

## ORDINANCE NO. 672

**AN ORDINANCE OF THE CITY OF SHORELINE, WASHINGTON AMENDING THE INTERNATIONAL BUILDING CODE, INTERNATIONAL FIRE CODE AND INTERNATIONAL PROPERTY MAINTENANCE CODE; AND AMENDING SECTIONS 15.05.015, 15.05.017, 15.05.020, 15.05.050 AND 15.05.070 OF THE SHORELINE MUNICIPAL CODE**

WHEREAS, Chapter 15.05 of the Shoreline Municipal Code adopts all current building and construction codes for the City of Shoreline as amended and adopted by the State Building Code Council, and adopts portions of the 2003 International Property Maintenance Code (“IPMC”); and

WHEREAS, in November 2012, the Washington State Building Code Council adopted the 2012 editions of the model codes; and

WHEREAS, City of Shoreline staff in consultation with the Shoreline Fire Department is proposing local amendments which will improve building safety, provide specific procedures for safe demolition of buildings, clarify regulations of the IMPC; and promote diversion of construction waste; now therefore

**THE CITY COUNCIL OF THE CITY OF SHORELINE, WASHINGTON DO ORDAIN AS FOLLOWS:**

**Section 1. New Section.** A new section 15.05.015 *Demolition and removal of buildings-permit required* is added to the Shoreline Municipal Code as set forth in Exhibit 1, which is attached hereto and incorporated herein.

**Section 2. New Section.** A new section 15.05.017 *Diversion of building materials from landfills* is added to the Shoreline Municipal Code as set forth in Exhibit 2, which is attached hereto and incorporated herein.

**Section 3. Amendment.** Shoreline Municipal Code Section 15.05.020, *General requirements for all referenced codes* is hereby amended as set forth in Exhibit 3, which is attached hereto and incorporated herein.

**Section 4. Amendment.** Shoreline Municipal Code Section 15.05.050, *International Fire Code amendments*, is hereby amended as set forth in Exhibit 4, which is attached hereto and incorporated herein.

**Section 5. Amendment.** Shoreline Municipal Code Section 15.05.070, *International Property Maintenance Code amendments*, is hereby adopted as set forth in Exhibit 5, which is attached hereto and incorporated herein.

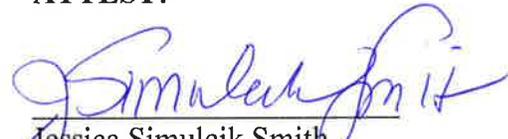
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**Section 6. Effective Date and Publication.** A summary of this ordinance consisting of the title shall be published in the official newspaper and the ordinance shall take effect five days after publication.

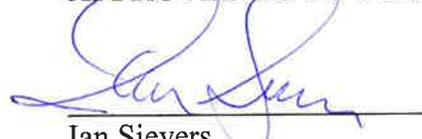
**PASSED BY THE CITY COUNCIL ON NOVEMBER 4, 2013.**

  
Keith A. McGlashan, Mayor

**ATTEST:**

  
Jessica Simulcik Smith  
Interim City Clerk

**APPROVED AS TO FORM:**

  
Ian Sievers  
City Attorney

Date of publication: November 7, 2013  
Effective date: November 12, 2013

**EXHIBIT 1**

New Section 15.05.015 to read as follows:

**15.05.015 Demolition and removal of buildings-permit required.**

A. Permit required. No person, firm or corporation shall cause or permit the removal or demolition of any building from real property within the City of Shoreline without securing a permit for such purpose ("demolition permit"); provided that buildings or structures that are exempt from permit under the codes adopted by this Chapter shall not require a permit.

B. The building official shall require the following reports with a demolition permit application:

1. Documentation of rodent abatement is required for demolitions.
2. Documentation of compliance with the Puget Sound Clean Air Agency's Asbestos/Demolition Notification requirements.
3. Letter of compliance with the sewer district's requirements for demolition.
4. A Waste Diversion Plan when required by 15.05.090 SMC.

C. Multiple buildings may be included on a single application for demolition or removal so long as the buildings occupy the same tax parcel.

D. Bonds and securities. A bond or other financial security approved by the City in an amount sufficient to ensure City abatement of potential impacts to public health and safety and long-term environmental impacts and to ensure general cleanup of the demolition site shall, be required prior to issuance of the demolition permit. The Building Official shall adopt a rule for bonding levels according to building classifications and uses.

E. Demolition and/or removal of structures from property. Every building or structure or portion or remnants thereof remaining after fire, acts of nature, explosion, decay, or deterioration or other destructive force which is found to be in noncompliance with the site cleanup requirements specified in this section shall be brought into compliance upon notice, which shall be sent via certified mail. Demolition permits shall be obtained within sixty days of such notice.

F. Demolition permits shall require the following cleanup unless site conditions are incorporated or corrected as part of new construction included in a concurrent building permit application:

1. Remove all floors, foundations, footings, basement and retaining walls to a minimum of eighteen inches below grade, or as otherwise required;
2. Fill excavations and other cavities with noncombustible, inorganic material smaller than eight inches and cover with dirt or gravel so that broken concrete is not left exposed;
3. Remove all sewage from existing cavities and fill with earth, sand, gravel or other approved material;
4. Fill wells with gravel and rocks no larger than eight inches or install a concrete cap (lined wells only) of sufficient size and weight that cannot easily be removed;
5. Grade site so that surface is smooth and properly sloped for required drainage. Grading shall conform to existing neighboring grades on all sides;
6. During demolition, water shall be used to control and reduce dust and its impact on neighboring properties;
7. The site shall be left clean and in a safe condition; and in a properly graded condition subject to approval of the building official;
8. When demolition or removal of a building has been completed, an inspection of the site shall be requested by the permit holder; and,
9. Permits shall be valid for a period not to exceed sixty days from date of issuance with sixty-day extensions allowed for extenuating circumstances as approved by the building official.

**EXHIBIT 2**

New Section 15.05.017 to read as follows:

**15.05.017 Diversion of building materials from landfills.**

A. The purpose of this section is to increase the reuse of construction and building removal materials.

B. Definitions. Unless otherwise expressly stated, the following words and terms shall, for the purposes of this section, have the following meanings:

1. "Demolition" means the process of razing, relocation, or removal of an existing building or structure, or a portion thereof.

2. "Beneficial Use" means the reuse of solid waste as an ingredient in a manufacturing process, or as an effective substitute for natural or commercial products in a manner that does not pose a threat to human health or the environment. Avoidance of processing or disposal cost alone does not constitute beneficial use.

3. "Deconstruction and salvage assessment" means a report which summarizes the building components within an existing building (prior to demolition) that have the potential for beneficial use.

C. Applicants for a permit to: (1) construct a structure greater than 1,000 square feet of gross floor area; (2) remove an entire building or structure greater than 1,000 square feet of gross floor area; or (3) make alterations greater than 1,000 square feet of gross floor area of a building or structure or tenant improvements greater than 2500 square feet of gross floor area shall submit:

1. A Waste Diversion Plan prior to permit issuance identifying the amount, by weight and volume, of construction and demolition material to be removed from a project site, the hauler, and the receiving facility or location for each commodity.

2. A Waste Diversion Report prior to permit finalization or issuance of a certificate of occupancy. A partial or temporary certificate of occupancy may be issued prior to submittal of the Waste Diversion Report. In instances where shared construction and demolition collection containers are used by two or more projects, periodic Waste Reports may be submitted in place of a final Waste Diversion Report, as determined by the Building Official. The Waste Diversion Report shall identify the amount, by weight or volume, of generated construction and demolition material removed from a project site, the hauler, and the receiving facility or location for each commodity. A signed affidavit from the receiving location and photo documentation must be included for salvaged materials for which a tip receipt cannot be obtained.

3. A deconstruction and salvage assessment prepared by a third party, prior to permit issuance.

D. Additional Requirements.

1. All construction and building material recycle loads that contain more than a single commodity shall be disposed of at a third party certified processing facility.

2. All jobsites proposing waste recycling shall have at least one bin for recyclable materials that will be sent to a processing facility for recycling for beneficial use, and a separate bin for construction and building removal waste destined for a landfill.

E. Exceptions: Construction activity otherwise subject to this section shall not include disaster response performed in conjunction with a declared emergency or removal of structures determined to be hazardous or dangerous by the building official.

**EXHIBIT 3**

Section 15.05.020 is amended to read as follows:

**15.05.020. General Requirements. ~~for all Referenced Codes.~~**

A. Fees. All city of Shoreline permit fees shall be established by Chapter 3.01 SMC.

The city manager or designee may authorize the refunding of:

1. One hundred percent of any fee erroneously paid or collected.
2. Up to 80 percent of the permit fee paid when no work has been done under a permit issued in accordance with this code.
3. Up to 80 percent of the plan review fee paid when an application for a permit for which a plan review fee has been paid is withdrawn or canceled before any plan reviewing is done. The city manager or designee shall not authorize refunding of any fee paid except on written application filed by the original permittee not later than 180 days after the date of fee payment.

B. Amendments Applicable to all Adopted International Codes.

1. Unless the context requires otherwise, any reference to “jurisdiction,” “Department of Building Safety,” “Department of Mechanical Inspection,” “Department of Inspection,” “Department of Property Maintenance Inspection,” shall refer to the “city of Shoreline.”
2. Unless the context requires otherwise, any reference to “building official” or “code official” shall refer to the city manager or designee.
3. Unless the context requires otherwise, any reference to “notice of violation” shall refer to “Notice and Order to Correct.”
4. Unless the context requires otherwise, any reference to “Board of Appeals” shall refer to “hearing examiner.”
5. Unless the context requires otherwise, any reference to “International Existing Building Code” shall refer to the “International Building Code.”
6. Unless the context requires otherwise, any reference to “International Electrical Code” shall refer to the “National Electrical Code.”
7. Unless the context requires otherwise, any reference to “International Zoning Code” shall refer to SMC Title 20, Development Code.

C. This chapter is an exercise of the City’s power to protect the public health, safety and welfare and its purpose is to provide enforcement of Code Violations, abatement of nuisances, and collection of abatement expenses by the City. This Code shall be enforced for the benefit of the general public, not for the benefit of any particular person or class of persons.

It is the intent of this chapter to place the obligation for Code compliance upon the responsible party, within the scope of this subchapter, and not to impose any duty upon the City or any of its officers, officials or employees which would subject them to damages in a civil action.

**EXHIBIT 4**

Section 15.05.050 is amended to read as follows:

**15.05.050 International Fire Code amendments.**

A. ~~Section 102.7 is amended to read as follows:~~

~~102.7 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 47. Such codes and standards shall be considered part of the requirements of this code to the prescribed extent each such reference as determined or modified by the fire chief. Where differences occur between the provisions of this code and the referenced standards, the provisions of this code shall apply.~~

A. New Section 102.7.3 is added to read as follows:

102.7.3 The fire code official is authorized to approve an alternative standard where the fire code official determines that the alternate standard, applied in its entirety, complies with the intent of the provisions of this code, and that the alternate standard is, for the purpose intended, at least the equivalent of the those listed in Chapter 80 in effectiveness, quality, fire resistance, durability and safety.

\* \* \* *[B-C unchanged]*

D. New Section 105.6.27.1 is added to read as follows:

105.6.27.1 Temporary LP-gas. An operational permit is required for temporary use of LP-gas over 200 gallons.

DE. New Section 105.7.157 is added to read as follows:

105.7.157 Emergency Power Supply System. A construction permit is required for the installation of Emergency Power Supply Systems required by Section 604.

F. Section 107.5 is amended to read as follows:

107.5 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.

EG. Sections 109.34 and 111.4 are hereby repealed.

H. Section 307.1.1 is amended to read as follows:

307.1.1 Prohibited open burning. Open burning shall not be conducted at any time in compliance with a permanent ban on *open burning* established by the Puget Sound Air Pollution Control Agency in September of 1992.

For air quality and burn ban status information and regulations, contact the Puget Sound Clean Air Agency at [www.pscleanair.org](http://www.pscleanair.org) or (206) 689-4088.

FI. Section 308.3-7 is amended to read as follows:

308.3-7 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.

1.2. On stages and platforms as a necessary part of a performance in accordance with Section 308.3.2.

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.

4. Where approved by the fire code official.

~~G.~~ Section 314.4 is amended to read as follows:

~~314.4 Vehicles. Liquid or gas-fueled vehicles, fueled equipment, boats or other motorcraft shall not be located indoors except as follows:~~

- ~~1. Batteries are disconnected.~~
- ~~2. Fuel in fuel tanks does not exceed one-quarter tank or 5 gallons (19 L) (whichever is least).~~
- ~~3. Fuel tanks and fill openings are closed and sealed to prevent tampering.~~
- ~~4. Vehicles, boats or other motorcraft, or fueled equipment are not fueled or defueled within the building.~~

H. New Section 315.3.2.1 is added to read as follows:

315.3.2.1 Storage under stairways. Storage is prohibited under exit stairways. Exception: Enclosures under stairways in accordance with Section 1009.9.3.

HK. Section 501.1 is amended to read as follows:

501.1 Scope. Fire service features for buildings, structures and premises shall comply with this chapter. The requirements in this chapter may be modified by the fire code official if other approved fire-protection features are provided.

HL. Section 503.1 is amended to read as follows:

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/or local street, road and access standards as determined by the fire code official.

JM. State amendments for Sections 503.1, 503.1.1, 503.1.2, 503.1.3, 503.2, 503.3, and 503.4, and 503.4.1 are hereby repealed.

N. Section 503.2.7 is amended to read as follows:

503.2.7 Grade. The grade of the fire apparatus access road shall be a 15 percent maximum grade unless approved by fire code official.

KO. Sections 507.3 and 507.5 are amended to read as follows:

\* \* \* [Subsections 1-10 unchanged]

LP. New Section 507.5.7.5 is added to read as follows:

507.5.7.5 Number of fire hydrants required. The number of hydrants required for a building or complex of buildings shall be based on the formula:

Number of hydrants = required fire flow divided by 1500 gpm.

Fractions equal to or greater than one-half (1/2) shall be rounded up to the next higher whole number. Fractions less than one-half (1/2) shall be dropped.

Exception: Where actual fire flow tests performed in an approved manner when allowed by the water purveyor show higher flows exist.

MQ. Section 510 is amended to read as follows:

~~510.1 Building radio coverage. Except as otherwise provided no person shall maintain, own, erect, or construct any building or structure or any part thereof, or cause the same to be done which fails to support adequate radio coverage for City emergency services workers, including but not limited to firefighters and police officers.~~

~~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. Single family residential buildings.~~

~~3. Buildings constructed primarily of wood frame without below grade storage or parking areas.~~

~~4. Buildings thirty five (35) feet high (as defined by the International Building Code Section 502) or less without below grade storage or parking areas. Should construction that is thirty five (35) feet high or less include subterranean storage or parking, then this ordinance shall apply only to the subterranean areas.~~

~~5. Preexisting buildings. Buildings constructed prior to the implementation of this section shall not be required to comply with public safety radio coverage provisions of this section. However, should exempted structures undergo renovation, restoration, or significant modification to the original structure, exemption from the provisions of this ordinance shall not apply.~~

~~510.1.1 Adequate radio coverage. A minimum signal strength of 95 dBm available in 95 percent of all areas of the building and 99 percent in elevators (measured at the primary recall floor), stair shafts and Fire Command Centers when transmitted from the closest Regional 800 MHz Radio System.~~

~~510.1.2 Minimum signal strength. A minimum signal strength of 100 dBm shall be received by the Regional 800 MHz Radio System when transmitted from 95 percent of all areas of the building and 99 percent in elevators (measured at the primary recall floor), stair shafts and Fire Command Centers.~~

~~510.1.3 Frequency range. The frequency range which must be supported shall be 806 MHz to 824 MHz and 851 MHz to 869 MHz and such other frequencies as determined by the Regional Radio System operator in all areas of the building. The building owner shall modify or expand the frequency range at his or her expense in the event frequency changes are required by the FCC or additional frequencies are made available by the FCC. Prior approval of a public safety radio coverage system on previous frequencies does not exempt this requirement.~~

~~510.2 Permits. Permits shall be in accordance with Sections 510.2.1 and 510.2.2.~~

~~510.2.1 Construction permit. A construction permit is required for installation of or modification to emergency responder radio coverage systems and related equipment. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.~~

~~510.2.2 Operational permit. An operational permit is required to operate an "in building radio system" in accordance with City permit requirements.~~

~~510.3 Power Supply. Power supplies shall conform with NFPA 72, Section 1-5.2 (Power Supplies).~~

~~510.4 Signal Booster Requirements. If used, signal boosters shall meet the following requirements:~~

- ~~1. All signal booster components shall be contained in a NEMA 4-type waterproof cabinet.~~
- ~~2. The battery system shall be contained in a NEMA 4-type waterproof cabinet.~~
- ~~3. The system shall include automatic alarming of malfunctions of the signal booster and battery system. Any resulting trouble alarm shall be automatically transmitted to an approved central 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.~~
- ~~4. Equipment shall have FCC certification prior to installation.~~

~~510.5 Compliance, testing, and qualifications. Proof of compliance, testing, and qualifications shall be in accordance with Sections 510.5.1 through 510.5.4.~~

~~510.5.1 Proof of compliance. Each owner shall submit at least one field test, or as determined by the fire code official, whenever structural changes occur to the building that would materially change the original field performance tests by a consultant approved by the fire code official. The performance test shall include at a minimum a floor plan and the signal strength in various locations of the building.~~

~~510.5.2 Annual test. It shall be the building owner's responsibility to have all active components of the system, such as amplifiers, power supplies, and backup batteries, tested a minimum of once every twelve (12) months. Testing shall consist of the following:~~

- ~~1. Amplifiers shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance.~~
- ~~2. Backup batteries and power supplies shall be tested under load of a period of one hour to verify that they will properly operate during an actual power outage. If, within the one hour test period, and in the opinion of the testing technician, the battery exhibits symptoms of failure, the test shall be extended for additional one-hour periods until the integrity of the battery can be determined.~~

~~3. All other active components shall be checked to determine that they are operating within the manufacturer's specifications for the intended purpose.~~

~~4. A report shall be submitted to the fire code official upon conclusion of the testing and not later than January 30 of each year.~~

~~510.5.3 Five-year tests. In addition to the annual test, it shall be the building owner's responsibility to perform a radio coverage test a minimum of once every five (5) years to ensure that the radio system continues to meet the requirements of the original acceptance test. A report shall be submitted to the fire code official upon conclusion of the testing.~~

~~510.5.4 Qualifications of personnel. The system designer, lead installation personnel, and personnel conducting radio system tests shall be qualified to perform the work. Design documents and all tests shall be documented and signed by a person in possession of a current FCC General Radio Telephone Operator License and the following:~~

- ~~1. A current technician certification issued by the Associated Public Safety Communications Officials International (APCO); or~~
- ~~2. The National Association of Business and Education Radio (NABER); or~~
- ~~3. The Personal Communications Industry Association (PCIA); or~~
- ~~4. Certificate holder issued by the manufacturer of the equipment being installed.~~

~~510.6 Inadequate Radio Coverage. Buildings and structures which cannot support the required level of radio coverage shall be equipped with:~~

- ~~1. A radiating cable system, and/or~~
- ~~2. An internal multiple antenna system with FCC certification bi-directional 800 MHz amplifiers, or~~
- ~~3. Systems otherwise approved by the city radio system manager in order to achieve the required adequate radio coverage. In the event that a signal booster is employed, it shall be fully encased with a NEMA 4 (or~~

~~equivalent) dust/waterproof rated enclosure, and filters that reject adjacent frequencies in addition to the multi-bandpass filters.~~

~~510.7 Secondary power. If any part of the installed system or systems contains an electrically powered component, the installed system or systems shall be provided with an independent battery system or an emergency generator capable of operating for a period of at least twenty four (24) hours without external power input. The battery system shall automatically charge in the presence of external power input.~~

~~510.8 Approval prior to installation. No amplification system capable of operating on frequencies used by the Regional 800 MHz Radio System shall be installed without prior coordination and approval of the radio system licensee (Eastside Public Safety Communications Agency) and any such system must comply with any standards adopted by the King County Regional Communications Board.~~

~~510.9 Acceptance tests. Acceptance testing or an in-building radio amplification system is required upon completion of installation. It is the building owner's responsibility to have the radio system tested by qualified personnel to ensure a minimum of 95 percent two-way coverage on each floor of the building. Point of information: A Certificate of Occupancy will not be issued to any structure if the building fails to comply with these provisions. Talk-back testing from a site to the Regional 800 MHz Radio System shall use a two (2) watt, portable transceiver with speaker/microphone and flexible antenna (or any calibrated device, which will produce signal levels useable by the prescribed portable radio). Field strength testing instruments must have been calibrated within one (1) year of the date of the acceptance test. Field strength testing instruments must be of the frequency selective type incorporating a flexible antenna similar to the ones used on the hand-held transceivers. City Radio System Manager may designate alternate methods of measuring the signal level, which satisfy appropriate levels of public safety coverage. A report shall be submitted to the fire code official at the conclusion of acceptance testing containing a floor plan and the signal strengths at each location tested and other relevant information. A representative of the fire department may oversee the acceptance test. Acceptance testing is also required whenever changes occur to the building that would materially change the original filed performance test.~~

~~510.10 Testing criteria. Each floor of the building shall be divided into a grid of approximately forty (40) equal areas. A maximum of two (2) nonadjacent areas will be allowed to fail the test. In the event that three (3) of the areas fail the test, the floor may be divided into eighty (80) equal areas in order to be more statistically accurate. In such event, a maximum of four (4) nonadjacent areas will be allowed to fail the test. After the eighty (80) area tests, if the system continues to fail, the building owner shall have the system altered to meet the 95 percent coverage requirement. A spot located approximately in the center of a grid area will be selected for the test, then the radio will be keyed to verify two-way communication to and from the outside of the building through the Regional 800 MHz Radio System. Once the spot has been selected, prospecting for a better spot within the grid area is not permitted. The gain values of all amplifiers shall be measured and the results kept on file with the building owner so that the measurements can be verified each year during the annual tests. In the event that the measurement results become lost, the building owner will be required to rerun the acceptance test to reestablish the gain values. Point of information: While the foregoing implies manual measurement and recording, automated testing and recording is certainly permitted so long as a report can be produced documenting the signal strength (or average) in each test square.~~

~~510.11 Field testing. Police and fire personnel shall at any time have the right to enter onto the property to conduct its own field testing to be certain that the required level of radio coverage is present.~~

510.1 Emergency responder radio coverage. All new buildings shall have approved radio coverage for emergency responders within the building installed in accordance with Section 510 of this code and with applicable provisions of NFPA 72, National Fire Alarm Signaling Code. This section shall not require improvement of the existing public safety communication system.

**Exceptions:**

1. Buildings and area 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.
2. Buildings constructed primarily of wood frame that do not have storage or parking areas extending more than one (1) level below grade.

3. Buildings thirty-five (35) feet high (as defined by the International Building Code, Section 502) or less that do not have below grade storage or parking areas extending more than one (1) level below grade.

Should construction that is thirty-five (35) feet high or less include subterranean storage or parking, then this ordinance shall apply only to subterranean areas.

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

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

510.3 Permits required. A construction permit for the installation of or modification to an emergency responder coverage system and related equipment is required as specified in Section 105.7.5. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

510.4 Technical requirements. Systems, components, and equipment required to provide an emergency responder radio coverage system shall comply with Section 510.4.1 through 510.4.2.5.

510.4.1 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 of the building and 99 percent in elevators (measured at the primary recall floor), stair shafts, and fire command centers meet the signal strength requirements in Sections 510.4.1.1 and 510.4.1.2.

510.4.1.1 Minimum signal strength into the building. A minimum signal strength of -95 dBm shall be receivable within the building.

510.4.1.2 Minimum signal strength out of the building. A minimum signal strength of -95 dBm shall be received by the agency's radio system when transmitted from within the building.

510.4.2 System design. The emergency responder radio coverage system shall be designed in accordance with Sections 510.4.2.1 through 510.4.2.5.

510.4.2.1 Amplification systems allowed. Buildings and structures which cannot support the required level of radio coverage shall be equipped with the following:

1. A radiating cable system, and/or,

2. An internal multiple antenna system with FCC certificated bi-directional 800 MHz amplifiers, or

3. Systems otherwise approved by the City radio system manager in order to achieve the required adequate radio coverage.

510.4.2.2 Frequency range. The frequency range which must be supported shall be 806 MHz to 824 MHz and 851 MHz to 869 MHz and such other frequencies as determined by the Regional Radio System operator in all areas of the building.

510.4.2.3 Power supply. Power supplies shall conform with NFPA 72, Section 10.5 Power Supplies.

510.4.2.3.1 Secondary power. If any part of the installed system or systems contains an electrically powered component, the installed system or systems shall be provided with an independent battery system or an emergency generator capable of operating for a period of at least twenty-four (24) hours without external power input. The battery system shall automatically charge in the presence of external power input.

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 Manufacture's Association (NEMA) 4-type waterproof cabinet.

2. The battery system shall be contained in a NEMA 4-type waterproof cabinet.

3. The system shall include automatic alarming of malfunctions of the signal booster and battery system. Any resulting trouble alarm shall be automatically transmitted to an approved central 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.

4. Equipment shall have FCC certification prior to installation.

5. Signal boosters must be equipped with filters that reject adjacent frequencies in addition to the multi-band pass filters.

510.4.2.5 Additional frequencies and change of frequencies. The building owner shall modify or expand the frequency range at their own expense in the event frequency changes are required by the FCC or additional frequencies are made available by the FCC. Prior approval of a public safety radio coverage system on previous frequencies does not exempt this requirement.

Point of information: System designers should be aware that re-banding (i.e. Nextel) is currently well along making available the entire 800 MHz spectrum as well as portions of the 700 MHz band for public safety and equipment must be capable of supporting these and other spectrum bands. See [www.FCC.gov](http://www.FCC.gov) for additional information.

510.5 Installation requirements. The installation of the emergency responder radio coverage system shall be in accordance with Sections 510.5.1 through 510.5.4.

510.5.1 Approval prior to installation. No amplification system capable of operating on frequencies used by the Regional 800 MHz Radio System shall be installed without prior coordination and approval of the radio system licensee (Eastside Public Safety Communications Agency, [www.epsca.com](http://www.epsca.com), (425) 556-2515), and any such system must comply with any standards adopted by the King County Regional Communications Board.

510.5.2 Minimum qualifications of personnel. The system designer, lead installation personnel, and personnel conducting radio system tests shall be qualified to perform the work.

Design documents and all tests shall be documented and signed by a person in possession of a current FCC General Radio Telephone Operator License and a certificate or certification issued by one (1) of the following:

1. Associated Public Safety Communications Officials International (APCO).
2. National Association of Business and Education Radio (NABER).
3. Personal Communications Industry Association (PCIA).
4. Manufacturer of the equipment being installed.

510.5.3 Acceptance test procedure. Acceptance testing for emergency responder radio amplification system is required, upon completion of installation.

It is the building owner's responsibility to have the radio system tested by qualified personnel to ensure a minimum of 95 percent two-way coverage on each floor of the building.

Point of information. A certificate of occupancy will not be issued for any structure if the building fails to comply with these provisions.

A report shall be submitted to the fire department at the conclusion of acceptance testing containing a floor plan and the signal strengths at each location tested and other relevant information. A representative of the fire department may oversee the acceptance test. Acceptance testing is also required whenever changes occur to the building that would materially change the original field performance test. The test procedure shall be conducted as follows:

1. Each floor of the building shall be divided into a grid of approximately forty (40) equal areas.
2. Testing shall use a two (2) watt, portable transceiver with speaker/microphone and flexible antenna (or any calibrated device which will produce signal levels useable by the prescribed portable radio). Field strength testing instruments must have been calibrated within one (1) year of the date of the acceptance test. Field strength testing instruments must be of the frequency selective type incorporating a flexible antenna similar to the ones used on the hand held transceivers. The City radio system manager may designate alternate methods of measuring the signal level, which satisfy appropriate levels of public safety coverage.
3. A maximum of two (2) nonadjacent areas will be allowed to fail the test.
4. In the event that three (3) of the areas fail the test, the floor may be divided into eighty (80) equal areas in order to be more statistically accurate. In such event, a maximum of four (4) nonadjacent areas will be allowed to fail the test. After the eighty (80) area test, if the system continues to fail, the building owner shall have the system altered to meet the 95 percent coverage requirement.
5. A spot located approximately in the center of a grid area will be selected for the test, then the radio will be keyed to verify two-way communication to and from the outside of the building through the Regional 800 MHz Radio System. Once the spot has been selected, prospecting for a better spot within the grid area is not permitted. The gain values of all amplifiers shall be measured and the results kept on file with the building owner so that the measurements can be verified each year during the annual test. In the event that the measurement results become lost, the building owner will be required to rerun the acceptance test to reestablish the gain values.
6. 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.

7. 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 time of installation and subsequent annual inspections.

Point of information. While the foregoing implies manual measurement and recording, automated testing and recording is certainly permitted so long as a report can be produced documenting the signal strength (or average) in each test square.

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

510.6 Maintenance. The emergency responder radio coverage system shall be maintained operational at all times in accordance with Sections 510.6.1 through 510.6.3.

510.6.1 Testing and proof of compliance. The emergency responder radio coverage system shall be inspected and tested annually, or whenever structural changes occur to the building that would materially change the original field performance test by a consultant approved by the fire code official. The performance test shall include at minimum a floor plan and the signal strength in various locations of the building.

Testing shall consist of the following:

1. In-building coverage test as described in Section 510.5.3.
2. Signal boosters shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance.
3. Backup batteries and power supplies shall be tested under load of a period of one (1) hour to verify that they will properly operate during an actual power outage. If within the one- (1) hour test period the battery exhibits symptoms of failure, the test shall be extended for additional one-(1) hour periods until the integrity of the battery can be determined.
4. All other active components shall be checked to verify operation within the manufacturer's specifications.

5. At the conclusion of the testing, a report, which shall verify compliance with Section 510.5.3, shall be submitted to the fire code official no later than January 30 of each year.

510.6.2 Additional frequencies and change of frequencies. The building owner shall modify or expand the frequency range at their own expense in the event frequency changes are required by the FCC or additional frequencies are made available by the FCC. Prior approval of a public safety radio coverage system on previous frequencies does not exempt this requirement.

510.6.3 Identification. The emergency radio coverage system shall be identified by a sign located on or near the fire alarm control panel stating "This building is equipped with an Emergency Responder Radio Coverage System."

510.6.4 Field testing. Police and fire personnel shall, at any time, have the right to enter onto the property to conduct its own field testing to be certain that the required level of radio coverage is present.

~~N. A new definition is added to Section 602.1 to read as follows:~~

~~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.~~

OR. Section 803.1 is amended to read as follows:

803.1 General. The provisions of Section 803.1.1 through 803.1.3 shall be applicable to all occupancies.

PS. New Section 803.1.3 is added to read as follows:

803.1.3 Atrium furnishings. Atrium furnishings shall comply with Sections 803.1.3.1 and 803.1.3.2.

803.1.3.1 Potential heat. Potential heat of combustible furnishings and decorative materials within atria shall not exceed 9,000 Btu per pound (20,934 J/g) when located within an area that is more than 20 feet (6,096 mm) below ceiling-level sprinklers.

803.1.3.2 Decorative materials. Decorative material in atria shall be noncombustible, flame resistant or treated with a flame retardant.

QT. New Section 901.4.57 is added to read as follows:

901.4.57 Additions, change of use, alterations and repairs to buildings. Additions, change of use, alterations and repairs to buildings shall comply with this section.

901.4.57.1 Additions or changes of use. Additions or changes of use to existing buildings which would result in a nonconforming building shall be brought up to current code requirements for fire protection systems.

Exception: A one time exemption for additions to Group R, Division 3 occupancies of up to 500 square feet is permitted without compliance with this section. This exemption shall be recorded with King County Records and Elections.

901.4.57.2 Alterations and repairs. When the value of all alterations or repairs performed within a seventy month period exceeds 50% of the value of the building, then fire extinguishing systems, and fire detection systems shall be installed throughout the building if one would otherwise be required for the building if of new construction. The value of the building shall be as listed by the King County Assessor's Office or other acceptable method approved by the fire code official at the time of the first permit application or first alteration or repair work performed. Buildings not listed with an appraised value shall utilize an alternate method of valuation prescribed by the fire code official.

RU. Section 901.7 is amended to read as follows:

901.7 Systems out of service. Where a fire protection system is out of service, 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 shut down 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.

SV. Section 903.2 is amended to read as follows:

903.2 Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section.

TW. New Section 903.2.13 is added to read as follows:

903.2.13 All buildings. All newly constructed buildings shall comply with this section.

903.2.13.1 Gross square footage. All newly constructed buildings with a gross square footage of 4,800 or greater square feet, regardless of type or use as well as zero lot line townhouses with an aggregate area of all connected townhouses equaling 4,800 square feet or greater shall be sprinklered.

903.2.13.2 Fire flow. All buildings requiring 2000 gallons per minute or more fire flow shall be sprinklered.

903.2.13.3 Group R Division 3. Group R, Division 3 occupancies shall be provided with an automatic sprinkler system if adequate fire flow, or hydrant spacing, or approved fire department access is not provided as defined in IFC Sections 503 and 507.

Exception: Up to two (2) Group R, Division 3 occupancy buildings less than 2,500 gross square feet (including attached garages) shall be exempt from this section.

UX. Sections ~~903.4.2 and 903.4.3~~ are ~~is~~ amended to read as follows:

~~1. 903.4.2 Alarms. Approved audible and visible alarm notification appliances shall be connected to every automatic sprinkler system in accordance with Section 907 and throughout areas designated by the fire code official. Sprinkler water flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Alarm devices shall be provided on the exterior of the building in an approved location. Where a fire alarm system is installed, actuation of the automatic sprinkler system shall actuate the building fire alarm system.~~

~~Exception: With approval of the fire code official, audible and visible alarm notification appliances may be omitted for approved residential sprinkler systems in one or two dwelling units if not otherwise specifically required.~~

~~2. 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.~~

Exception: When approved by the fire code official in NFPA 13D and NFPA 13R Systems.

VY. Section 904.11 is amended to read as follows:

904.11 Commercial cooking systems. The automatic fire-extinguishing system for commercial cooking systems shall be of a type recognized for protection of commercial cooking equipment and exhaust system of the type and arrangement protected. Pre-engineered automatic dry- and wet-chemical extinguishing systems shall be tested in accordance with UL 300 and listed and labeled for specific use as protection for commercial cooking operations. The system shall be installed in accordance with this code, its listing and the manufacturer's installation instructions. Automatic fire-extinguishing systems of the following types shall be installed in accordance with the referenced standard indicated, as follows:

1. Carbon dioxide extinguishing systems, NFPA 12.
2. Automatic sprinkler systems, NFPA 13.
3. Foam-water sprinkler system or foam-water spray systems, NFPA 16.
4. Dry-chemical extinguishing systems, NFPA 17.
5. Wet chemical extinguishing systems, NFPA 17A.

Exceptions:

1. Factory-built commercial cooking recirculating systems that are tested in accordance with UL 197 or 710B and listed, labeled and installed in accordance with Section 304.1 of the International Mechanical Code.

WZ. New Section 905.3.89 is added to read as follows:

905.3.89 High-rise building standpipes. Standpipe risers shall be combination standpipe/sprinkler risers using a minimum pipe size of 6-inch. Two 2 1/2-inch hose connections shall be provided on every intermediate floor level landing in every required stairway. Where 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 at a minimum pressure of 150 psi (maximum 200 psi) at each standpipe connection, in addition to the flow and pressure requirements contained in NFPA 14.

AA. Section 905.4 is amended to read as follows:

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. Where stairs are required to provide roof access, the standpipe roof connections shall be located adjacent to the stair opening on the roof.

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

Exceptions:

1. 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.

2. When the fire code official determines that a standpipe connection is not needed.

6. Where the most remote portion of a nonsprinklered floor or story is more than 150 feet (45 720 mm) from a hose connection or the most remote portion of a sprinklered floor or story is more than 150 feet (45 720 mm) from a hose connection, the fire code official is authorized to require that additional hose connections be provided in approved locations.

X. Section 906.1 is amended to read as follows:

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

1. In all Group A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies.

2. Within 30 feet (9114 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.~~

YBB. New Section 907.2.24 is added to read as follows:

907.2.24 All buildings. All newly constructed buildings with a gross square footage of 3,000 or greater shall be provided with an approved automatic and manual fire alarm system.

Exceptions:

A. Group R Division 3 and 4, and Group U Occupancies having adequate fire flow and approved access.

B. Group R Division 3 and 4 dwelling units shall have interconnected single station smoke detectors in accordance with RCW 48.48.140 and WAC 212-10.

ZCC. New Section 907.2.25 is added to read as follows:

907.2.25 Remodels and tenant improvements. When undergoing remodel and tenant improvements, existing occupancies equipped with smoke detectors that are 10 or more years old shall have all such detectors replaced with modern units. Those occupancies without the protection of smoke detection shall add smoke detection in accordance with the applicable requirements in the International Residential Code or International Building Code.

DD. New Section 907.2.26 is added to read as follows:

907.2.26 Alarm panel beyond repair. When an alarm panel is beyond repair and parts are not available, a new alarm panel shall be required. Installation of the new alarm panel shall be in accordance with Section 907.

EE. Section 1103.2 is amended to read as follows:

1103.2 Emergency responder radio coverage in existing buildings. Buildings constructed prior to the implementation of this code shall not be required to comply with the emergency responder radio coverage provisions except as follows:

1. Whenever an existing wired communication system cannot be repaired or is being replaced.

2. Buildings identified in Section 510.1 undergoing substantial alteration as determined by the fire code official.

3. When buildings, classes of buildings, or specific occupancies do not have minimum radio coverage -signal strength as identified in Section 510.4.1 and the fire code official determines that lack of minimum signal strength poses an undue risk to emergency responders that cannot be reasonably mitigated by other means.

FF. Sections 1103.8 and 1103.8.1 are amended to read as follows:

1. 1103.8 Single- and multiple-station smoke alarms. Single- and multiple-station smoke alarms shall be installed in existing Group I-1 and R occupancies in accordance with Sections 1103.8.1 through 1103.8.3.

2. 1103.8.1 Where required. Existing Group I-1 and R occupancies shall be provided with single-station smoke alarms in accordance with Section 907.2.11, except as provided in Sections 1103.8.2 and 1103.8.3.

Exception: Where smoke detectors connected to a fire alarm system have been installed as a substitute for smoke alarms.

~~AA. Section 1404.5 is amended to read as follows:~~

~~1404.5 Fire watch. When required by the fire code official for building construction or demolition that is hazardous in nature, qualified personnel shall be provided to serve as an onsite fire watch. Fire watch personnel shall be provided with at least one approved means for notification of the fire department and their sole duty shall be to perform constant patrols and watch for the occurrence of fire.~~

~~BBGG. Section 2703.9~~5003.9 is amended to read as follows:

~~2703.9~~5003.9 General safety precautions. General precautions for the safe storage, handling or care of hazardous materials shall be in accordance with Sections ~~2703.9.1~~5003.9.1 through ~~2703.9.10~~5003.9.11.

~~CC~~HH. New Section ~~2703.9.11~~5003.9.11 is added to read as follows:

~~2703.9.11~~5003.9.11 Manufacturer's Limitations. The storage and use of hazardous materials shall not exceed the manufacturer's limitations on shelf life and any other restrictions on use.

~~DD~~II. Sections ~~3204.3.1.1~~3504.3.1.1.3, ~~3404.2.9.6~~15704.2.9.6.1, ~~3406.2.4.4~~5706.2.4.4, and ~~3804.26~~104.2 are amended to read as follows: ~~designate the applicable areas as the city of Shoreline, except as allowed by the fire code official.~~

1. 5504.3.1.1.3 Location. Amended to designate the applicable areas as the City of Shoreline, except as allowed by the fire code official.

2. 5704.2.9.6.1 Locations where above-ground tanks are prohibited. Amended to designate the applicable areas as the City of Shoreline, except as allowed by the fire code official.

3. 5706.2.4.4 Locations where above-ground tanks are prohibited. Amended to designate the applicable areas as the City of Shoreline, except as allowed by the fire code official.

4. 6104.2 Maximum capacity within established limits. Amended to designate the applicable areas as the City of Shoreline, except as allowed by the fire code official.

**EXHIBIT 5**

Section 15.05.070 is amended to read as follows:

**15.05.070 International Property Maintenance Code amendments.**

\* \* \* *[A – C unchanged]*

D. Section 108.7 is amended to read as follows:

108.7 Relocation assistance. If a rental dwelling or portion of a dwelling or its premises is declared condemned or unlawful to occupy and is required to be vacated, the landlord, who knew or should have known of the existence of these conditions, shall be required to pay relocation assistance and any prepaid deposit and prepaid rent to the displaced tenants in accordance with the Revised Code of Washington (RCW) 59.18.085. The City shall advance relocation assistance funds, prepaid deposit and prepaid rent to eligible tenants as set forth in RCW 59.18.085 in the event the landlord fails to pay the relocation assistance as required.

\* \* \* *[E – I unchanged]*

J. Section 302.8 is amended to read as follows:

302.8 Motor vehicles, recreational vehicles, and boats. Except as provided for in other regulations, no inoperative or unlicensed motor vehicle, recreational vehicle or boat shall be parked, kept or stored on any premises, and no vehicle, recreational vehicle or boat shall at any time be in a state of major disassembly, disrepair, damaged to the extent it prevents normal operation, or in the process of being stripped or dismantled. Every motor vehicle, recreational vehicle or boat parked, kept or stored on any premises shall display current and valid registration tabs properly mounted in accordance with State of Washington rules and regulations. Painting of vehicles and boats is prohibited unless conducted inside an approved spray booth.

\* \* \* *[K – L unchanged]*