *Duties and Powers of the Fire Code Official*. Section 104 of the International Fire Code entitled "~~General Authority and Responsibilities~~" "Duties and Powers of the Fire Code Official" is amended by adding the following new Subsection 104.1.2:

> 104.1.2 Indigent housing guidelines. The *fire code official* is hereby authorized to develop a policy regarding application and exemption of construction codes for temporary homeless shelters in accordance with WAC 51-16-030 Exemptions for indigent housing guidelines, now or as hereafter amended.

E. ~~*General authority and responsibilities*~~ *Duties and Powers of the Fire Code Official – Assistance from other agencies.* Section 104 of the International Fire Code entitled "~~General Authority and Responsibilities~~" "Duties and Powers of the Fire Code Official" is amended by substituting subsection 104.11.1 with the following:

> 104.11.1 Assistance from other agencies. Police and other enforcement agencies shall have authority to render necessary assistance in the investigation of fires or the enforcement of this code as requested by the *fire code official*.

F. ~~*General authority and responsibilities*~~ *Duties and Powers of the Fire Code Official – Obstructing operations.* Section 104 of the International Fire Code entitled "~~General authority and responsibilities~~" "Duties and Powers of the Fire Code Official" is amended by substituting subsection 104.12.2 with the following:

> 104.12.2 Obstructing operations. ~~No person~~ Persons shall not obstruct the operations of the fire department in connection with extinguishment, control, or investigation of any fire, or actions relative to other emergencies, or disobey any lawful command of the fire department 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.

G. *Permits – Compressed Gases.* Section 105 of the International Fire Code entitled "Permits" is amended by substituting subsection 105.5.9 with the following:

> 105.5.9 Compressed gases. An operational permit is required for the storage, use or handling at *normal temperature and pressure* (NTP) of *compressed gases* in excess of the amounts listed in Table 105.5.9.
>
> **Exception:** Vehicles equipped for and using *compressed gas* as a fuel for propelling the vehicle.

TABLE 105.5.9
PERMIT AMOUNTS FOR COMPRESSED GASES

TYPE OF GAS	AMOUNT (cubic feet at NTP)
Carbon dioxide used in carbon dioxide enrichment systems	875 (100 lbs.)
Carbon dioxide or nitrogen used in insulated liquid carbon dioxide or nitrogen beverage dispensing, food or beverage applications	875 (100 lbs.)
Corrosive	200
Flammable (except cryogenic fluids and liquefied petroleum gases)	200
Highly toxic	Any Amount
Inert and simple asphyxiant	6,000
Oxidizing (including oxygen)	504
Pyrophoric	Any Amount
Toxic	Any Amount

For SI: 1 cubic foot – 0.02832 m^3.

H. *Permits – Mobile food preparation vehicles.* Section 105 of the International Fire Code entitled "Permits" is amended by substituting subsection 105.5.32 with the following:

105.5.32 Mobile food preparation vehicles. A permit is required for mobile food preparation vehicles equipped with appliances that produce smoke or grease-laden vapors or utilize LP-gas systems or CNG systems.

A ~~passed,~~ conforming inspection completed by an agency participating ~~agency~~ in the Washington State Association of Fire Marshals Mobile Food Preparation Vehicle Inspection Program~~, performed within the last 12 months, shall~~ will be accepted if the passed inspection was completed within the last 12 months. ~~Valid operational permits issued by any King County Fire Agency are a participating fire agency may be recognized provided that the vehicle and appliances are maintained in accordance with conditions of the permit.~~

I. *Permits – Positive alarm sequence.* Section 105 of the International Fire Code entitled "Permits" is amended by adding the following new subsection 105.5.53:

105.5.53 Positive alarm sequence. An operational permit is required to operate a PAS (Positive Alarm Sequence) Account as prescribed in NFPA (National Fire Protection Association) 72.

~~J. *Permits – Private fire hydrants.* Section 105 of the International Fire Code entitled "Permits" is amended by adding the following new subsection 105.5.54:~~

~~105.5.54 Private fire hydrants. An operational permit is required to operate and maintain a private fire hydrant.~~

~~K~~ J. *Permits – Gates and Barricades Across Fire Apparatus Access Roads.* Section 105 of the International Fire Code entitled "Permits" is amended by adding the following new subsection 105.5.55:

> 105.5.55 Gates *and barricades across fire apparatus access roads.* An operational permit is required to operate and maintain a gate or barricade across a primary *fire apparatus access road.*

~~L~~ K. *Permits – Flammable and combustible liquids.* Section 105 of the International Fire Code entitled "Permits" is amended by substituting subsection 105.6.8 with the following:

> 105.6.8 Flammable and combustible liquids. A 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.
>
> **Exception**: A permit is not required for the abandonment or removal of underground storage tanks previously used to store fuel oil for residential heating. It is the property owner's responsibility to make the decision on how to proceed with abatement.

~~M~~ L. *Permits – Refrigeration Equipment.* Section 105 of the International Fire Code entitled "Permits" is amended by adding the following new subsection ~~105.7.27~~ 105.6.26:

> ~~105.7.27~~ 105.6.26 Refrigeration Equipment. A construction permit is required to install a mechanical refrigeration unit or system regulated by Chapter 6 of the International Fire Code.

~~N~~ M. *Fees – Schedule of permit fees.* Section 107 of the International Fire Code entitled "Fees" is amended by substituting subsection 107.2 with the following:

> 107.2 Schedule of permit fees. Where a permit is required, ~~T~~the fee for each permit shall be as set forth in Chapter 21.74, as now or hereafter amended. A permit shall not be valid until the fees have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

~~O~~ N. *Fees – Work commencing before permit issuance.* Section 107 of the International Fire Code entitled "Fees" is amended by substituting subsection 107.4 with the following:

> 107.4 Work commencing before permit issuance. A person who commences any work, activity or operation regulated by this code before obtaining the necessary permits shall be subject to ~~an additional~~ a fee established in Chapter 21.74 KMC, which shall be in addition to the required permit fees.

~~P~~ Q. *Fees - Refunds.* Section 107 of the International Fire Code entitled "Fees" is amended by substituting subsection 107.6 with the following:

107.6 Refunds. Refunds shall be according to policies and procedures established in Chapter 21.74 KMC.

~~Q~~ P. *Fees – Re-inspection fee.* Section 107 of the International Fire Code entitled "Fees" is amended by adding the following new subsection 107.7:

107.7 Re-inspection fee. A re-inspection fee may be assessed when all of the following criteria have been met:

a. Code violations have been identified by the *fire code official*;

b. A written notice has been issued to the responsible party, identifying the code violations and a time period to make corrections; and

c. The code violations have not been corrected within the specified period.

~~R~~ Q. *Fees – Event fee.* Section 107 of the International Fire Code entitled "Fees" is amended by adding the following new subsection 107.8:

107.8 Event Fee. When the fire chief determines it is necessary to preserve the public health, safety and welfare, event sponsors may be required to compensate the department for staffing and equipment in an amount calculated according to the Washington State Fire Chiefs Association's fee schedule together with Fire Prevention hourly staffing rate as set forth in Chapter 21.74 KMC or as now or hereafter amended.

~~S~~ R. *Maintenance – Recordkeeping.* Section 109 of the International Fire Code entitled "Maintenance" is amended by substituting subsection 109.3 with the following:

109.3 Recordkeeping. A record of periodic inspections, test, servicing, and other operations and maintenance shall be maintained on the premises or other *approved* location for not less than 3 years, or a different period of time where specified in this code or referenced standards. Records shall be made available for inspection by the *fire code official*, and a copy of the records shall be provided to the *fire code official* upon request.

The *fire code official* is authorized to prescribe the form and format of such recordkeeping. The *fire code official* is authorized to require that certain required records be filed with the *fire code official.*

~~Effective February 1, 2020~~ ~~a~~All confidence test reports must be filed with the Compliance Engine at www.thecomplianceengine.com.

~~T~~ S. *Maintenance – Timeliness of report filing.* Section 109 of the International Fire Code entitled "Maintenance" is amended by adding the following new subsection 109.3.1:

109.3.1 Timeliness of report filing. Fire/life safety system confidence test reports must be submitted within five business days of the inspection or maintenance

completion. Systems with impairments or red-tagged systems must also be reported immediately using the current mandatory impaired systems reporting process.

Reports that are not submitted in a timely manner are subject to an additional ~~$10~~ fee for each late report, which will be established administratively by the *fire code official* in consultation with the City's third-party vendor managing the report filing system.

~~U~~ T. *Maintenance – Supervision.* Section 109 of the International Fire Code entitled "Maintenance" is amended by adding the following new subsection 109.4.1:

109.4.1 Reported deficiencies extending past ~~60~~30 days shall be subject to additional fees until deficiencies have been corrected.

~~V~~ U. *Maintenance – Overcrowding.* Section 109 of the International Fire Code entitled "Maintenance" is amended by substituting subsection 109.6 with the following:

109.6 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.

~~W~~ V. *Appeals.* Section 111 of the International Fire Code entitled "Appeals" is amended by substituting Section 111 with the following:

111.1 Appeals to hearing examiner. Appeals of orders, decisions and determinations of *the fire code official* that do not constitute enforcement actions shall be heard and decided by the city of Kirkland hearing examiner. Enforcement actions shall be brought pursuant to the provisions of Chapter 1.12. To the extent the codes adopted by reference in this title refer to a "board of appeals" those references shall be deemed to refer to the city of Kirkland hearing examiner.

111.2 Limitations on authority. An application for appeal shall be based on a claim that the true intent of this ~~chapter~~ code, Chapter 21.33 KMC, or the rules legally adopted thereunder have been incorrectly interpreted, or the provisions of this code do not fully apply. ~~or an equivalent method of protection or safety is proposed~~. The hearing examiner shall not have authority to waive requirements of this code or interpret the administration of this code.

111.3 When to appeal and appeal fee. An appellant shall file a written appeal of the order, decision or determination of the *fire code official* with the ~~Fire Marshal of the~~ Kirkland fire department within thirty days of the date of the decision of the *fire code official*. There shall not be an appeal fee for appeals of stop work orders or code enforcement orders. For all other matters, the appeal fee shall be one hundred twenty-five dollars and shall accompany the written appeal. Failure to timely file the appeal or pay the appeal fee shall result in dismissal of the appeal.

111.4 Contents of notice of appeal. The appeal shall contain a clear reference to the matter being appealed and a statement of the specific elements of the *fire code official's* order, decision or determination disputed by the appellant.

111.5 Notice of the appeal hearing.

(a) The *fire code official* shall prepare a notice of the appeal hearing containing the following:

(1) The file number and a brief description of the matter being appealed;

(2) A statement of the scope of the appeal including a summary of the elements of the *fire code official's* order, decision or determination that are contested in the appeal;

(3) The time and place of the hearing on appeal before the hearing examiner; and

(4) A statement of who may participate in the appeal.

(b) At least fourteen days before the hearing on the appeal, the *fire code official* shall send a copy of the notice of appeal hearing to each person who has appealed the *fire code official's* order, decision or determination.

111.6 Participation in the appeal. Only those parties who have appealed the *fire code official's* order, decision or determination may participate in the appeal. Appellants may participate in either or both of the following ways:

(1) By submitting written comments or testimony to the hearing examiner prior to the commencement of the hearing; and/or

(2) By appearing in person, or through a representative, at the hearing. The hearing examiner may reasonably limit the extent of oral testimony or oral argument to facilitate the orderly and timely conduct of the hearing.

111.7 Scope of appeal. The appeal will be an open record appeal hearing. The scope of the appeal is limited to the specific elements of the *fire code official's* order, decision or determination disputed by the appellant and the hearing examiner shall only consider comments, testimony and arguments on these specific elements.

111.8 Record of appeal hearing. The city shall make an electronic sound recording of the hearing.

111.9 Decision on the appeal. The hearing examiner shall consider all information and material within the scope of the appeal submitted by persons entitled to participate in the appeal. Based on the hearing examiner's findings and conclusions, the hearing examiner may affirm, reverse or modify the order, decision or determination being appealed. The hearing examiner shall issue his or her decision within fifteen days of the appeal hearing by emailing it to the city.

Within four business days after it is issued, the hearing examiner's decision shall be mailed or emailed by the City to the applicant and to each person who has requested notice of the decision. The decision by the hearing examiner is the final decision of the city.

111.10 Judicial review. Any judicial appeal of the hearing examiner's decision shall be reviewed in King County superior court pursuant to Chapter 36.70C RCW, the Land Use Petition Act ("LUPA"). The land use petition must be filed within twenty-one calendar days of the issuance of the hearing examiner's decision.

~~X~~ W. *Violations – Violation penalties.* Section 112 of the International Fire Code entitled "Violation" is amended by substituting subsection 112.4 with the following:

~~Section~~ 112.4. Violation penalties. 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 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 misdemeanor, or civil offense, as deemed applicable by the *fire code official* punishable by a fine of not more than $1,000 dollars or by imprisonment not exceeding 90 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.

~~Section~~ 112.4.1 Violations and enforcement. In addition to the remedies provided for in this Title and remedies that may otherwise be available at law, any violation of this Title, including codes adopted by reference, may be enforced pursuant to the provisions of Chapter 1.12 KMC.

~~Section~~ 112.4.2 Abatement of violation. In addition to the imposition of the penalties herein described, the *fire code official* is authorized to institute appropriate action to ~~pre-vent~~ 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 2. KMC 21.20.050 is amended to read as follows:

21.20.050 Amendments to the International Fire Code – Chapter 3, General Requirements.

The following local amendments to Chapter 3 of the International Fire Code, entitled "General Requirements," including all amendments enacted by the state of Washington, are hereby adopted and incorporated into the International Fire Code as follows:

A. *General Requirements — Open Burning, Recreational Fires and Portable Outdoor Fireplaces.* Section 307 of the International Fire Code is amended by substituting section 307 with the following:

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 Sections 307.2 through 307.5.

Exceptions:
1. *Bonfires*
2. *Recreational Fires*
3. *Portable outdoor fireplaces*

307.2 Permit required - Bonfire. A permit shall be obtained from the *fire code official* in accordance with Section ~~105.6~~ 105.5 prior to kindling a bonfire. Application for such approval shall only be presented by and permit issued to the owner of the land upon which the fire is to be kindled.

Exception: A permit is not required for a *recreational fire* or portable outdoor fireplace.

307.2.1 Bans on fires due to air quality or fire danger. If the Puget Sound Clean Air Agency issues a burn ban due to air quality, or if a fire safety burn ban is issued by the Kirkland Fire Department all fires are prohibited. It is the responsibility of the property owner where the fire is to be conducted to ensure no such ban exists prior to starting any fire.

307.3 Extinguishment authority. Where any fire creates or adds to a hazardous situation, or a required permit has not been obtained, *the fire code official* is authorized to order the extinguishment of the fire.

307.4 Location. The location for open burning shall be not 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:
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 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.

307.4.2 *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. See also Chapter 173-425 WAC.

307.4.3 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.

307.5 Attendance. 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.

B. *General storage—Storage under stairways.* Section 315 of the International Fire Code, entitled "General Storage" is amended by adding the following new subsection 315.3.2.1:

315.3.2.1 Storage under stairways. Storage is prohibited under exit stairways.

Exception: Enclosures under stairways in accordance with Sections 1011.7.3 or 1011.7.4 as applicable.

C. *General Requirements – Road Tunnels, Bridges and Other Limited Access Highways.* Chapter 3 of the International Fire Code is amended by adding the following new section ~~324~~ 322:

~~Section 324~~ 322. Road tunnels, bridges and other limited access highways.

~~324.1~~ 322.1 Road tunnels, bridges and other limited access highways. Road tunnels, bridges, and other limited access highways shall be in accordance with NFPA 502.

Section 3. KMC 21.20.070 is amended to read as follows:

21.20.070 Amendments to the International Fire Code – Chapter 5, Fire Services Features.

The following local amendments to Chapter 5 of the International Fire Code, entitled "Fire Service Features," including all amendments enacted by the state of Washington are hereby adopted, and incorporated into the International Fire Code as follows:

A. *Fire Apparatus Access Roads – Where Required.* Section 503 is amended by substituting subsection 503.1 with the following:

503.1 Where required. Fire apparatus access roads shall be provided and maintained in accordance with locally adopted street, road, and access standards. The city of Kirkland has established criteria for fire apparatus access roads in Operating Policy #6, which is available on the city of Kirkland website and at City Hall.

B. *Access to Building Openings and Roofs – Building with enclosed interior courtyards.* Section 504 of the International Fire Code is amended by adding the following new subsection 504.4:

504.4 Buildings with enclosed interior courtyards. New buildings with enclosed interior courtyards shall have a straight/direct access corridor and/or stairway from the exterior to the courtyard at a location acceptable to the *fire code official.* If a stairway is used it shall comply with International Fire Code Section 1011 and

a corridor shall comply with International Fire Code Section 1020. The access shall have a minimum width of 4 feet (or as directed by the *fire code official*) and shall be large enough to carry a 35-foot-long sectional ladder (minimum folded length 20 feet) directly from the exterior to the courtyard without obstructions. The access door shall be marked at the street as "Direct access to courtyard".

C. *Fire Protection Water Supplies – Fire Hydrant Systems, Where Required.* Section 507 of the International Fire Code entitled "Fire Protection Water Supplies" is amended by substituting subsection 507.5.1 with the following:

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 150 feet 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 300 feet (91.5 m).
2. For Group R-3 and Group U occupancies equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2, the distance requirements shall be 600 feet (183 m)

D. *Fire Command Center – Separations and Penetrations.* Section 508 of the International Fire Code entitled "Fire Command Center" is amended by substituting subsection 508.1.2 with the following:

508.1.2 Separation and penetrations. Fire command center shall be separated from the remainder of the building by not less than a 2-hr. fire barrier constructed in accordance with section 707 of the International Building Code (IBC) or horizontal assembly constructed in accordance with section 711 if the IBC, or both.

Penetrations into and openings through a fire command center are prohibited except for required exit doors, equipment, and ductwork necessary for heating, cooling or ventilation, sprinkler branch line piping, electrical raceway for fire department communication and control and electrical raceway serving the fire command center or being controlled from the fire command center. Such penetrations shall be protected in accordance with International Building Code Section 714.

Exception: Metallic piping, with no joints or openings within the fire command center, is allowed if penetrations are protected in accordance with Section 714.

E. *Emergency Responder Radio Coverage.* Section 510 of the International Fire Code entitled "Emergency Responder Radio Coverage" is amended by substituting Section 510 with the following:

510.1 Emergency responder radio coverage in new buildings. Approved radio coverage for emergency responders shall be provided within buildings that meet any one of the following conditions:

1. High rise buildings;
2. The total building area is 50,000 square feet or more;
3. The total basement area is 10,000 square feet or more;
4. There are floors used for human occupancy more than 30 feet below the finished floor of the lowest level of exit discharge; or
5. Buildings or structures where the Fire or Police Chief determines that in-building radio coverage is critical because of its unique design, location, use or occupancy.

The radio coverage system shall be installed in accordance with Sections 510.4 through 510.5.5 of this code and with provisions of NFPA 1221 (2019). This section shall not require improvement of the existing public safety communication systems.

Exceptions:

1. Buildings and areas of buildings that have minimum radio coverage signal strength levels of the King County Regional 800 MHz Radio System within the building in accordance with Section 510.4.1 without the use of a radio coverage system

   Point of Information

   When determining if the minimum signal strength referenced at Section 510.4.1.1 exists at a subject building, the signal strength shall be measured at any point on the exterior of the building up to the highest point on the roof.

2. In facilities where emergency responder radio coverage is required and such systems, components or equipment required could have a negative impact on the normal operations of that facility, the *fire code official* shall have the authority to accept an automatically activated emergency responder radio coverage system.

3. One- and two-family dwellings and townhouses.

4. Subject to the approval of the *fire code official*, buildings other than high-rise buildings, colleges, universities, and buildings primarily occupied by Group E or I occupancies that have completed a Mobile Emergency Responder Radio Coverage application and submitted payment as outlined in the application.

510.1.1 Occupancy. It shall be unlawful to occupy any portion of a building or structure until Emergency Responder Radio Coverage have been tested and *approved* in accordance with the provisions of Section 510.

~~510.2 Emergency responder radio coverage in existing buildings. Existing buildings shall have *approved* radio coverage for emergency responders as required in Chapter 11.~~

~~510.3 Permit required. A construction permit for the installation of or modification to emergency responder radio coverage systems and related equipment is required as specified in Section 105.7.6. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.~~

~~Point of Information~~

~~Prior coordination and approval from the Public Safety Radio System Operator is required before installation of an Emergency Responder Radio System. Until 2022, such approval is required from EPSCA, King County, Seattle or ValleyCom depending on the location of the installation. In 2022 PSERN will be the single operator of a county wide system.~~

~~In order to be forward compatible, designers and contractors should be aware of PSERN's requirements for Distributed Antenna Systems which can be found via https://psern.org/requirements/~~

~~510.4 Technical requirements. Systems, components and equipment required to provide the emergency responder radio coverage system shall comply with Sections 510.4.1 through 510.4.2.8.~~

~~510.4.1 Emergency responder communication enhancement system signal strength. The building shall be considered to have acceptable emergency responder communications enhancement system coverage when signal strength measurements in 95 percent of all areas on each floor of the building meet the signal strength requirements in Sections 510.4.1.1 through 510.4.1.3.~~

~~Exception: Critical areas, such as the fire command center(s), the fire pump room(s), interior exit stairways, exit passageways, elevator lobbies, standpipe cabinets, sprinkler sectional valve locations, and other areas required by the *fire code official*, shall be provided with 99 percent floor area radio coverage.~~

~~510.4.1.1 Minimum signal strength into the building. The minimum inbound signal strength shall be sufficient to provide usable voice communications throughout the coverage area as specified by the *fire code official*. The inbound signal level shall be a minimum of -95dBm in 95% of the coverage area and 99% in critical areas and sufficient to provide not less than a Delivered Audio Quality (DAQ) of 3.0 or an equivalent Signal-to-Interference-Plus-Noise Ratio (SINR) applicable to the technology for either analog or digital signals.~~

~~510.4.1.2 Minimum signal strength out of the building. The minimum outbound signal strength shall be sufficient to provide usable voice communications throughout the coverage area as specified by the *fire code official*. The outbound signal level shall be sufficient to provide not less than a DAQ of 3.0 or an equivalent SINR applicable to the technology for either analog or digital signals. A minimum signal strength of -95dBm shall be received by the King County Regional 800MHz Radio System when transmitted from within the building.~~

~~510.4.1.3 System performance. Signal strength shall be sufficient to meet the requirements of the applications being utilized by public safety for emergency operations through coverage area as specified by the Public Safety Radio System Operator in Section 510.4.2.2.~~

~~510.4.2 System design. The emergency responder radio coverage system shall be designed in accordance with Sections 510.4.2.1 through 510.4.2.8 and NFPA 1221 (2019).~~

~~510.4.2.1 Amplification systems and components. Buildings and structures that cannot support the required level of radio coverage shall be equipped with systems and components to enhance the public safety radio signals and achieve the required level of radio coverage specified in Sections 510.4.1 through 510.4.1.3. Public safety communications enhancement systems utilizing radio-frequency-emitting devices and cabling shall be allowed by the radio system manager. Prior to installation, all RF-emitting devices shall have the certification of the radio licensing authority and be suitable for public safety use.~~

~~510.4.2.2 Technical criteria. The Public Safety Radio System Operator shall provide the various frequencies, required, the location of radio sites, the effective radiated power of radio sites, the maximum propagation delay in microseconds, the applications being used and other supporting technical information necessary for system design upon request by the building owner or owner's representative.~~

~~510.4.2.3 Power supply sources. Emergency responder radio coverage systems shall be provided with dedicated standby batteries or provided with 2-hour standby batteries and connected to the facility generator power system in accordance with Section 1203. The standby power supply shall be capable of operating emergency responder radio coverage system at 100 percent system capacity for a duration of not less than 12 hours.~~

~~510.4.2.4 Signal booster requirements. If used, signal boosters shall meet the following requirements:~~

~~1. All signal booster components shall be contained in a National Electrical Manufacturer's Association (NEMA) 4, IP66 type waterproof cabinet or equivalent.~~

~~Exception: Listed battery systems that are contained in integrated battery cabinets.~~

~~2. Battery systems used for the emergency power source shall be contained in a NEMA 3R or higher rated cabinet, IP65 type waterproof cabinet or equivalent.~~

~~3. Equipment shall have FCC or other radio licensing authority certification and be suitable for public safety use prior to installation.~~

~~4. Where a donor antenna exists, isolation shall be maintained between the donor antenna and all inside antennas to not less than 20dB greater than the system gain under all operating conditions.~~

~~5. Bi-Directional Amplifiers (BDAs) used in emergency responder radio coverage systems shall be fitted with anti-oscillation circuitry and per-channel AGC.~~

~~6. The installation of amplification systems or systems that operate on or provide the means to cause interference on any emergency responder radio coverage networks shall be coordinated and *approved* by the Public Safety Radio System Operator.~~

~~7. Unless otherwise *approved* by the Public Safety Radio System Operator, only channelized signal boosters shall be permitted.~~

~~Exception: Broadband BDS's may be utilized when specifically authorized in writing by the Public Safety Radio System Operator.~~

~~Point of Information~~

~~BDA's must also comply with PSERN's (www.psern.org/requirements) detailed requirements, which include channelized, minimum of 28 channels, supporting analog, P25 Phase I (FDMA), and P25 Phase II (TDMA).~~

~~510.4.2.5 System monitoring. The emergency responder radio enhancement system shall include automatic supervisory and trouble signals that are monitored by a supervisory service and are annunciated by the fire alarm system in accordance with NFPA 72. The following conditions shall be separately annunciated by the fire alarm system, or, if the status of each of the following conditions is individually displayed on a dedicated panel on the radio enhancement system, a single automatic supervisory signal may be annunciated on the fire alarm system indicating deficiencies of the radio enhancement system:~~

~~1. Loss of normal AC power supply.~~
~~2. System battery charger(s) failure.~~
~~3. Malfunction of the donor antenna(s).~~
~~4. Failure of active RF-emitting device(s).~~
~~5. Low battery capacity at 70 percent reduction of operating capacity.~~
~~6. Active system component malfunction.~~
~~7. Malfunction of the communications link between the fire alarm system and the emergency responder radio enhancement system.~~

~~510.4.2.6 Additional frequencies and change of frequencies. The emergency responder radio coverage system shall be capable of modification or expansion in the event frequency changes are required by the FCC or other radio licensing authority, or additional frequencies are made available by the FCC or other radio licensing authority.~~

~~510.4.2.7 Design documents. The *fire code official* shall have the authority to require "as-built" design documents and specifications for emergency responder communications coverage systems. The documents shall be in a format acceptable to the *fire code official*.~~

~~510.4.2.8 Radio communication antenna density. Systems shall be engineered to minimize the near-far effect. Radio enhancement system designs shall include sufficient antenna density to address reduced gain conditions.~~

~~Exceptions:~~

~~1. Class A narrow band signal booster devices with independent AGC/ALC circuits per channel.~~

~~2. Systems where all portable devices within the same band use active power control.~~

~~510.5 Installation requirements. The installation of the public safety radio coverage system shall be in accordance with NFPA 1221 (2019) and Sections 510.5.1 through 510.5.7~~

~~510.5.1 Approval prior to installation. Amplification systems capable of operating on frequencies licensed to any public safety agency by the FCC or other radio licensing authority shall not be installed without prior coordination and approval of the Public Safety Radio System Operator.~~

~~510.5.2 Minimum qualifications of personnel. The minimum qualifications of the system designer and lead installation personnel shall include both of the following:~~

~~1. A valid FCC-issued general radio telephone operator's license.~~

~~2. Certification of in-building system training issued by an *approved* organization or *approved* school, or a certificate issued by the manufacturer of the equipment being installed.~~

~~510.5.3 Acceptance test procedure. Where an emergency responder radio coverage system is required, upon completion of installation, the building owner shall have the radio system tested to verify that two-way coverage on each floor of the building is in accordance with Section 510.4.1. The test procedure shall be conducted as follows:~~

~~1. Each floor of the building shall be divided into a grid of 20 approximately equal test areas, with a maximum test area size of 6400 square feet. Where the floor area exceeds 128,000 square feet, the floor shall be divided into as many approximately equal test areas as needed, such that no test area exceeds the maximum square footage allowed for a test area.~~

~~2. Coverage testing of signal strength shall be conducted using a calibrated spectrum analyzer for each of the test grids. A diagram of this testing shall be created for each floor where coverage is provided, indicating the testing grid used for the test in Section 510.5.3(1), and including signal strengths and frequencies for each test area. Indicate all critical areas.~~

~~3. Functional talk-back testing shall be conducted using two calibrated portable radios of the latest brand and model used by the agency's radio communications system or other equipment approved by the *fire code official*. Testing shall use Digital Audible Quality (DAQ) metrics, where a passing result is a DAQ of 3 or higher. Communications between handsets shall be tested and recorded in the grid square diagram required by section 510.5.3(2): each grid square on each floor; between each critical area and a radio outside the building; between each critical area and the fire command center or fire~~

~~alarm control panel; between each landing in each stairwell and the fire command center or fire alarm control panel.~~

~~4. Failure of more than 5% of the test areas on any floor shall result in failure of the test.~~

~~**Exception:** Critical areas shall be provided with 99 percent floor area coverage.~~

~~5. In the event that two of the test areas fail the test, in order to be more statistically accurate, the floor shall be permitted to be divided into 40 equal test areas. Failure of not more than two nonadjacent test areas shall not result in a failure of the test. If the system fails the 40 area test, the system shall be altered to meet the 95 percent coverage requirement.~~

~~6. A test location approximately in the center of each test area shall be selected for the test, with the radio enabled to verify two way communications to and from the outside of the building through the public agency's radio communications system. Once the test location has been selected, that location shall represent the entire test area. Failure in the selected test location shall be considered to be a failure of that test area. Additional test locations shall not be permitted.~~

~~7.The gain values of all amplifiers shall be measured, and the test measurement results shall be kept on file with the building owner so that the measurements can be verified during annual tests. In the event that the measurement results become lost, the building owner shall be required to rerun the acceptance test to reestablish the gain values.~~

~~8. As part of the installation, a spectrum analyzer or other suitable test equipment shall be utilized to ensure spurious oscillations are not being generated by the subject signal booster. This test shall be conducted at the time of installation and at subsequent annual inspections.~~

~~9. Systems incorporating Class B signal booster devices or Class B broadband fiber remote devices shall be tested using two portable radios simultaneously conducting subjective voice quality checks. One portable radio shall be positioned not greater than10 feet (3048 mm) form the indoor antenna. The second portable radio shall be positioned at a distance that represents the farthest distance from any indoor antenna. With both portable radios simultaneously keyed up on different frequencies within the same band, subjective audio testing shall be conducted and comply with DAQ levels as specified in Sections 510.4.1.1 and 510.4.1.2.~~

~~10. Documentation maintained on premises. At the conclusion of the testing, and prior to issuance of the building Certificate of Occupancy, the building owner or owner's representative shall place a copy of the following records in the DAS enclosure or the building engineer's office. The records shall be available to the *fire code official* and maintained by the building owner for the life of the system:~~

~~a. A certificate letter stating that the emergency responder radio coverage system has been installed and tested in accordance with this code, and that the system is complete and fully functional.~~

~~b. The grid square diagram created as part of testing in Sections 510.5.3.~~

~~c. Data sheets and/or manufacturer specifications for the emergency responder radio coverage system equipment; back up battery; and charging system (if utilized).~~

~~d. A diagram showing device locations and wiring schematic.~~

~~e. A copy of the electrical permit.~~

~~11. Acceptance test reporting to *fire code official*. At the conclusion of the testing, and prior to issuance of the building Certificate of Occupancy, the building owner or owner's representative shall submit to the *fire code official* a report of the acceptance test by way of the department's third-party vendor thecomplianceengine.com~~

~~510.5.4 FCC compliance. The emergency responder radio coverage system installation and components shall comply with all applicable federal regulations including, but not limited to, FCC 47 CFR Part 90.219.~~

~~510.5.5 Mounting of the donor antenna(s). To maintain proper alignment with the system designed donor site, donor antennas shall be permanently affixed on the highest possible position on the building or where *approved* by the *fire code official*. A clearly visible sign shall be placed near the antenna stating, "movement or repositioning of this antenna is prohibited without approval from the *fire code official*." The antenna installation shall be in accordance with the applicable requirements in the International Building Code for weather protection of the building envelope.~~

~~510.5.6 Wiring. The backbone, antenna distribution, radiating, or any fiber optic cables shall be rated as plenum cables. The backbone cables shall be connected to the antenna distribution, radiating, or copper cables using hybrid coupler devices of a value determined by the overall design. Backbone cables shall be routed through an enclosure that matches the building's required fire resistance rating for shafts or interior exit stairways. The connection between the backbone cable and the antenna cables shall be made within an enclosure that matches the building's fire resistance rating for shafts or interior exit stairways, and passage of the antenna distribution cable in and out of the enclosure shall be protected as a penetration per the International Building Code.~~

~~510.5.7 Identification Signs. Emergency responder radio coverage systems shall be identified by an *approved* sign located on or near the Fire Alarm Control Panel or other *approved* location stating "This building is equipped with an Emergency Responder Radio Coverage System. Control Equipment located in room (insert information provided by owner)."~~

~~A sign stating "Emergency Responder Radio Coverage System Equipment" shall be placed on or adjacent to the door of the room containing the main system components.~~

~~510.6 Maintenance. The emergency responder radio coverage system shall be maintained operational at all times in accordance with Sections 510.6.1(1) through (7).~~

~~510.6.1 Testing and proof of compliance. The owner of the building or owner's authorized agent shall have the emergency responder radio coverage system inspected and tested annually or where structural changes occur including additions or remodels that could materially change the original field performance tests. Testing shall consist of the following items (1) through (7):~~

~~1. In-building coverage test as required by the *fire code official* as described in Section 510.5.3 "Acceptance test procedure" or 510.6.1.1 "Alternative in-building coverage test".~~

~~**Exception:** Group R Occupancy annual testing is not required within dwelling units.~~

~~2. Signal boosters shall be tested to verify that the gain/output level is the same as it was upon initial installation and acceptance or set to optimize the performance of the system.~~

~~3. Backup batteries and power supplies shall be tested under load of a period of 2 hours to verify that they will properly operate during an actual power outage. If within the 2 hour test period the battery exhibits symptoms of failure, the test shall be extended for additional 1-hour periods until the integrity of the battery can be determined.~~

~~4. If a fire alarm system is present in the building, a test shall be conducted to verify that the fire alarm system is properly supervising the emergency responder communication system as required in Section 510.4.2.5. The test is performed by simulating alarms to the fire alarm control panel. The certifications in Section 510.5.2 are sufficient for the personnel performing this testing.~~

~~5. Other active components shall be checked to verify operation within the manufacturer's specifications.~~

~~6. At the conclusion of the testing, a report, which shall verify compliance with Section 510.6.1, shall be submitted to the *fire code official* by way of the department's third-party vendor thecompliancengine.com.~~

~~7. At the conclusion of testing, a record of the inspection and maintenance along with an updated grid diagram of each floor showing tested strengths in each grid square and each critical area shall be added to the documentation maintained on the premises in accordance with Section 510.5.3.~~

~~510.6.1.1 Alternative In-building coverage test. When the comprehensive test documentation required by Section 510.5.3 is available, or the most recent full five-year test results are available if the system is older than six years, the in-building coverage test required by the *fire code official* in Section 510.6.1(1), may be conducted as follows:~~

1. Functional talk-back testing shall be conducted using two calibrated portable radios of the latest brand and model used by the agency's radio communication system or other equipment *approved* by the *fire code official*. Testing shall use Digital Audible Quality (DAQ) metrics, where a passing result is a DAQ of 3 or higher. Communications between handsets in the following locations shall be tested: between the fire command center or fire alarm control panel and a location outside the building; between the fire alarm control panel and each landing in each stairwell.

2. Coverage testing of signal strength shall be conducted using a calibrated spectrum analyzer for:

   a. Three grid areas per floor. The three grid areas to be tested on each floor are the three grid areas with poorest performance in the acceptance test or the most recent annual test, whichever is more recent; and

   b. Each of the critical areas identified in acceptance test documentation required by Section 510.5.3, or as modified by the *fire code official*, and

   c. One grid square per serving antenna.

3. The test area boundaries shall not deviate from the areas established at the time of the acceptance test, or as modified by the *fire code official*. The building shall be considered to have acceptable emergency responder radio coverage when the required signal strength requirements in 510.4.1.1 and 510.4.1.2 are located in 95 percent of all areas on each floor of the building and 99 percent in Critical Areas, and any non-functional serving antenna are repaired to function within normal ranges. If the documentation of the acceptance test or most recent previous annual test results are not available or acceptable to the *fire code official*, the radio coverage verification testing described in 510.5.3 shall be conducted.

Point of Information

The alternative in-building coverage test provides an alternative testing protocol for the in-building coverage test in subsection (1) of section 510.6.1. There is no change or alternative to annual testing requirements enumerated in subsection (2) - (7) of Section 510.6.1, which must be performed at the time of each annual test.

510.6.2 Additional frequencies. The building owner shall modify or expand the emergency responder radio coverage system at his or her expense in the event frequency changes are required by the FCC or other radio licensing authority, or additional frequencies are made available by the FCC public safety radio system operator or FCC license holder. Prior approval of a public safety radio coverage system on previous frequencies does not exempt this section.

~~510.6.3 Nonpublic safety system. Where other nonpublic safety amplification systems installed in buildings reduce the performance or cause interference with the emergency responder communication coverage system, the nonpublic safety amplification system shall be corrected or removed.~~

~~510.6.4 Field testing. Agency personnel shall have the right to enter on to the property at any reasonable time to conduct field testing to verify the required level of radio coverage or to disable a system that due to malfunction or poor maintenance has the potential to impact the emergency responder radio system in the region.~~

Section 4. KMC 21.20.080 is amended to read as follows:

21.20.080 Amendments to the International Fire Code – Chapter 6, Building Services and Systems.

The following local amendments to Chapter 6 of the International Fire Code, entitled "Building Services and Systems," including all amendments enacted by the state of Washington, are hereby adopted and incorporated into the International Fire Code as follows:

A. *Building Services and Systems – Definitions.* Section 602 of the International Fire Code entitled "Definitions" is amended by adding the following definition:

> Power Tap. A listed device for indoor use consisting of an attachment plug on one end of a flexible cord and two or more receptacles on the opposite end and has overcurrent protection.

B. *Electrical Equipment, Wiring and Hazards – Multiplug adapters.* Section 603 of the International Fire Code entitled "Electrical Equipment, Wiring and Hazards" is amended by adding a new subsection ~~604.4~~ 603.11 as follows:

> ~~603.5.4~~603.11 Multiplug adapters. Multiplug adapters, such as cube adapters, unfused plug strips or any other device not complying with the electrical code as adopted by the City of Kirkland shall be prohibited.

C. *Elevator Operation Maintenance and Fire Service Keys – Elevator Maintenance.* Section 604 of the International Fire Code entitled "Elevator Operation Maintenance and Fire Service Keys" is amended by adding the following new subsection 604.8:

> 604.8 Duty of building operators to repair elevator and give notice. Any owner or lessor of the entirety of a building subject to this chapter, or any agent thereof with the responsibility for managing such building (hereafter "building operator") shall ensure that the elevator(s) are accessible, usable and in good working order at all times.
>
> 604.8.1 Communication. Whenever an elevator is out of service, the building operator shall provide notice to all occupants in the building via text, e-mail, or phone call as well as a written notice posted on or adjacent to the elevator on each floor. The notice shall contain at least the following information:
>
> 1. The anticipated date and time that elevator service will resume;

2. Accommodations available for occupants that are dependent on elevator; and

3. Contact information if occupants have any questions.

Exception: Non-residential buildings may limit the notice to a written notice posted with the above information on or adjacent to the elevator on each floor.

604.8.2 ~~Residential~~ Buildings Served by a Single Elevator Level of Service. ~~Residential~~ Bbuildings served by a single elevator shall maintain a full-service maintenance contract with a Washington State Licensed Elevator Company that provides the industries' highest-level service.

604.8.3 Accommodations for Residential Buildings Served by a Single Elevator. Residential buildings served by a single elevator shall maintain a plan to address out-of-service conditions for mobility impaired occupants at no cost to the occupant. Such plan shall include at least the following elements:

1. Transportation in and out of the building. Building operators shall maintain a list of companies qualified to transport mobility impaired individuals in and out of the building up to once per day at no expense to the individual when elevator is out-of-service for up to 24 hours.

2. Alternate housing. When the elevator is out-of-service for longer than 72 hours, the building operator shall provide upon request alternative housing for any person residing in the building who needs to use the elevator to gain access or egress to or from his or her unit as a result of such person's physical disability, medical condition, infirmity, illness or other disability. Alternate housing is not required if such resident's disability does not prevent him or her from gaining access to or from his or her unit via available stairs. Such alternative housing shall be decent, safe, sanitary and provide reasonable accommodation for the person's disability. Any alternate housing shall be provided at the building operator's expense. The duty to provide alternative housing shall not arise if the building operator is prevented from repairing the elevator within seventy-two hours or any time thereafter due to a natural disaster or an act of God.

604.8.4 Failure to timely repair--Civil remedies. Where the failure to timely repair an elevator or to provide alternative housing, as required by Section 604.8 results in any person residing in the building having substantially restricted access to or egress from his or her unit because of such person's impaired ability to climb stairs as a result of such person's physical disability, medical condition, infirmity, illness or other similar circumstance, the person whose access to or egress from such building has been substantially restricted as set forth in this subsection and may request the City of Kirkland initiate a code compliance investigation. If upon investigation the City of Kirkland determines a building operator has violated a provision of KMC 21.20.080(C) it may issue a civil violation pursuant to KMC Chapter 1.12 and also pursue such other legal remedies as may be appropriate.

604.8.5 Prohibition on retaliation and discrimination in renting.

A. No landlord or building operator may bring or threaten to bring an action to recover possession, cause a tenant to quit the unit involuntarily, serve any notice to quit or notice of termination of tenancy, decrease any services or increase the rent where the landlord's intention is retaliation against the tenant for the tenant's assertion or exercise of rights under this chapter by reason of their disability. Such retaliation shall be a defense to an action to recover possession, or it may serve as a basis for an affirmative suit by the tenant for actual and punitive damages and injunctive relief as may be available through the Human Rights Commission pursuant to RCW 49.60.

B. It shall be illegal for any landlord to refuse to rent to any persons on the grounds that they may assert their rights under this chapter because they require an elevator for access to or egress from the building. Any such claim may be made to the Human Rights Commission pursuant to RCW 49.60.

604.8.6 Remedies cumulative. The remedies provided by this chapter are in addition to all other remedies available to any party with respect to ensuring accessibility and usability of elevators.

Section 5. KMC 21.20.090 is amended to read as follows:

21.20.090 Amendments to the International Fire Code – Chapter 9, Fire Protection and Life Safety Systems.

The following local amendments to Chapter 9 of the International Fire Code, entitled "Fire Protection and Life Safety Systems," including all amendments enacted by the state of Washington, are hereby adopted and incorporated into the International Fire Code as follows:

A. *General Fire Areas.* Section 901 of the International Fire Code entitled "General" is amended by substituting subsection 901.4.4 with the following:

901.4.4 Fire areas. Where buildings, or portions thereof, are divided into *fire areas* so as not to exceed the limits established requiring a *fire protection system* in accordance with this chapter, fire barriers, fire partitions, and fire walls of any type do not constitute separate buildings or fire areas.

B. *Automatic Sprinkler Systems – Where Required.* Section 903 of the International Fire Code entitled "Automatic Sprinkler Systems" is amended by substituting subsection 903.2 with the following:

903.2 Where required. *Approved automatic sprinkler systems* in new buildings and structures shall be provided in the locations described in Sections 903.2.1 through 903.2.12 and as required in Chapter 21.33 KMC Fire-Extinguishing Systems.

C. *Automatic Sprinkler Systems – Specific Buildings Areas and Hazards.* Section 903 of the International Fire Code entitled "Automatic Sprinkler Systems" is amended by substituting subsection 903.2.11 with the following:

903.2.11 All occupancies. In all occupancies other than Group U, an automatic sprinkler system shall be installed for building design or hazards in the locations set forth in Section 903.2.11.1 through 903.2.11.8.

903.2.11.1 Stories *and basements* without openings. An automatic sprinkler system shall be installed throughout all stories, including basements, of all buildings where the floor area exceeds 1,500 square feet (139.4 m2) and where there is not provided at least one of the following types of exterior wall openings:

1. Openings below grade that lead directly to ground level by an exterior stairway complying with Section 1011 or an outside ramp complying with Section 1012. Openings shall be located in each 50 linear feet (15,240 mm), or fraction thereof, of exterior wall in the story on not fewer than one side. The required openings shall be distributed such that the lineal distance between adjacent openings does not exceed 50 feet (15,240 mm).

2. Openings entirely above the adjoining ground level totaling not less than 20 square feet (1.86 m2) in each 50 linear feet (15,240 mm), or fraction thereof, of exterior wall in the story on not fewer than one side. The required openings shall be distributed such that the lineal distance between adjacent openings does not exceed 50 feet (15,240 mm). The height of the bottom of the clear opening shall not exceed 44 inches (1,118 mm) measured from the floor.

903.2.11.1.1 Opening dimensions and access. Openings shall have a minimum dimension of not less than 30 inches (762 mm). Access to such openings shall be provided for the fire department from the exterior and shall not be obstructed in a manner that firefighting or rescue cannot be accomplished from the exterior.

903.2.11.1.2 Openings on one side only. Where openings in a story are provided on only one side and the opposite wall of such story is more than 75 feet (22,860 mm) from such openings, the story shall be equipped throughout with an *approved automatic sprinkler system* or openings as specified above shall be provided on at least two sides of the story.

903.2.11.1.3 Basements. Where any portion of a basement is located more than 75 feet (22,860 mm) from openings required by Section 903.2.11.1, or where new walls, partitions or other obstructions are installed that increase the exit access travel distance to more than 75 feet, the basement shall be equipped throughout with an *approved* automatic sprinkler system.

903.2.11.2 Rubbish and linen chutes. An automatic sprinkler system shall be installed at the top of rubbish and linen chutes and in their terminal rooms. Chutes shall have additional sprinkler heads installed at alternate floors and at the lowest intake. Where a rubbish chute extends through a building more than one floor below the lowest intake, the extension shall have sprinklers installed that are recessed from the drop area of the chute and protected from freezing in accordance with Section 903.3.1.1. Such sprinklers shall be installed at alternate

floors beginning with the second level below the last intake and ending with the floor above the discharge. Access to sprinklers in chutes shall be provided for servicing.

903.2.11.3 Buildings 55 feet or more in height. An automatic sprinkler system shall be installed throughout buildings with a floor level having an occupant load of 30 or more that is located 55 feet (16,764 mm) or more above the lowest level of fire department vehicle access.

903.2.11.4 Ducts conveying hazardous exhausts. Where required by the International Mechanical Code, automatic sprinklers shall be provided in ducts conveying hazardous exhaust, flammable or combustible materials.

Exception: Ducts where the largest cross-sectional diameter of the duct is less than 10 inches (254 mm).

903.2.11.5 Commercial cooking operations. An automatic sprinkler system shall be installed in a commercial kitchen exhaust hood and duct system where an automatic sprinkler system is used to comply with Section 904.

903.2.11.6 Other required suppression systems. In addition to the requirements of Section 903.2, the provisions indicated in Table 903.2.11.6 also require the installation of a fire suppression system for certain buildings and areas.

903.2.11.7 Relocatable buildings within buildings. Relocatable buildings or structures located within a building with an *approved* fire sprinkler system shall be provided with fire sprinkler protection within the occupiable space of the building and the space underneath the relocatable building.

Exceptions:

1. Sprinkler protection is not required underneath the building when the space is separated from the adjacent space by construction resisting the passage of smoke and heat and combustible storage will not be located there.

2. If the building or structure does not have a roof or ceiling obstructing the overhead sprinklers.

3 Construction trailers and temporary offices used during new building construction prior to occupancy.

4. Movable shopping mall kiosks with a roof or canopy dimension of less than 4 feet (1219 mm) on the smallest side.

903.2.11.8 Exterior projections. Where sprinklers are required throughout a Group A occupancy, sprinklers shall be installed under exterior projections greater that 2 ft (600 mm) wide over areas where combustibles are stored or where outdoor dining occurs.

D. *Automatic Sprinkler Systems – Installation Requirements.* Section 903 of the International Fire Code entitled "Automatic Sprinkler Systems" is amended by substituting subsection 903.3 with the following:

~~903.3~~ Installation requirements. *Automatic sprinkler systems* shall be designed and installed in accordance with Sections 903.3.1 through 903.3.9.

E. *Installation Requirements – NFPA 13 Sprinkler Systems.* Section 903.3.1 of the International Fire Code entitled "Installation Requirements" is amended by substituting subsection 903.3.1.1 with the following:

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 903.3.1.1.3

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 a room merely because it is damp, of fire-resistance-rated construction, or contains electrical equipment.

1. A room where the application of water, or flame and water, constitutes a serious life or fire hazard, when 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. In rooms or areas that are of noncombustible construction with wholly noncombustible contents.
4. Fire service access elevator machine rooms and machinery spaces.
5. Machine rooms and machinery spaces associated with evacuation elevators and are designed in accordance with Section 3008 of the *International Building Code.*
6. Elevator machine rooms, elevator machinery spaces, control spaces, or hoistways of traction elevators that comply with NFPA 13 (2019) Section 9.3.6.3.

903.3.1.1.2 Bathrooms. In Group R occupancies, sprinklers shall not be required in bathrooms that do not exceed 55 square feet (5 m2) in area and are located within individual *dwelling units* or *sleeping units*, provided that walls and ceilings, including the walls and ceilings behind a shower enclosure or tub, are of noncombustible or limited-combustible materials with a 15-minute thermal barrier rating.

903.3.1.1.3 Seismic Coefficient. The coefficient Cp for seismic bracing design calculations in accordance with NFPA 13 shall either use a value of 0.70 or shall use a value based on site specific USGS data.

F. *Installation Requirements – NFPA 13R Sprinkler Systems.* Section 903.3.1 of the International Fire Code entitled "Installation Requirements" is amended by substituting subsection 903.3.1.2 with the following:

> 903.3.1.2 NFPA 13R sprinkler systems. Automatic sprinkler systems in Group R occupancies up to and including four stories shall be permitted to be installed throughout in accordance with NFPA 13R.
>
> Buildings designed in accordance with Washington Administrative Code 51-50-0504, 51-50-0510, ~~0510~~ or ~~Section 510.4~~ Section 504.4.1 of the Washington State Building Code ~~International Building Code~~ shall be designed in accordance with NFPA 13 throughout.

Section 6. KMC 21.20.100 is amended to read as follows:

21.20.100 Amendments to the International Fire Code – Chapter 10, Means of Egress.

The following local amendments to Chapter 10 of the International Fire Code, entitled "Fire Protection and Life Safety Systems," including all amendments enacted by the state of Washington, are hereby adopted and incorporated into the International Fire Code as follows:

A. *Means of Egress Illumination – Duration.* Section 1008 of the International Fire Code entitled "Means of Egress Illumination" is amended by substituting subsection 1008.3.4 with the following:

> 1008.3.4 Duration. The emergency power system shall provide power for a duration of not less than 90 minutes, or such time as stipulated by International Building Code Section 2702 and Table 2702 when applicable for high-rise or underground buildings, and shall consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with International Building Code Section 2702.

B. *Two-Way Communication Systems – System Requirements.* Section 1009.8 of the International Fire Code entitled "Two-Way Communication Systems" is amended by substituting subsection 1009.8.1 with the following:

> 1009.8.1 System requirements. Two-way communication systems shall provide communication between each required location and the fire command center or a central control point location *approved* by the fire department. Where the central control point is not a constantly attended location, athe two-way communication system shall have a timed automatic telephone dial-out capability ~~to a monitoring location~~. that provides two-way communication with an approved supervising station or 9-1-1. The two-way communication system shall include both audible and visible signals. The two-way communication system shall have a battery backup or an *approved* alternate source of power that is capable of a duration of operation in accordance with International Building Code Section 2702 and Table 2702 upon failure of the normal power source.

C. *Doors, Gates and Turnstiles – Thresholds.* Section 1010 of the International Fire Code entitled "Doors, Gates and Turnstiles" is amended by substituting subsection 1010.1.6 with the following:

1010.1.6 Thresholds. Thresholds at doorways shall not exceed 3/4 inch (19.1 mm) in height above the finished floor or landing for sliding doors serving *dwelling units* or 1/2 inch (12.7 mm) above the finished floor or landing for other doors. Raised thresholds and floor level changes greater than 1/4 inch (6.4 mm) at doorways shall be beveled with a slope not greater than one-unit vertical in two units horizontal (50-percent slope).

Exceptions:

1. In occupancy Group R-2 or R-3, threshold heights for sliding and side-hinged exterior doors shall be permitted to be up to 7 3/4 inches (197 mm) in height if all of the following apply:

1.1. The door is not part of the required *means of egress.*

1.2. The door is not part of an *accessible route* as required by Chapter 11.

1.3. The door is not part of an *Accessible unit, Type A unit* or *Type B unit.*

2. In Type B units, where Exception 5 to Section 1010.1.4 permits a 4-inch (102 mm) elevation change at the door, the threshold height on the exterior side of the door shall not exceed 4 3/4 inches (120 mm) in height above the exterior deck, patio or balcony for sliding doors or 4 1/2 inches (114 mm) above the exterior deck, patio or balcony for other doors.

3. Thresholds at doors serving non-occupiable transformer rooms where emergency containment of oil and sprinkler water is required.

D. *Horizontal Exits – Fire Alarm and Sprinkler Zones.* Section 1026 of the International Fire Code entitled "Horizontal Exits" is amended by adding the following new subsection 1026.6:

1026.6 Fire Alarm and Sprinkler Zones. When fire walls and/or horizontal exits are provided the fire alarm and sprinkler systems shall be zoned to coincide with the horizontal exits.

Exception: Sprinkler zoning is not required in existing construction if fire alarm initiating devices provide the same level of occupant notification that a zoned sprinkler system would provide.

Section 7. KMC 21.33.040, entitled "Automatic fire-extinguishing systems," is amended to read as follows is amended to read as follows:

21.33.040 Automatic fire-extinguishing systems.

a) Where Required. An automatic fire-extinguishing system shall be installed in all structures as set forth in this section and as described in Chapter 9 of the currently adopted editions of both the International Fire Code and the International Building Code as amended and

adopted by the state of Washington. For the purposes of this section, fire barriers and fire walls of any type do not constitute separate buildings.

b) All Occupancies. An automatic sprinkler system shall be installed in the following buildings or structures:

1. In all newly constructed buildings and existing buildings with Level 2 or Level 3 alteration or change of occupancy with a gross floor area of five thousand or greater square feet, regardless of type or use, as well as zero lot line townhouses with an aggregate area of all connected townhouses five thousand square feet or greater;

2. When it is determined by the ~~fire chief~~ *fire code official* that access for fire department or fire flow is not adequate;

3. In Group E occupancies as required by WAC 51-50-0903;

4. All buildings or structures supported by piers or piling which extend over water.

   Exception: Any one-story structure used solely for the moorage of boats or having Type I F.R. or II F.R. construction throughout need not have a sprinkler system installed unless otherwise required by other provisions of this chapter;

5. Other buildings and/or structures as specified in rules promulgated by the fire department.

Section 8. If any provision of this ordinance or its application to any person or circumstance is held invalid, the remainder of the ordinance or the application of the provision to other persons or circumstances is not affected.

Section 9. This ordinance shall be in force and effect five days from and after its passage by the Kirkland City Council and publication as required by law, which can be in the summary form attached to the original of this ordinance and by this reference approved by the City Council.

Passed by majority vote of the Kirkland City Council in open meeting this 6th day of May, 2025.

Signed in authentication thereof this 6th day of May, 2025.

Kelli Curtis, Mayor

Attest:

Elizabeth Adkisson, Acting City Clerk

Publication Date: May 12, 2025

Approved as to Form:

Darcey Eilers, City Attorney

PUBLICATION SUMMARY
OF ORDINANCE NO. O-4899

AN ORDINANCE OF THE CITY OF KIRKLAND RELATING TO THE INTERNATIONAL FIRE CODE AND AMENDING CHAPTER 21.20 AND CHAPTER 21.33 OF THE KIRKLAND MUNICIPAL CODE.

SECTIONS 1 – 6. Amends chapter 21.20 of the Kirkland Municipal Code (KMC) related to the International Fire Code.

SECTION 7. Amends KMC 21.33.040 related to automatic fire-extinguishing systems.

SECTION 8. Provides a severability clause for the ordinance.

SECTION 9. Authorizes publication of the ordinance by summary and establishes the effective date as five days after publication of this summary.

The full text of this Ordinance will be mailed without charge to any person upon request made to the City Clerk for the City of Kirkland. The Ordinance was passed by the Kirkland City Council at its meeting on the 6th day of May, 2025.

I certify that the foregoing is a summary of Ordinance O-4899 approved by the Kirkland City Council for summary publication.

Elizabeth Adkisson, Acting City Clerk