ATTACHMENT A

CITY OF BELLEVUE, WASHINGTON

ORDINANCE NO. _____

AN ORDINANCE amending the Bellevue City Code to adopt certain State Building Code updates and local amendments thereto; amending Chapter 23.05 relating to construction code administration; repealing Chapter 23.10 in its entirety and replacing it with a new Chapter 23.10 reflecting amendments to state building codes; repealing Chapter 23.12 in its entirety and replacing it with a new Chapter 23.12 reflecting amendments to state residential codes; amending Chapter 23.16 to reflect amendments to swimming pool enclosures; repealing Chapter 23.50 in its entirety and replacing it with a new Chapter 23.50 reflecting amendments to state mechanical and related codes; repealing Chapter 23.60 in its entirety and replacing it with a new Chapter 23.60 reflecting amendments to state plumbing and related codes, and establishing an effective date.

WHEREAS, RCW 19.27.031 expressly requires the City of Bellevue adopt state building, residential, mechanical, fire, plumbing and related uniform codes; and

WHEREAS, RCW 19.27.060 provides the City with authority to amend the codes enumerated in RCW 19.27.031 as they apply within the City's corporate boundaries, provided such modifications do not result in less than the minimum performance standards and objectives contained in the state building code;

WHEREAS, current provisions of the Bellevue City Code adopt and rely upon various state and national codes, which have been superseded by statewide amendments (2015 editions) which become effective July 1, 2016; and

WHEREAS, the 2015 amendments to the national codes necessitate corollary amendments to the Bellevue City Code; now therefore

THE CITY COUNCIL OF THE CITY OF BELLEVUE, WASHINGTON, DOES ORDAIN AS FOLLOWS:

Section 1. Section 23.05.080 of the Bellevue City Code is hereby amended to read as follows:

23.05.080 Duties and powers of building official.

In addition to the duties and powers set forth in other sections of this chapter and the technical codes, the building official shall have the following duties and powers:

A. General. The building official is hereby authorized and directed to enforce the provisions of this chapter and the technical codes. The building official shall have the authority to render interpretations of this chapter and the technical codes and to adopt policies and procedures supplemental to this chapter and the technical codes as deemed necessary in order to clarify the application of their provisions. Such

interpretations, policies and procedures shall be in compliance with the intent and purpose of this chapter and the technical codes.

1. The building 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.

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Section 2. Section 23.05.090 of the Bellevue City Code is hereby amended to read as follows:

23.05.090 Permits required.

A. Technical Codes Other Than the Electrical Code – Required. Any person who intends to construct, enlarge, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this chapter and the technical codes, or to cause any such work to be done, shall first make application to the building official and obtain the required permit.

B. Technical Codes Other than the Electrical Code – Work Exempt from Permit. Certain work is exempt from the permit requirements of this chapter and the technical codes. Exemptions from permit requirements of this chapter and the technical codes shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this chapter, the technical codes or any other laws or ordinances of the city. An exemption from the permit requirements of one technical code does not exempt work from the permit requirements of other technical codes or other laws or ordinances of the city. Permits shall not be required for the following:

1. Emergency Repairs. Where equipment replacements and equipment repairs must be performed in an emergency situation posing a significant and immediate risk to life and safety, or a significant and immediate risk of loss to property, the permit application shall be submitted within the next working business day to the building official.

2. Repairs. Application or notice to the building official is not required for ordinary repairs to structures. Such repairs shall not include the cutting away of any wall, partition or portion thereof, the removal or cutting of any structural beam or load-bearing support, or the removal or change of any required means of egress, or rearrangement of parts of a structure affecting the egress requirements; nor shall ordinary repairs include addition to, alteration of, replacement or relocation of any standpipe, water supply, sewer, drainage, drain leader, gas, soil, waste, vent or similar piping, electric wiring or mechanical or other work affecting public health or general safety.

3. The following work otherwise governed by Chapter 23.10 BCC:

a. One-story detached structures accessory to 1-family or 2-family residential (houses and duplexes), used as tool and storage sheds, tree-supported play structures, playhouses and similar uses, provided the floor area does not exceed 200 square feet (11.15 m^2).

b. Fences not over eight feet (2,438 mm) high.

c. Oil derricks.

d. Retaining walls which are not over four feet (1,219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II or III-A liquids.

e. Water tanks supported directly on grade if the capacity does not exceed 5,000 gallons (18,925 L) and the ratio of height to diameter or width does not exceed two to one.

f. Sidewalks, decks and driveways not more than 30 inches (762 mm) above grade (or grade plane, as applicable) and not over any basement or story below and which are not part of an accessible route or means of egress.

g. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.

h. Temporary motion picture, television and theater stage sets and scenery.

i. Prefabricated swimming pools accessory to structures regulated by the IRC or accessory to Group R-3 and Group U occupancies regulated by the IBC, which are less than 24 inches (610 mm) deep, do not exceed 5,000 gallons (18, 925 L) and are installed entirely above ground.

j. Shade cloth structures constructed for nursery or agricultural purposes and not including service systems.

k. Swings, slides and other similar playground equipment.

l. Window awnings supported by an exterior wall which do not project more than 54 inches (1,372 mm) from the exterior wall and do not require additional support of structures regulated by the IRC or of Group R-3 and Group U occupancies regulated by the IBC.

m. Movable cases, counters and partitions not over five feet, nine inches (1,753 mm) in height.

n. Work primarily within public right-of-way.

o. ~~Public utility t~~Towers and poles owned by public utilities, including associated public and private equipment attached to such towers and poles. Note: Communication towers owned by private companies, and any equipment associated with such towers, are not exempt.

p. Replacement of nonstructural siding on IRC structures except for stucco, and brick or stone veneer greater than four feet above grade plane.

q. In-kind (same size) window replacement for structures where no alteration of structural members is required.

r. Single-story construction job shacks that are placed on a permitted job site during construction. Job shacks shall be removed upon final approval of construction, or may be required to be removed if the permit expires or is suspended or cancelled. A construction job shack is a portable structure for which the primary purpose is to house equipment and supplies, and which may serve as a temporary office during construction for the purposes of the construction activity.

s. Replacement of residential and commercial roofing.

t. Photovoltaic (PV) panels meeting all of the following criteria:

1. PV system is designed and proposed for a detached single family house.
2. PV system is designed for the rooftop of a house in compliance with applicable codes.
3. The mounting system is engineered and designed for PV.
4. The rooftop is made from lightweight material such as shingles.
5. PV system has an approved and issued electrical permit.
6. To address uplift, panels are mounted no higher than 18” above the surface of the roofing to which they are affixed, and except for flat roofs, no portion of the system may exceed the highest point of the roof.
7. Total dead load of panels, supports, mountings, raceways and all other appurtenances weigh no more than:

☐ Three and one-half (3.5) pounds per square foot (PSF); or

☐ Four and one-half (4.5) pounds per square foot for frameless panels on a roof with a slope of at least three (3) vertical in twelve (12) horizontal; or

☐ Five (5.0) pounds per square foot for frameless panels on a roof with a slope of at least five (3) vertical in twelve (12) horizontal.

8. Supports for solar panels are installed to spread the dead load across as many roof-framing members as needed to ensure that at no point are loads caused in excess of fifty (50) pounds.
9. Attachment to the roof is specified by the mounting system manufacturer.
10. A method and type of weatherproofing roof penetrations is provided
11. The house is code compliant with setbacks and height, or the code allows expansion of nonconformity for solar panels.
12. The PV panels are mounted no higher than the roof ridge or apex of roof (applies only to sloped roofs).

u. Flag and light poles located on private property less than or equal to 20 feet in height, but not exempting permit requirement for any electrical work.

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Section 3. Section 23.05.090 of the Bellevue City Code is hereby amended to read as follows:

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F. Application for Permits Governed by Chapter 23.10 BCC – Other Filings Required.

1. At the time of filing a building permit application, the applicant shall submit all information required to be submitted, together with any application form and application fee therefor, for any of the following approvals which may be applicable to the proposed project:

a. Design review, Land Use Code, Part 20.30F;

b. Administrative conditional use permit, Land Use Code, Part 20.30E;

c. Conditional use permit, shorelines conditional use permit, planned unit development, Land Use Code, Parts 20.30B, 20.30C and 20.30D;

d. Variance or shorelines variance, Land Use Code, Parts 20.30G, 20.30H and shorelines substantial development permit, Land Use Code, Part 20.25E;

e. Clearing and grading permit, Chapter 23.76 BCC.

2. No building permit application will be accepted for filing by the building official for any proposed project for which any of the approvals referred to in subsection (A) of this section is required unless the building permit application is accompanied by all information required to be filed for such required approvals.

3. The filing of a complete building permit application for a proposed project, which is in compliance with applicable state law and the codes, ordinances and regulations of the city in effect at the time of such filing, shall establish a vested right, if a building permit is issued, to proceed with construction of the proposed project in accordance with such then-existing codes, ordinances and regulations; provided, however, such proposed project may nonetheless be conditioned or denied by the city under the State Environmental Policy Act. For the purpose of this subsection, a “complete building permit application” means an application which contains all information required to be submitted

by any applicable provisions of this chapter and the technical codes, including, but not limited to, all information required to be submitted by subsection (A) of this section. A shoring permit, to protect the public right-of-way or adjacent private property, shall not establish vesting of the proposed project.

a. When approved by the building official, a phasing plan may be submitted for review, and if approved, the phasing plan shall thereby establish a schedule for vesting of the proposed project subject to submittal of the first complete building permit application identified in the phasing plan, excluding a shoring permit. The phasing plan is subject to the following limitations. After the first building permit application, each subsequent permit identified in the phasing plan shall be submitted with a complete building application within 12 months of the submittal of the prior permit, and the last permit application for the proposed project shall be submitted with a complete building permit application within 36 months of the first permit application which established vesting for the proposed project. The first permit application must be issued and must not expire per BCC 23.05.090(H) to maintain project vesting, and the issued permit must not expire due to not starting work within 1 year or suspending work for more than 180 days per BCC 23.05.100(E). The vested status for the project is retained beyond the 3-year maximum life of the first permit if all inspections required for the work under that permit have been completed and approved. The vested status will not apply to any permit application submitted more than 36 months after the first permit application which established vesting.

4. No application for design review, administrative conditional use permit, planning commission design review, planned unit development, conditional use permit, variance, shorelines variance, shorelines substantial development permit or a clearing and grading permit shall be accepted by the city for filing unless it is accompanied by a complete building permit application.

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Section 4. Section 23.05.130 of the Bellevue City Code is hereby amended to read as follows:

23.05.130 Inspections.

A. General. Construction or work for which a permit is required shall be subject to inspection by the building official and such construction or work shall remain accessible and exposed for inspection purposes until approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this chapter, the technical codes, or of other ordinances of the city. Inspections presuming to give authority to violate or cancel the provisions of this chapter, the technical codes, or of other ordinances of the city shall not be valid. It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Neither the building official nor the city shall be liable for expense entailed in the removal or replacement of any material required to allow inspection. When the installation of an electrical system is complete, an additional and final inspection shall be made. Electrical systems and equipment regulated by the National Electrical Code shall not be connected to the energy source until authorized by the building official.

B. Preliminary Inspections. Before issuing a permit, the building official is authorized to examine or cause to be examined buildings, structures and sites for which an application has been filed.

C. Required Inspections. The building official, upon notification, ~~shall~~is authorized to make the following inspections:

1. Footing and Foundation Inspection. Footing and foundation inspections shall be made after excavations for footings are complete and any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. Materials for the foundation shall be on the job, except where concrete is ready-mixed in accordance with ASTM C 94, the concrete need not be on the job.

2. Electrical Underground. Underground inspection shall be made after trenches or ditches are excavated and bedded, piping and conductors are installed, and before backfill is installed. Where excavated soil contains rocks, broken concrete, frozen chunks and other rubble that would damage or break the raceway, cable or conductors, or where corrosive action will occur, protection shall be provided in the form of granular or selected material, approved running boards, sleeves or other means.

3. Concrete Slab and Under-Floor Inspection. Concrete slab and under-floor inspections shall be made after in-slab or under-floor reinforcing steel and building service equipment, conduit, slab insulation, piping accessories and other ancillary equipment items are in place, but before any concrete is placed or floor sheathing installed, including the subfloor.

4. Lowest Floor Elevation. In flood hazard areas, upon placement of the lowest floor, including the basement, and prior to further vertical construction, the elevation certification required in IBC Section 1612.5 or IRC Section R323 shall be submitted to the building official.

5. Exterior Wall Sheathing Inspection. Exterior wall sheathing shall be inspected after all wall framing is complete, strapping and nailing is properly installed but prior to being covered.

6. Roof Sheathing Inspection. Roof sheathing shall be inspected after all roof framing is complete. No roof coverings shall be installed until inspections are made and approved.

7. IMC/UPC/GAS/NEC Rough-In Inspection. Rough-in mechanical, gas piping, plumbing and electrical shall be inspected when the rough-in work is complete and, if required, under test. No connections to primary utilities shall be made until the rough-in work is inspected and approved. Electrical rough-in inspection shall be made after the roof, framing, fireblocking and bracing are in place and all wiring and other components to be concealed are complete, and prior to the installation of wall or ceiling membranes. All required equipment grounding conductors installed in concealed cable or flexible conduit systems must be completely installed and made up at the time of the rough-in cover inspection.

Exception: Ground-source heat pump loop systems tested in accordance with IMC 1208.1.1 shall be permitted to be backfilled prior to inspection.

8. Frame Inspection. Framing inspections shall be made after the roof deck or sheathing, all framing, fire blocking and bracing are in place and pipes, chimneys and vents to be concealed are complete and the rough electrical, plumbing, heating wires, pipes and ducts are approved.

9. Lath Inspection and Gypsum Board Inspection. Lath and gypsum board inspections shall be made after lathing and gypsum board, interior and exterior, are in place, but before any plastering is applied or gypsum board joints and fasteners are taped and finished.

Exception: Gypsum board that is not part of a fire-resistance rated assembly or a shear assembly.

10. Fire-Resistant Penetration Inspections. Protection of joints and penetrations in fire-resistance-rated assemblies shall not be concealed from view until inspected and approved.

11. Energy Efficiency Inspection.

a. Envelope.

i. Wall Insulation Inspection. To be made after all wall insulation and air vapor retarder sheet or film materials are in place, but before any wall covering is placed.

ii. Glazing Inspection. To be made after glazing materials are installed in the building.

iii. Exterior Roofing Insulation. To be made after the installation of the roof insulation, but before concealment.

iv. Slab/Floor Insulation. To be made after the installation of the slab/floor insulation, but before concealment.

b. Mechanical.

i. Mechanical Equipment Efficiency and Economizer. To be made after all equipment and controls required by this chapter and the technical codes are installed and prior to the concealment of such equipment or controls.

ii. Mechanical Pipe and Duct Insulation. To be made after all pipe and duct insulation is in place, but before concealment.

c. Lighting and Motors.

i. Lighting Equipment and Controls. To be made after the installation of all lighting equipment and controls required by this chapter and the technical codes, but before concealment of the lighting equipment.

ii. Motor Inspections. To be made after installation of all equipment covered by the energy code, but before concealment.

12. Electrical. The building official may require special inspection of equipment or wiring methods under the following conditions:

a. Where the installation requires special training, equipment, expertise, or knowledge;

b. Where there is insufficient evidence of compliance with the provisions of this code;

c. Where the material or method does not conform to the requirements of this code; or

d. To substantiate claims for alternative materials or methods.

Where such special inspection is required, it shall be performed by an accredited electrical products testing laboratory approved by the state of Washington under WAC 296-46B-999 and acceptable to the building official. The special inspection person/agency shall be designated and approved prior to beginning the installation of wiring or equipment. A written report from the designated special inspection agency indicating that the installation conforms to the appropriate codes and standards shall be received by the building official prior to that installation being approved. All costs for such testing and reporting shall be the responsibility of the permit holder.

13. Final Inspection. The final inspection shall be made after all work required by the permit is completed.

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Section 5. Chapter 23.10 of the Bellevue City Code is hereby repealed in its entirety and replaced with a new Chapter 23.10 to read as follows:

Chapter 23.10
BUILDING CODE

Sections:

23.10.302.1 International Building Code Section 302.1 amended - General.
23.10.403.2.1.1 International Building Code Section 403.2.1.1 amended – Type of construction.
23.10.403.3 International Building Code Section 403.3 amended – Automatic sprinkler system.
23.10.403.3.1 International Building Code Section 403.3.1 amended – Number of sprinkler risers and system design.
23.10.403.3.2 International Building Code Section 403.3.2 amended – Water supply to required fire pumps.
23.10.403.3.3 International Building Code Section 403.3.3 amended – Secondary water supply.
23.10.403.4.8 International Building Code Section 403.4.8 amended – Standby and emergency power.
23.10.403.5 International Building Code Section 403.5 amended – Means of egress and evacuation.
23.10.403.7 International Building Code Section 403.7 added – Smoke control.
23.10.405.1 International Building Code Section 405.1 amended –General.
23.10.424.1 International Building Code Section 424.1 amended – Children's play structures.
23.10.503.1 International Building Code Section 503.1 amended – General.
23.10.708.6 International Building Code Section 708.6 amended – Openings.
23.10.903.2 International Building Code Section 903.2 amended – All occupancies.
23.10.903.3.1 International Building Code Section 903.3.1 amended – Standards.
23.10.903.3.1.1.1 International Building Code Section 903.3.1.1.1 amended – Exempt locations.
23.10.903.3.1.1.3 International Building Code Section 903.3.1.1.3 added – Seismic coefficient.
23.10.903.3.1.2 International Building Code Section 903.3.1.2 amended – NFPA 13R sprinkler systems.
23.10.903.3.3 International Building Code Section 903.3.3 amended – Obstructed locations.
23.10.903.4.3 International Building Code Section 903.4.3 amended – Floor control valves.
23.10.903.5 International Building Code Section 903.5 amended – Testing and maintenance.
23.10.905.3 International Building Code Section 905.3 amended – Required installations.
23.10.905.3.1 International Building Code Section 905.3.1 amended – Height.
23.10.905.3.9 International Building Code Section 905.3.9 added – High-rise building standpipes.
23.10.905.3.10 International Building Code Section 905.3.10 added – Vertical Standpipes served by fire pumps.
23.10.905.4 International Building Code Section 905.4 amended – Location of Class I standpipe hose connections.
23.10.905.8 International Building Code Section 905.8 amended – Dry standpipes.
23.10.907.1 International Building Code Section 907.1 amended – General.
23.10.907.1.2 International Building Code Section 907.1.2 amended – Fire alarm shop drawings.
23.10.907.2.7.1 International Building Code Section 907.2.7.1 deleted – Occupant notification.
23.10.907.2.13.1.1 International Building Code Section 907.2.13.1.1 amended – Area smoke detection.
23.10.907.2.13.2 International Building Code Section 907.2.13.2 amended – Fire department communication system.
23.10.907.2.18.1 International Building Code Section 907.2.18.1 amended – Smoke detectors.
23.10.907.5 International Building Code Section 907.5 amended – Occupant notification system.

23.10.907.5.2.1.1 International Building Code Section 907.5.2.1.1 amended – Average sound pressure.
23.10.907.5.2.2 International Building Code Section 907.5.2.2 amended – Emergency voice/alarm communication systems.
23.10.907.5.2.3 International Building Code Section 907.5.2.3 amended – Visible alarms.
23.10.907.6.3.1 International Building Code Section 907.6.3.1 amended – Annunciator panel.
23.10.907.6.4.1 International Building Code Section 907.6.4.1 amended – Graphic annunciator.
23.10.909.1 International Building Code Section 909.1 amended – Scope and purpose.
23.10.909.4.6 International Building Code Section 909.4.6 amended – Duration of operation.
23.10.909.10.2 International Building Code Section 909.10.2 amended – Ducts, including shafts acting as ducts.
23.10.909.10.3 International Building Code Section 909.10.3 amended – Equipment, inlets and outlets.
23.10.909.11 International Building Code Section 909.11 amended – Emergency power.
23.10.909.12.1 International Building Code Section 909.12.1 amended – Verification.
23.10.909.17 International Building Code Section 909.17 amended – System response time.
23.10.909.18.8.3.2 International Building Code Section 909.18.3.3.2 added– Certificate of compliance.
23.10.909.20 International Building Code Section 909.20 amended – Smokeproof enclosures.
23.10.909.20.6.3 International Building Code Section 909.20.6.3 amended – Acceptance and testing.
23.10.909.21.3 International Building Code Section 909.21.3 amended – Ducts for system.
23.10.909.21.4.4 International Building Code Section 909.21.4.4 amended – Fan capacity.
23.10.911.1.2 International Building Code Section 911.2 amended – Separation and penetrations.
23.10.912.5 International Building Code Section 912.5 amended – Signs.
23.10.913.2 International Building Code Section 913.2 amended – Protection against interruption of service.
23.10.1008.3.4 International Building Code Section 1008.3.4 amended – Duration.
23.10.1011.12.2 International Building Code Section 1011.12.2 amended – Roof access.
23.10.1011.7 International Building Code Section 1011.7 amended – Stairway construction.
23.10.1612.3 International Building Code Section 1612.3 amended – Establishment of flood hazard areas.
23.10.1612.4 International Building Code Section 1612.4 amended – Design and construction.
23.10.1613.1 International Building Code Section 1613.1 amended – Scope.
23.10.1705.17 International Building Code Section 1705.17 deleted – Fire-resistant penetrations and joints.
23.10.2701 International Building Code Section 2701 amended – General.
23.10.2702 International Building Code Section 2702 amended – Emergency and standby power systems.
23.10.3002.4 International Building Code Section 3002.4 amended – Elevator car to accommodate ambulance stretcher.
23.10.3007.1 International Building Code Section 3007.1 Amended – General.
23.10.3007.6.2 International Building Code Section 3007.6.2 Amended – Lobby enclosure.

23.10.3007.10 International Building Code Section 3007.10 Added – Phase I emergency recall operation.
23.10.3008.6.7 International Building Code Section 3008.6.7 added – Lobby status indicator.
23.10.3304.1 International Building Code Section 3304.1.5 added – Excavation and shoring near improved public places.
23.10.3306.1 International Building Code Table 3306.1 amended – Protection of pedestrians.
23.10.3306.2 International Building Code Section 3306.2 amended – Walkways.

23.10.010 Amendments and adoptions.

The following codes, all as amended, added to, or excepted in this chapter, together with all amendments and additions provided in this title, are adopted and shall be applicable within the city:

A. International Building Code.

1. Code Adoption. The 2015 Edition of the International Building Code published by the International Code Council, as adopted and amended by the State Building Code Council in Chapter 51-50 WAC, excluding Chapter 1, “Administration,” is adopted, and shall be applicable within the city, as amended, added to and excepted in this chapter. Those sections of the 2015 Edition of the International Building Code that are not being adopted by the city (except Chapter 1 referenced above) are listed in consequential order with the city’s local amendments. The 2015 International Swimming Pool and Spa Code published by the International Code Council, as adopted and amended in WAC 51-50-3109, shall be applicable within the city.

2. Scope. The provisions of the International Building Code as adopted, amended, added to, or excepted in this chapter shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures, except where such work is regulated by the 2015 International Existing Building Code.

Exception: Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures shall comply with the International Residential Code.

B. International Energy Conservation Code.

1. Code Adoption. The International Energy Conservation Code, as provided in RCW 19.27A.020 and as adopted by the State Building Code Council in Chapter 51-11C WAC and Chapter 51-11R WAC, is adopted and shall be applicable within the city, as amended, added to, or excepted in this chapter.

C. Abatement of Dangerous Buildings Code.

1. Code Adoption. The 1997 Edition of the Uniform Code for the Abatement of Dangerous Buildings published by the International Council of Building Officials, except for Section 205 and Chapters 5, 6, 7, 8, and 9, is adopted and shall be applicable within the city, as amended, added to, or excepted in this chapter.

2. Scope. The 1997 Edition of the Uniform Code for the Abatement of Dangerous Buildings, as adopted, amended, added to, or excepted in this chapter, provides equitable remedies consistent with other laws for the repair, vacation or demolition of dangerous buildings.

D. Uniform Housing Code.

1. Code Adoption. The 1997 Edition of the Uniform Housing Code as published by the International Conference of Building Officials, except Sections 104, 201.1, 201.2, 203, 302, and Chapters 12, 13, 14, 15 and 16, is adopted and shall be applicable within the city, as amended, added to, or excepted in this chapter.

2. Scope. The 1997 Edition of the Uniform Housing Code, as adopted, amended, added to, or excepted in this chapter, provides requirements affecting conservation and rehabilitation of housing.

E. Adoption by Reference. All codes, standards, rules and regulations adopted by this section are adopted by reference thereto and by this reference fully incorporated herein. Not less than one copy of each code, standard, rule or regulation, in the form in which it was adopted, shall be filed in the city clerk's office and be available for use and examination by the public.

23.10.015 Amendments, additions, or exceptions to the 2015 International Building Code. Pursuant to RCW 19.27.060, the following contains amendments, additions, or exceptions to the International Building Code applicable and enforceable within the city.

23.10.202 International Building Code Section 202 amended – Definitions. International Building Code Section 202 is hereby amended as follows:

. . . .

[F] HIGH-RISE BUILDING. A building with an occupied floor or occupied roof located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access.

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23.10.202 International Building Code Section 202 amended – Definitions. International Building Code Section 202 is hereby amended as follows:

[F] STANDBY POWER SYSTEM. All references to Standby Power System shall be considered to indicate Legally Required Power in accordance with the Washington

Cities Electrical Code, and NFPA 70 (National Electrical Code), and shall be in accordance with Chapter 27 Legally Required Standby Power, as a~~A~~ source of automatic electric power of a required capacity and duration to operate required building, hazardous materials or ventilation systems in the event of a failure of the primary power. Standby power systems are required for electrical loads where interruption of the primary power could create hazards or hamper rescue or fire-fighting operations.

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23.10.202 International Building Code Section 202 amended – Definitions. International Building Code Section 202 is hereby amended to add the following definition:

[F] WATER SUPPLY. The source and delivery system supplying the required flow (gpm) and pressure (psi) to a sprinkler system or other fire protection system/equipment.

23.10.302.1 International Building Code Section 302.1 amended – General. International Building Code Section 302.1 is hereby amended to read as follows:

302.1 General. Structures or portions of structures shall be classified with respect to occupancy in one or more of the groups listed in this section. A room or space that is intended to be occupied at different times for different purposes shall comply with all of the requirements that are applicable to each of the purposes for which the room or space will be occupied. Structures with multiple occupancies or uses shall comply with Section 508. Where a structure is proposed for a purpose that is not specifically provided for in this code, such structure shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved. Occupied roofs shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved and shall comply with Section 503.1.4.

1. Assembly (see Section 303): Groups A-1, A-2, A-3, A-4 and A-5.
2. Business (see Section 304): Group B.
3. Educational (see Section 305): Group E.
4. Factory and Industrial (see Section 306): Groups F-1 and F-2.
5. High Hazard (see Section 307): Groups H-1, H-2, H-3, H-4 and H-5.

6. Institutional (see Section 308): Groups I-1, I-2, I-3 and I-4.

7. Mercantile (see Section 309): Group M.

8. Residential (see Section 310): Groups R-1, R-2, R-3 and R-4.

9. Storage (see Section 311): Groups S-1 and S-2.

10. Utility and Miscellaneous (see Section 312): Group U.

23.10.403.2.1.1 International Building Code Section 403.2.1.1 amended – Type of construction. International Building Code Section 403.2.1.1 is hereby amended to read as follows:

403.2.1.1 Type of construction. The following reductions in the minimum *fire-resistance rating* of the building elements in Table 601 shall be permitted as follows:

1. For buildings not greater than 420 feet (128 000 mm) in *building height*, the *fire-resistance rating* of the building elements in Type IA construction, other than structural frame and bearing walls, shall be permitted to be reduced to the minimum fire-resistance ratings for the building elements in Type IB.

~~**Exception:** The required *fire-resistance rating* of columns supporting floors shall not be reduced.~~

2. In other than Groups F-1, M and S-1 occupancies, the *fire-resistance rating* of the building elements in Type IB construction, other than structural frame and bearing walls, shall be permitted to be reduced to the *fire-resistance ratings* in Type IIA.

3. The *building height* and *building area* limitations of a building containing building elements with reduced *fire-resistance ratings* shall be permitted to be the same as the building without such reductions.

23.10.403.3 International Building Code Section 403.3 amended – Automatic sprinkler system. International Building Code Section 403.3 is hereby amended to read as follows:

[F] 403.3 Automatic sprinkler system – High-rise building. Buildings and structures shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 and a secondary water supply where required by Section 403.3.3.

~~**Exception:** An *automatic sprinkler system* shall not be required in spaces or areas of:~~

~~1. *Open parking garages* in accordance with Section 406.5.~~

~~2. Telecommunications equipment buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided that those spaces or areas are equipped throughout with an automatic fire detection system in accordance with Section 907.2 and are separated from the remainder of the building by not less than 1-hour *fire barriers* constructed in accordance with Section 707 or not less than 2-hour *horizontal assemblies* constructed in accordance with Section 711, or both.~~

23.10.403.3.1 International Building Code Section 914.3.1.3 amended – Number of sprinkler risers and system design. International Building Code Section 403.3.1 is hereby amended by the addition of a new subsection 403.3.1.2 to read as follows:

403.3.1.2 High-rise building sprinkler system design. Combination standpipe/sprinkler risers using 6 in. pipe minimum, shall be used. Shut-off valves and water-flow devices shall be provided on each floor at the sprinkler system connection to each standpipe. Two four-way fire department connections serving the combination system shall be provided on separate streets well separated from each other. At least one of the fire department connections shall be connected to the riser above a riser isolation valve. Dry pipe sprinkler systems serving parking garages may use one separate two-way fire department connection. The dry pipe sprinkler system shall be supplied by the on-site water tank.

23.10.403.3.2 International Building Code Section 403.3.2 amended – Water supply to required fire pumps. International Building Code Section 403.3.2 is hereby amended to read as follows:

[F] 403.3.2 Water supply to required fire pumps. In buildings that are more than 450~~420~~ feet in *building height*, required fire pumps shall be supplied by connections to

no fewer than two water mains located in different streets and shall not serve other buildings. Separate supply piping shall be provided between each connection to the water main and the pumps. Each connection and the supply piping between the connection and the pumps shall be sized to supply the flow and pressure required for the pumps to operate.

Exception: When approved by the fire code official, ~~T~~two connections to the same main shall be permitted provided the main is valved such that an interruption can be isolated so that the water supply will continue without interruption through no fewer than one of the connections.

23.10.403.3.3 International Building Code Section 403.3.3 amended – Secondary water supply. International Building Code Section 403.3.3 is hereby amended to read as follows:

[F] 403.3.3 Secondary water source. A secondary on-site water source shall be provided for high-rise building as follows:

1. High-rise buildings containing R or B occupancy only shall be provided with a net useable volume of 15,000 gallons.

2. High-rise buildings containing an S-2 occupancy shall be provided with a net useable volume of 40,000 gallons.

3. High-rise buildings containing an M occupancy shall be provided with a net useable volume of 50,000 gallons.

4. Multi high-rise complexes that are less than 450’ in height may share a common secondary water source shall by combining the highest demand of number 2 or 3 above, with number 1 above. Only one parking/retail area and 2 high-rise buildings may share a common secondary water source.

An acceptable alternative to items 1 through 4 above, is to prove a calculated net useable volume capable of meeting the hydraulically calculated sprinkler demand, including the total (combined inside and outside) hose stream requirement, as per NFPA 13. The duration of the calculated source shall have a duration of not less than 30 minutes for buildings with light hazard occupancies only and a 60 minute duration for building with ordinary hazard occupancies as defined by NFPA 13.

Exception: Existing buildings, including those undergoing substantial renovation.

~~An automatic secondary on-site water supply having a capacity not less than the hydraulically calculated sprinkler demand, including the hose stream requirement, shall be provided for *high-rise buildings* assigned to Seismic Design Category C, D, E or F as determined by Section 1613. An additional fire pump shall not be required for~~

~~the secondary water supply unless needed to provide the minimum design intake pressure at the suction side of the fire pump supplying the *automatic sprinkler system*. The secondary water supply shall have a duration of not less than 30 minutes.~~

23.10.403.4.8 International Building Code Section 403.4.8 amended – Standby and emergency power. International Building Code Section 403.4.8 is hereby amended to read as follows:

403.4.8 Standby and emergency power. A standby power system complying with Section 2702 and Section 3003 shall be provided for the standby power loads specified in Section 403.4.8.3. An emergency power system complying with Section 2702 shall be provided for the emergency power loads specified in Section 403.4.8.4.

403.4.8.1 Equipment room. If the standby or emergency power system includes a generator set inside a building, the system shall be in accordance with Section 2702.1.8 ~~located in a separate room enclosed with 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both System supervision with manual start and transfer features shall be provided at the *fire command center*~~.

Exception: In Group I-2, Condition 2, manual start and transfer features for the critical branch of the emergency power are not required to be provided at the *fire command center*.

403.4.8.1.1 Penetrations. Penetrations into and openings through an equipment room containing a standby or emergency generator set inside a building, are prohibited except for required exit doors, equipment and ductwork necessary for heating, cooling or ventilation, sprinkler branch line piping, or electrical raceway, serving the generator set equipment room or being served by the generator set. Such penetrations shall be protected in accordance with Section 713.

Exception: Metallic piping with no joints or openings where it passes through the generator set equipment room.

403.4.8.2 Fuel line piping protection. Fuel lines supplying a generator set inside a building shall be separated from areas of the building other than the room the generator is located in by an approved method or assembly that has a fire resistance rating of not less than 2 hours. Where the building is protected throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the required fire-resistance rating may~~shall~~ be reduced to 1 hour.

23.10.403.5 International Building Code Section 403.5 amended – Means of egress and evacuation.

International Building Code Section 403.5 is hereby amended to read as follows:

403.5 Means of egress and evacuation. The means of egress in high-rise buildings shall comply with Sections 403.5.1 through 403.5.6, and in addition to these requirements, shall comply with Bellevue City Code 23.11.907.5.2.2.6, which requires either Phased Evacuation, an additional stair, or occupant evacuation elevators, to facilitate simultaneous building evacuation and firefighter response into the building.

403.5.1 Remoteness of interior exit stairways. Required interior exit stairways shall be separated by a distance not less than 30 feet (9144 mm) or not less than one-fourth of the length of the maximum overall diagonal dimension of the building or area to be served, whichever is less. The distance shall be measured in a straight line between the nearest points of the enclosure surrounding the interior exit stairways. In buildings with three or more interior exit stairways, no fewer than two of the interior exit stairways shall comply with this section. Interlocking or scissor stairs shall be counted as one interior exit stairway.

403.5.2 Additional interior exit stairway. For buildings other than Group R-2 that are more than 420 feet (128 000 mm) in building height, one additional interior exit stairway meeting the requirements of Sections 1011 and 1023 shall be provided in addition to the minimum number of exits required by Section 1006.3. The total width of any combination of remaining interior exit stairways with one interior exit stairway removed shall be not less than the total width required by Section 1005.1. Scissor stairs shall not be considered the additional interior exit stairway required by this section.

Exception: An additional interior exit stairway shall not be required to be installed in buildings having elevators used for occupant self-evacuation in accordance with Section 3008.

403.5.3 Stairway door operation. Stairway doors other than the exit discharge doors shall be permitted to be locked from the stairway side. Stairway doors that are locked from the stairway side shall be capable of being unlocked simultaneously without unlatching upon a signal from the fire command center.

403.5.3.1 Stairway communication system. A telephone or other two-way communications system connected to an approved constantly attended station shall be provided at not less than every fifth floor in each stairway where the doors to the stairway are locked.

403.5.4 Smokeproof enclosures. Every required interior exit stairway serving floors more than 75 feet (22 860 mm) above the lowest level of fire department vehicle

access shall be a smokeproof enclosure in accordance with Sections 909.20 and 1023.10.

403.5.5 Luminous egress path markings. Luminous egress path markings shall be provided in accordance with Section 1025.

403.5.6 Emergency escape and rescue. Emergency escape and rescue openings specified in Section 1030 are not required.

23.10.403.7 International Building Code Section 403.7 Added -- Smoke Control. International Building Code Section 403 is hereby amended to add a new subsection 403.7 to read as follows:

403.7 Smoke control. A smoke-control system meeting the requirements of Section 909 shall be provided in all areas containing a Group I or Group R occupancy within high-rise buildings. Such areas shall be separated in accordance with Section 709 and Section 909 to create separate smoke zones, or smoke control shall be provided in all such unseparated areas of the building.

23.10.405.1 International Building Code Section 405.1 amended –General. International Building Code Section 405.1 is hereby amended to read as follows:

405.1 General. The provisions of this section apply to building spaces having a floor level used for human occupancy more than 30 feet (9144 mm) below the finished floor of the lowest level of exit discharge.

Exceptions:

1. One- and two-family dwellings, sprinklered in accordance with Section 903.3.1.3.

2. Parking garages with automatic sprinkler systems in compliance with Section 405.3 and pressurized stair enclosures provided with emergency power in compliance with Sections 909.20, 909.20.5, and 909.20.6.

3. Fixed guideway transit systems, complying with NFPA 130 as amended by the City of Bellevue.

4. Grandstands, bleachers, stadiums, arenas and similar facilities.

5. Where the lowest story is the only story that would qualify the building as an underground building and has an area not exceeding 1,500 square feet (139 m^2) and has an occupant load less than 10.

6. Pumping stations and other similar mechanical spaces intended only for limited periodic use by service or maintenance personnel.

23.10.424.1 International Building Code Section 424.1 amended – Children's play structures. International Building Code Section 424.1 is hereby amended to read as follows:

424.1 Children's play structures. Children's play structures installed inside all occupancies covered by this code that exceed 10 feet (3048 mm) in height ~~and~~or 150 square feet (14 m2) in area shall comply with Sections 424.2 through 424.5.

23.10.503.1 International Building Code Section 503.1 amended – General. International Building Code Section 503.1 is hereby amended to add a new subsection 503.1.4 to read as follows:

503.1.4 Occupied roofs. A roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by Table 504.4 for the story immediately below the roof. The area of the occupied roofs shall not be included in the building area as regulated by Section 506.

Exceptions:

1. The occupancy located on an occupied roof shall be limited occupancies allowed on the story immediately below the roof where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and occupant notification in accordance with Section 907.5 is provided in the area of the occupied roof.

2. Assembly occupancies shall be permitted on roofs of open parking garages of Type I or Type II construction, in accordance with the exception to Section 903.2.1.6.

Elements or structures enclosing the occupied roof areas shall not extend more than 48 inches above the surface of the occupied roof.

Exception: Penthouses constructed in accordance with Section 1510.2, towers, domes, spires, and cupolas constructed in accordance with Section 1510.5.

23.10.708.6 International Building Code Section 708.6 amended – Openings. International Building Code Section 708.6 is hereby amended to read as follows:

708.6 Openings. Openings in a *fire partition* shall be protected in accordance with Section 716.

Exception: A smoke and draft control door assembly is not required at a hoistway opening if the hoistway is pressurized in accordance with IBC Section 909.

23.10.903.2.11 International Building Code Section 903.2.11 amended – All occupancies. International Building Code Section 903.2.11 is hereby amended to read as follows:

[F] 903.2.11 ~~Specific building areas and hazards~~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.~~6~~7.

[F] 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 1009 or an outside ramp complying with Section 1010. Openings shall be located in each 50 linear feet (15,240 mm), or fraction thereof, of exterior wall in the story on at least 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 at least 20 square feet (1.86 m2) in each 50 linear feet (15,240 mm), or fraction thereof, of exterior wall in the story on at least 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 (1118 mm) measured from the floor.

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

[F] 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.

[F] 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 walls, partitions or other obstructions are installed that restrict the application of water from hose streams, or increase the exit access travel distance to more than 75 feet, the *basement* shall be equipped throughout with an *approved automatic sprinkler system*.

[F] 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. Chute sprinklers shall be accessible for servicing.

[F] 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.

~~**Exceptions:**~~

~~1. Open parking structures.~~
~~2. Occupancies in Group F-2.~~

[F] 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).

[F] 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.

[F] 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.

[F] 903.2.11.7 Buildings exceeding 10,000 square feet. Notwithstanding any provision of the *International Building Code* or *International Fire Code*, as such codes are adopted by the City, throughout all buildings where the total floor area, including basements, exceeds 10,000

square feet. For purposes of this paragraph, portions of buildings separated by one or more fire walls will not be considered a separate building. Existing buildings shall comply with this section when an addition is made to the building and the total floor area, including the basements, of the existing building and the addition combined exceeds 10,000 square feet, or when the value of a structural alteration or repair of an existing building 10,000 square feet in area or greater exceeds 50 percent of the assessed valuation of such existing building, or exceeds 50 percent of the recognized replacement cost of the structure, without consideration of depreciation, as determined under the Marshall Valuation Service Cost Handbook, whichever is greater.

23.10.903.3.1 International Building Code Section 903.3.1 amended – Standards. Section 903.3.1 of the International Building Code is hereby amended to read as follows:

[F] 903.3.1 Standards. Sprinkler systems shall be designed and installed in accordance with Section 903.3.1.1 ~~unless otherwise permitted by Sections 903.3.1.2 and~~, 903.3.1.2 or 903.3.1.3 and other chapters of this code, as applicable. In addition sprinkler systems shall be designed with a buffer to account for water system fluctuations to include a low reservoir condition. Such buffer shall be 5% ~~p.s.i.~~ for static pressures less than 50 p.s.i. and 10% ~~p.s.i.~~ for static pressures above 50 p.s.i.

Exception: Buffers are not required for systems designed in accordance with Section 903.3.1.3 (NFPA 13 D)

Permit applicants shall independently verify site specific static pressure:

• Prior to initiating sprinkler system.

• Prior to installing any sprinkler piping, including the underground supply.

• Prior to requesting any cover inspections.

23.10.903.3.1.1.1 International Building Code Section 903.3.1.1.1 amended – Exempt locations. International Building Code Section 903.3.1.1.1 is hereby amended to read as follows:

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

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard, when *approved* by the fire code official.

2. A room or space where sprinklers are considered undesirable because of the nature of the contents, where *approved* by the fire code official.

~~3. Generator and transformer rooms separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a *fire-resistance rating* of not less than 2 hours.~~

3~~4~~. In rooms or areas that are of noncombustible construction with wholly noncombustible contents.

4~~5~~. Fire service access elevator machine rooms and machinery spaces.

5~~6~~. Machine rooms, machinery spaces, control rooms and control spaces associated with occupant evacuation elevators designed in accordance with Section 3008.

6. Elevator machine rooms, elevator machinery spaces, control spaces, or hoistways of traction elevators that comply with NFPA 13 (2013) Section 8.15.5.3.

23.10.903.3.1.1 International Building Code Section 903.3.1.1.3 added – Seismic coefficient. International Building Code Section 903.3.1.1 is amended to add a new subsection 903.3.1.1.3 to read as follows:

[F] 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.

23.10.903.3.1.2 International Building Code Section 903.3.1.2 amended – NFPA 13R sprinkler systems. International Building Code Section 903.3.1.2 is hereby amended to read as follows:

[F] 903.3.1.2 NFPA 13R sprinkler systems. *Automatic sprinkler systems* in Group R occupancies up to and including four stories in height ~~in buildings not exceeding 60 feet (18 288 mm) in height above grade plane~~ shall be permitted to be installed throughout in accordance with NFPA 13R.

~~The number of stories of Group R occupancies constructed in accordance with Sections 510.2 and 510.4 shall be measured from the horizontal assembly creating separate buildings.~~

A *building* designed in accordance with Washington Administrative Code 51-50-0504, 0510 or Section 510.4 of the *International Building Code* shall be sprinkled throughout in accordance with NFPA 13.

23.10.903.3.3 International Building Code Section 903.3.3 amended – Obstructed locations. International Building Code Section 903.3.3 is hereby amended to read as follows:

> **[F] 903.3.3 Obstructed locations.** Automatic sprinklers shall be installed ~~with due regard to obstructions that will delay activation or obstruct the water distribution pattern. Automatic sprinklers shall be installed~~ in accordance with NFPA 13 obstruction criteria and the listing requirements of the sprinkler head. Automatic sprinklers shall be installed in or under covered kiosks, displays, booths, concession stands, or equipment that exceeds 4 feet (1219 mm) in width and depth, and for all multi-level exhibit booths. Not less than a 3-foot (914 mm) clearance shall be maintained between automatic sprinklers and the top of piles of combustible fibers.
>
> > **Exception:** Kitchen equipment under exhaust hoods protected with a fire-extinguishing system in accordance with Section 904.

23.10.903.4.3 International Building Code Section 903.4.3 amended – Floor control valves.

International Building Code Section 903.4.3 is hereby amended to read as follows:

> **[F] 903.4.3 Floor control valves.** *Approved* supervised indicating control valves shall be provided at the point of connection to the riser on each floor ~~in high-rise buildings~~. The floor control valves shall be located within *interior exit stairways* and within 6' of floors or landings unless chains or other approved devices are readily available.
>
> > **Exception:** In buildings without *interior exit stairways*, the location of the floor control valves shall be determined by the fire code official.

23.10.903.5 International Building Code Section 903.5 amended – Testing and maintenance. International Building Code Section 903.5 is hereby amended to read as follows:

> **[F] 903.5 Testing and maintenance.** Sprinkler systems shall be tested and maintained in accordance with Section 903.5.1~~the *International Fire Code*~~.
>
> > **[F] 903.5.1 Fire sprinkler and standpipe main/express drains.** Fire sprinkler and standpipe main/express drains shall be positioned to drain to the sanitary sewer. Additionally maintenance or testing discharges from fire pumps shall be treated in order to comply with the National Pollution Discharge Elimination System (NPDES) requirements.

Point of Information

Water drained or otherwise discharged from a fire sprinkler system, standpipe or fire pump is considered an "illicit discharge" and must drain to the sanitary sewer or be treated in order to discharge to storm drains, ditches, or water bodies. See (http://www.bellevuewa.gov/pdf/Utilities/Fire_Confidence-WQ_3-14-12.pdf) for additional information.

23.10.905.3 International Building Code Section 905.3 amended – Required installations. International Building Code Section 905.3 is hereby amended to read as follows:

[F] 905.3 Required installations. Standpipe systems shall be installed where required by Sections 905.3.1 through 905.3.98. Standpipe systems are allowed to be combined with *automatic sprinkler systems*.

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

23.10.905.3.1 International Building Code Section 905.3.1 amended – Height. International Building Code Section 905.3.1 is hereby amended to read as follows:

[F] 905.3.1 Height. Class I~~II~~ standpipe systems shall be installed throughout buildings where the floor level of the highest *story* is located more than 30 feet (9144 mm) above the lowest level of fire department vehicle access, or where the floor level of the lowest *story* is located more than 30 feet (9144 mm) below the highest level of fire department vehicle access.

Exception~~s~~:

1. ~~Class I standpipes are allowed in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.~~
2. ~~Class I manual standpipes are allowed in *open parking garages* where the highest floor is located not more than 150 feet (45 720 mm) above the lowest level of fire department vehicle access.~~
3. ~~Class I manual dry standpipes are allowed in *open parking garages* that are subject to freezing temperatures, provided that the hose connections are located as required for Class II standpipes in accordance with Section 905.5.~~
4. ~~Class I standpipes are allowed in basements equipped throughout with an *automatic sprinkler system*.~~15.In determining the lowest level of fire department vehicle access, it shall not be required to consider:
   1.1. Recessed loading docks for four vehicles or less, and
   1.2. Conditions where topography makes access from the fire department vehicle to the building impractical or impossible.

23.10.905.3 International Building Code Section 905.3.9 added – High-rise building standpipes. International Building Code Section 905.3 is hereby amended by the addition of a new subsection 905.3.9 to read as follows:

[F] 905.3.9 High Rise Building Standpipes. Standpipe risers shall be combination standpipe/sprinkler risers using a minimum pipe size of 6 inch. One 2-1/2 inch hose connection shall be provided on every intermediate floor level landing in every required stairway and elsewhere as required by NFPA 14. Where, and only where, static or residual water pressures at any hose outlet exceeds 175 psi (1207 kPa), approved pressure-regulating devices shall be installed to limit the pressure to a range between 125 and 175 psi at not less than 300 gpm. The pressure on the inlet side of the pressure-regulating device shall not exceed the rated working pressure of the device. An additional non-regulated hose connection located directly below the PRV or an equally sized bypass around the pressure regulating device with a normally closed control valve shall be provided at each reduced pressure connection.

Each non-regulated hose connection shall be labeled “High Pressure – No PRV”. The sign shall have ½” white letters on a red background.

Point of Information

Additional flow and pressure requirements are contained in NFPA 14. Designers should be cognizant of space considerations within stair shafts and additional signage needed for the PRV by-pass control valves.

23.10.905.3 International Building Code Section 905.3 amended – Vertical Standpipes served by fire pumps. Section 905.3 of the International Building Code is hereby amended by the addition of a new subsection 905.3.10 to read as follows:

[F] 905.3.10 Vertical Standpipes served by Fire Pumps. Where vertical standpipes are served by fire pumps a check valve shall be installed at the base of vertical standpipe.

23.10.905.4 International Building Code Section 905.4 amended – Location of Class I standpipe hose connections. International Building Code Section 905.4 is hereby amended to read as follows:

[F] 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 *interior exit stairway*, a hose connection shall be provided for each story above and below grade. Hose connections shall be located at an intermediate landing between stories, unless otherwise *approved* by the fire code official. 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 an *interior exit stairway* hose connection 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.

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

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

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

5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-percent slope), ~~a hose connection shall be located to serve the roof or at the highest landing of an *interior exit stairway* with access to the roof provided in accordance with Section 1011.12.~~at least one standpipe shall be provided with a 2 ½ in. hose connection located on the roof. Additional hose connections shall be provided so that all portions of the roof are within 200 feet of hose travel distance from a standpipe hose connection. The hose connection(s) shall be at least 10 feet (3048 mm) from the roof edge, skylight, light well or other similar openings, unless protected by a 42-inch-high (1,067 mm) guardrail or equivalent. All roof hose connections shall be arranged to be operable without entering the building. Roof connections in high-rise buildings are allowed to be located at the highest landing of a stairway with stair access to the roof. An additional hose connection shall be provided at the top of the most hydraulically remote standpipe for testing purposes.

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 200 feet (60 960 mm) from a hose connection, the fire code official is authorized to require that additional hose connections be provided in *approved* locations. Additional hose connections shall be provided in interior exit stairways or protected locations that are accessed through protected enclosures. The protected enclosure shall be a corridor constructed as a smoke barrier from the exit enclosure to the standpipe connection.

Exception: Hose connections in parking garages must be located in vertical exit enclosures, protected locations, immediately adjacent to exterior exit doors, loading docks or other areas as approved by the fire code official. Subject to the approval of the fire code official the travel distance may also be increased to a maximum distance of 240 feet.

Point of Information: Chapter 10 of this code outlines the requirements for stairways to the roof and roof access. This section (905.4) identifies the locations of standpipes and hose connections, but does not dictate the need for additional stairways to the roof or roof access.

23.10.905.8 International Building Code Section 905.8 amended – Dry standpipes. International Building Code Section 905.8 is hereby amended to read as follows:

905.8 Dry standpipes. Dry standpipes shall not be installed.

Exception: Where subject to freezing and in accordance with NFPA 14 when approved by the fire code official.

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23.10.907.1 International Building Code Section 907.1 amended – General. International Building Code Section 907.1 is hereby amended to read as follows:

[F] 907.1 General. This section covers the application, installation, performance and maintenance of fire alarm systems and their components in new and existing buildings and structures. The requirements of Section 907.2 are applicable to new buildings and structures and new fire alarm systems including replacement of existing fire alarm control panels being installed in existing buildings and structures. The requirements of *International Fire Code* Section 907.9 are applicable to existing buildings and structures. For the purpose of this section, fire barriers shall not be considered to

create a separate building or structure. Buildings and structures required by this section to be provided with a fire alarm system shall be provided with a single fire alarm system unless otherwise approved by the fire code official.

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23.10.907.1.2 International Building Code Section 907.1.2 amended – Fire alarm shop drawings. International Building Code Section 907.1.2 is hereby amended to read as follows:

[F] 23.10.907.1.2 Fire alarm shop drawings. Shop drawings for fire alarm systems shall be submitted for review and approval prior to system installation, and shall include, but not be limited to, all of the following where applicable to the system being installed:

1. A floor plan that indicates the use of all rooms.
2. Locations of alarm-initiating devices.
3. Locations of alarm notification appliances, including candela ratings for visible alarm notification appliances.
4. Design minimum audibility level for occupant notification
5. Location of fire alarm control unit, transponders and notification power supplies.
6. Annunciators.
7. Power connection.
8. Battery calculations.
9. Conductor type and sizes.
10. Voltage drop calculations.
11. Manufacturers' data sheets indicating model numbers and listing information for equipment, devices and materials.
12. Details of ceiling height and construction.
13. The interface of fire safety control functions.
14. Classification of the supervising station.

15. A narrative and input/output matrix that supports the approved exiting plan for the building.

23.10.907.2.7.1 International Building Code Section 907.2.7.1 deleted – Occupant notification. International Building Code Section 907.2.7.1 is hereby deleted.

23.10.907.2.13.1.1 International Building Code Section 907.2.13.1.1 amended – Area smoke detection. International Building Code Section 907.2.13.1.1 is hereby amended to read as follows:

[F] 907.2.13.1.1 Area smoke detection. Area smoke detectors shall be provided in accordance with this section. Smoke detectors shall be connected to an automatic fire alarm system. The activation of any detector required by this section, other than duct smoke detectors, shall activate the emergency voice/alarm communication system in accordance with Section 907.5.2.2. In addition to smoke detectors required by Sections 907.2.1 through 907.2.10, smoke detectors (where such locations are within unconditioned spaces, other devices may be installed in accordance with 907.4.3) shall be located as follows:

1. In each mechanical equipment, electrical, transformer, telephone equipment or similar room that is not provided with sprinkler protection.

2. In each elevator machine room, machinery space, control room and control space and in elevator lobbies.

3. Within 5 feet (1524 mm) of doors opening into stairways that are smoke proof enclosures, or are pressurized stairways.

23.10.907.2.13.2 International Building Code Section 907.2.13.2 amended – Fire department communication system. International Building Code Section 907.2.13.2 is hereby amended to read as follows:

[F] 907.2.13.2 Fire department communication system. An approved two-way, fire department communication system designed and installed in accordance with NFPA 72 shall be provided for fire department use. It ~~Where a wired communication system is *approved* in lieu of an emergency responder radio coverage system in accordance with Section 510 of the *International Fire Code*, the wired fire department~~

~~communication system shall be designed and installed in accordance with NFPA 72 and~~ shall operate between a fire command center complying with Section 911, elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, *areas of refuge* and inside *interior exit stairways*. The fire department communication device shall be provided at each floor level within the *interior exit stairway*.

23.10.907.2.18.1 International Building Code Section 907.2.18.1 amended – Smoke detectors. International Building Code Section 907.2.18.1 is hereby amended to read as follows:

[F] 907.2.18.1 Smoke detectors. A minimum of ~~Not fewer than~~ one smoke detector *listed* for the intended purpose shall be installed in all of the following areas:

1. ~~Mechanical equipment, e~~Electrical, non-Utility owned transformer vault rooms, telephone equipment, elevator machine or similar rooms.

2. Elevator lobbies.

3. The main return and exhaust air plenum of each air-conditioning system serving more than one *story* and located in a serviceable area downstream of the last duct inlet.

4. Each connection to a vertical duct or riser serving two or more floors from return air ducts or plenums of heating, ventilating and air-conditioning systems, except that in Group R occupancies, a *listed* smoke detector is allowed to be used in each return air riser carrying not more than 5,000 cfm (2.4 m^3/s) and serving not more than 10 air-inlet openings.

5. Within 5 ft. of doors opening into stairways that are smokeproof enclosures, or that are pressurized stairways.

Exception: Where any such locations in items 1 through 5 above are within unconditioned spaces, other devices may be installed in accordance with 907.4.3.

23.10.907.5 International Building Code Section 907.5 amended – Occupant notification system. International Building Code Section 907.5 is hereby amended to read as follows:

[F] 907.5 Occupant notification systems. A fire alarm system shall annunciate at the fire alarm control unit and shall initiate occupant notification upon activation, in accordance with Sections 907.5.1 through 907.5.2.3.3. Where a fire alarm system is required by another section of this code, it shall be activated by:

1. Automatic fire detectors.

2. *Automatic sprinkler system* waterflow devices.

3. Manual fire alarm boxes.

4. Automatic fire-extinguishing systems.

~~**Exception:** Where notification systems are allowed elsewhere in Section 907 to annunciate at a *constantly attended location*.~~

23.10.907.5.2.1.1 International Building Code Section 907.5.2.1.1 amended – Average sound pressure. International Building Code Section 907.5.2.1.1 is hereby amended to read as follows:

[F] 907.5.2.1.1 Average sound pressure. The audible alarm notification appliances shall provide a sound pressure level of 15 decibels (dBA) above the average ambient sound level or 5 dBA above the maximum sound level having a duration of not less than 60 seconds, whichever is greater, in every occupiable space within the building, or in the case of a partial alarm system, throughout the space that is being provided with the fire alarm system. The minimum sound pressure levels shall be: 75 dBA in occupancies in Groups R and I-1; 90 dBA in mechanical equipment rooms; and 60 dBA in other occupancies. In occupancies with high sound levels such as nightclubs, bars, theaters, auditoriums, sanctuaries, etc., an interface shall be provided between the fire alarm system and the noise source to eliminate the noise source upon activation of the fire alarm system.

Exception: Private mode signaling in accordance with NFPA 72 shall be allowed in areas of group I-2 and I-3 occupancies where occupants are not expected to self-evacuate.

23.10.907.5.2.2 International Building Code Section 907.5.2.2 amended – Emergency voice/alarm communication systems. International Building Code Section 907.5.2.2 is hereby amended to read as follows:

[F] 907.5.2.2 Emergency voice/alarm communication systems. Emergency voice/alarm communication systems required by this code shall be designed and installed in accordance with NFPA 72. The operation of any automatic fire detector, sprinkler waterflow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving *approved* information and directions for a general or staged evacuation in accordance with the building's fire safety and evacuation plans required by Section 404 of the *International Fire Code*. In high-rise buildings, the system shall operate on at least the alarming floor, the floor above and the floor below. Speakers shall be provided throughout the building by paging zones. At a minimum, paging zones shall be provided as follows:

1. Elevator groups.

2. *Interior exit stairways*.

3. Each floor.

4. *Areas of refuge* as defined in Chapter 2.

Exception: In Group I-1 and I-2 occupancies, the alarm shall sound in a *constantly attended* *location*~~area~~ and a general occupant notification shall be broadcast over the overhead page.

[F] 907.5.2.2.1 Manual override. A manual override for emergency voice communication shall be provided on a selective and all-call basis for all paging zones.

[F] 907.5.2.2.2 Live voice messages. The emergency voice/alarm communication system shall have the capability to broadcast live voice messages by paging zones on a selective and all-call basis.

Point of Information: See Fire Department Emergency Voice/Alarm Public Information Sheet F-44 for detailed messaging requirements.

[F] 907.5.2.2.3 Alternate uses. The emergency voice/alarm communication system shall be allowed to be used for other announcements, provided the manual fire alarm use takes precedence over any other use.

[F] 907.5.2.2.4 Emergency voice/alarm communication captions. Where stadiums, arenas and grandstands are required to caption audible public announcements in accordance with Section 1108.2.7.3, the emergency/voice alarm communication system shall be captioned. Prerecorded or live emergency captions shall be from an *approved* location constantly attended by personnel trained to respond to an emergency.

[F] 907.5.2.2.5 Emergency power. Emergency voice/alarm communications systems shall be provided with emergency power in accordance with Section 2702. The system shall be capable of powering the required load for a duration of not less than 24 hours, as required in NFPA 72.

[F] 907.5.2.2.6 Phased Evacuation. All buildings more than 10 stories above grade plane shall utilize an approved phased evacuation plan.

Exceptions:

1. When an additional exit stairway meeting the requirements of Sections IBC 1011 and 1023 are provided in addition to the minimum number of exits required by Section IBC 1006.

2. Where the width of each required exit stairway as specified in Section 1011.2 is increased by not less than 24" of additional width.

3. Where occupant self-evacuation elevators in accordance with IBC Section 3008 have been installed.

4. Where full tenant evacuation can be demonstrated to be accomplished in less than 7 minutes.

Point of Information: These provisions are intended to facilitate the simultaneous building evacuation and firefighter response into the building.

23.10.907.5.2.3 International Building Code Section 907.5.2.3 amended – Visible alarms. International Building Code Section 907.5.2.3 is hereby amended to read as follows:

[F] 907.5.2.3 Visible alarms. Visible alarm notification appliances shall be provided in accordance with Sections 907.5.2.3.1 through 907.5.2.3.3.

Exceptions:

1. Visible alarm notification appliances are not required in *alterations*, except where an existing fire alarm system is replaced, or a new fire alarm system is installed.

2. Visible alarm notification appliances shall not be required in *exits* as defined in Chapter 2.

3. Visible alarm notification appliances shall not be required in elevator cars.

4. Visual alarm notification appliances are not required in critical care areas of Group I-2 Condition 2 occupancies that are in compliance with Section 907.2.6, Exception 2.

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23.10.907.6.3.1 International Building Code Section 907.6.3.1 amended – Annunciation. International Building Code Section 907.6.3.1 is hereby amended to read as follows:

[F] 907.6.3.1 Annunciator panel~~Annunciation~~. ~~The initiating device status shall be annunciated at an *approved* on-site location~~All fire alarm systems in buildings without a

fire command center shall be provided with an annunciator panel (or the main fire alarm control panel) located inside the building at the main addressed building entrance.

Exception: Other approved locations.

23.10.907.6.4.1 International Building Code Section 907.6.4.1 amended – Graphic Annunciator. International Building Code Section 907.6.4.1 is hereby amended to read as follows:

[F] 907.6.4.1 Graphic annunciator~~Zoning indicator panel~~. Graphic annunciators, when provided, shall be mounted to maintain the viewer's directional orientation. The visual zone indication on the annunciator panel shall lock in until the system is reset and shall not be canceled by the operation of an audible-alarm silencing switch. Alarm panels and annunciators shall not be installed where they would obstruct exiting. The required exit width plus 12 inches shall be provided when the panel is located in a means of egress. Alarm panels shall not be installed in an exit enclosure providing the sole exit from any space~~A zoning indicator panel and the associated controls shall be provided in an *approved* location. The visual zone indication shall lock in until the system is reset and shall not be canceled by the operation of an audible-alarm silencing switch~~.

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23.10.909.1 International Building Code Section 909.1 amended – Scope and purpose. International Building Code Section 909.1 is hereby amended to read as follows:

[F] 909.1 Scope and purpose. This section applies to mechanical or passive smoke control systems when they are required by other provisions of this code. The purpose of this section is to establish minimum requirements for the design, installation and acceptance testing of smoke control systems that are intended to provide a tenable environment for the evacuation or relocation of occupants. These provisions are not intended for the preservation of contents, or the timely restoration of operations~~, or for assistance in fire suppression or overhaul activities~~. Smoke control systems regulated by this section serve a different purpose than the smoke- and heat-venting provisions found in Section 910. Mechanical smoke control systems shall not be considered exhaust systems under Chapter 5 of the *International Mechanical Code*.

23.10.909.4.6 International Building Code Section 909.4.6 amended – Duration of operation. International Building Code Section 909.4.6 is hereby amended to read as follows:

> **[F] 909.4.6 Duration of operation.** All portions of active or engineered smoke control systems shall be capable of continued operation after detection of the fire event for a period of not less than that time period specified in accordance with Section 2702~~either 20 minutes~~ or 1.5 times the calculated egress time, whichever is greater.

23.10.909.10.2 International Building Code Section 909.10.2 amended – Ducts. International Building Code Section 909.10.2 is hereby amended to read as follows:

> **[F] 909.10.2 Ducts, including shafts acting as ducts.** Duct materials and joints shall be capable of withstanding the probable temperatures and pressures to which they are exposed as determined in accordance with Section 909.10.1. Ducts shall be constructed and supported in accordance with the *International Mechanical Code*. Ducts shall be leak tested to 1.5 times the maximum design pressure in accordance with nationally accepted practices. Measured leakage shall not exceed 5 percent of design flow. Results of such testing shall be a part of the documentation procedure. Ducts shall be supported directly from fire-resistance-rated structural elements of the building by substantial, noncombustible supports.
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> **Exception:** Flexible connections for the purpose of vibration isolation, complying with the *International Mechanical Code* and that are constructed of *approved* fire-resistance-rated materials.

23.10.909.10.3 International Building Code Section 909.10.3 amended – Equipment, inlets and outlets. International Building Code Section 909.10.3 is hereby amended to read as follows:

> **[F] 909.10.3 Equipment, inlets and outlets.** Equipment shall be located so as to not expose uninvolved portions of the building to an additional fire hazard. Outdoor air inlets shall be located so as to minimize the potential for introducing smoke or flame into the building. Exhaust outlets shall be so located as to minimize reintroduction of smoke into the building and to limit exposure of the building or adjacent buildings to an additional fire hazard. In addition, supply air shall be taken directly from an outside, uncontaminated source located a minimum distance of 20 feet from any air exhaust system or outlet.

23.10.909.11 International Building Code Section 909.11 amended – Standby power.

International Building Code Section 909.11 is hereby amended to read as follows:

[F] 909.11 Emergency~~Standby~~ power. Smoke control systems, including energy management systems used for smoke control or smoke removal, shall be provided with emergency~~standby~~ power in accordance with Section 2702.

Exception: In other than high-rise buildings, underground buildings, atriums, and covered mall buildings, smoke control systems shall be provided with legally required standby power in accordance with Section 2702.

~~**909.11.1 Equipment room.** The standby power source and its transfer switches shall be in a room separate from the normal power transformers and switch gears and ventilated directly to and from the exterior. The room shall be enclosed with not less than 1-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both.~~

909.11.1~~2~~ Power sources and power surges. Elements of the smoke control system relying on volatile memories or the like shall be supplied with uninterruptable power sources of sufficient duration to span 15-minute primary power interruption. Elements of the smoke control system susceptible to power surges shall be suitably protected by conditioners, suppressors or other *approved* means.

23.10.909.12 International Building Code Section 909.12 amended – Detection and control systems.
Section 909.12 of the International Building Code is hereby amended to read as follows:

909.12 Detection and control systems. Fire detection systems providing control input or output signals to mechanical smoke control systems or elements thereof shall comply with the requirements of Section 907. Such systems shall be equipped with a control unit complying with UL 864 and *listed* as smoke control equipment.

Exception: Shaft pressurization equipment in *buildings* constructed in accordance with Washington Administrative Code 51-50-0504 or WAC 51-50-0510, or *International Building Code* Section 510.4 may utilize a fire detection system that is *listed* as releasing equipment.

[F] 909.12.1 Verification. Control systems for mechanical smoke control systems shall include provisions for verification. Verification shall include positive confirmation of actuation, testing, manual override and the presence of power downstream of all disconnects. A preprogrammed weekly test sequence shall report abnormal conditions audibly, visually, ~~and~~ by printed report or other approved means. The preprogrammed weekly test shall operate all devices, equipment and components used for smoke control.

Exception: Where verification of individual components tested through the preprogrammed weekly testing sequence will interfere with, and produce unwanted effects to, normal building operation, such individual components are permitted to be bypassed from the preprogrammed weekly testing, where

approved by the fire codebuilding official and in accordance with both of the following:

1. Where the operation of components is bypassed from the preprogrammed weekly test, presence of power downstream of all disconnects shall be verified weekly by a listed control unit.

2. Testing of all components bypassed from the preprogrammed weekly test shall be in accordance with Section 909.20.6 of the *International Fire Code*.

23.10.909.17 International Building Code Section 909.17 amended– System response time. International Building Code Section 909.17 is hereby amended to read as follows:

[F] 909.17 System response time. Smoke-control system activation shall be initiated immediately after receipt of an appropriate automatic or manual activation command. Smoke control systems shall activate individual components (such as *dampers* and fans) in the sequence necessary to prevent physical damage to the fans, *dampers*, ducts and other equipment. For purposes of smoke control, the fire fighter's control panel response time shall be the same for automatic or manual smoke control action initiated from any other building control point. The total response time, including that necessary for detection, shutdown of operating equipment and smoke control system startup, shall allow for full operational mode to be achieved before the conditions in the space exceed the design smoke condition. Upon receipt of an alarm condition at the fire alarm control panel, fans, dampers and automatic doors shall have achieved their expected operating state and confirmation of proper operation shall be indicated at the smoke control panel within 60 seconds. Documentation shall be provided in the required final reportThe system response time for each component and their sequential relationships shall be detailed in the required rational analysis and verification of their installed condition reported in the required final report.

23.10.909.18.8.3 International Building Code Section 909.18.8.3 amended – Reports. International Building Code Section 909.18.8.3 is hereby amended to add the following subsection 909.18.8.3.2 to read as follows:

[F] 909.18.8.3.2 Certificate of compliance. A certificate of compliance shall be provided by the special inspector and responsible registered design professional certifying that the referenced property is in substantial compliance. The certificate shall identify the company, designer, special inspector that performed the testing, name, date and address of the property being tested. The following statement must also be included: "I have reviewed the report and by personal knowledge and on- site observation certify that the smoke control system is in substantial compliance with the approved design documents, and to the best of my understanding complies with requirements of the applicable codes as identified in the smoke control report."

23.10.909.20 International Building Code Section 909.20 amended – Smokeproof enclosures. International Building Code Section 909.20 is hereby amended to read as follows:

> **909.20 Smokeproof enclosures.** Where required by Section 1023.11, a smokeproof enclosure shall be constructed in accordance with this section. All portions of the smokeproof enclosure ventilation system and equipment must comply with the provisions of Section 909. A smokeproof enclosure shall consist of an *interior exit stairway* or *ramp* that is enclosed in accordance with the applicable provisions of Section 1023 and an open exterior balcony or ventilated vestibule meeting the requirements of this section. Where access to the roof is required by the *International Fire Code*, such access shall be from the smokeproof enclosure where a smokeproof enclosure is required.
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23.10.909.20.6.3 International Building Code Section 909.20.6.3 amended – Acceptance and testing. International Building Code Section 909.20.6.3 is hereby amended to read as follows:

> **909.20.6.3 Acceptance and testing.** Special inspection for performance shall be required in accordance with Section 909.18.8~~Before the mechanical equipment is *approved*, the system shall be tested in the presence of the *building official* to confirm that the system is operating in compliance with these requirements~~.

23.10.909.21.3 International Building Code Section 909.21.3 amended – Ducts for system. International Building Code Section 909.21.3 is hereby amended to read as follows:

> **909.21.3 Ducts for system.** Any duct system that is part of the pressurization system shall be protected with the same *fire-resistance rating* as required for the elevator shaft enclosure, and equipment, control wiring, power wiring, and ductwork shall comply with one of the methods specified in Section 909.20.6.1. Ducts shall be in accordance with Section 909.10.2.

23.10.909.21.4.4 International Building Code Section 909.21.4.4 amended – Fan capacity.

International Building Code Section 909.21.4.4 is hereby amended to read as follows:

909.21.4.4 Fan capacity. The supply fan shall be either adjustable with a capacity of not less than 1,000 cfm (.4719 m^3/s) per door, or that specified by a *registered design professional* to meet the requirements of a designed pressurization system. Fans shall be in accordance with Section 909.10.5.

23.10.911.1.2 International Building Code Section 911.1.2 – Separation & penetrations.
International Building Code Section 911.1.2 is hereby amended to read as follows:

[F] 911.1.2 Separation & penetrations. The fire command center shall be separated from the remainder of the building by not less than a 21 ~~1~~-hour *fire barrier* constructed in accordance with Section 707 or *horizontal assembly* constructed in accordance with section 711, 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 Section 714.

Exception: Metallic piping with no joints or openings.

23.10.912.5 International Building Code Section 912.5 amended – Signs.
International Building Code Section 912.5 is hereby amended to read as follows:

[F] 912.5 Signs. A metal sign with raised letters not less than 1 inch (25 mm) in size shall be mounted on all fire department connections serving automatic sprinklers, standpipes or fire pump connections. Such signs shall read: ~~AUTOMATIC~~ SPRINKLERS, ~~or~~ STANDPIPES, COMBINED, DRY S/PIPES, DRY S/P & SPKRS, BOOST TO _____ (as specified by the fire code official) PSI, or TEST CONNECTION or a combination thereof as applicable. Systems utilizing Pressure Reducing Valves (PRV's) must note the required boosted pressure at the Fire Department Connection, in order to overcome the PRV setting. ~~Where the fire department connection does not serve the entire building, a sign shall be provided indicating the portions of the building served.~~ If it is not readily apparent which building or portion the fire department connection serves, the sign shall also include the premise address or building identification, and the portion of the building protected.

Exception: A metal sign with letters at least 1 inch (25 mm) in size may match the fire department connection where chrome, brass, or other approved decorative finish is utilized.

23.10.913.1 International Building Code Section 913.1 amended – General

Section 913.1 of the International Fire Code is hereby amended to read as follows:

[F] 913.1 General. Where provided, fire pumps shall be installed in accordance with this section and NFPA 20.

913.1.1 Fire Pump Controls. Fire pump controllers supplying standpipes in excess of 130 p.s.i. shall be soft start.

23.10.913.2 International Building Code Section 913.2 amended – Protection against interruption of service. International Building Code Section 913.2 is hereby amended to read as follows:

[F] 913.2 Protection against interruption of service. The fire pump, driver and controller shall be protected in accordance with NFPA 20 against possible interruption of service through damage caused by explosion, fire, flood, earthquake, rodents, insects, windstorm, freezing, vandalism and other adverse conditions.

[F] 913.2.1 Protection of fire pump rooms and access. Fire pumps shall be located in rooms that are separated from all other areas of the building by 2-hour *fire barriers* constructed in accordance with Section 707 or 2-hour *horizontal assemblies* constructed in accordance with Section 711, or both. Fire pump rooms not directly accessible from the outside shall be accessible through an enclosed passageway from an *interior exit stairway* or exterior exit. The enclosed passageway shall have a fire-resistance rating not less than the fire-resistance rating of the fire pump room (See NFPA 20 Section 4.12.2.1.2).

Point of Information
These provisions originate in NFPA 20 (2013) and are intended to facilitate fire department access to the fire pump room. Ideally fire pump rooms are located on the perimeter of the building affording direct access. Where that is not possible, a protected passageway is required. This passageway is not synonymous with an *exit passageway* and therefore not subject to the significant limitations of allowable penetrations. Fire pump rooms are not permitted to open directly into an *exit passageway* or *interior exit stairway*; rather the fire pump room must open into a vestibule before access to an *exit passageway* or an *interior exit stairway*.

~~**Exceptions:**~~

~~1. In other than high-rise buildings, separation by 1-hour *fire barriers* constructed in accordance with Section 707 or 1-hour *horizontal assemblies* constructed in accordance with Section 711, or both, shall be permitted in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.~~

~~2. Separation is not required for fire pumps physically separated in accordance with NFPA 20.~~

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23.10.1008.3.4 International Building Code Section 1008.3.4 amended – Duration. International Building Code Section 1008.3.4 is hereby amended to read as follows:

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 Section 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 Section 2702.

23.10.1011.12.2 International Building Code Section 1011.12.2 amended – Roof access. International Building Code Section 1011.12.2 is hereby amended to read as follows:

1011.12.2 Roof access. Where a stairway is provided to a roof, access to the roof shall be provided through a penthouse complying with Section 1510.2.

Exception: In buildings without an occupied roof, access to the roof shall be permitted to be a roof hatch or trap door not less than 16 square feet in area and having a minimum dimension of 3~~2~~ feet.

23.10.1011.7 International Building Code Section 1011.7 amended – Stairway construction. International Building Code Section 1011.7 is hereby amended to read as follows:

1011.7 Stairway construction. *Stairways* shall be built of materials consistent with the types permitted for the type of construction of the building, except that wood *handrails* shall be permitted for all types of construction.

Exception: In buildings with a 3-hour horizontal assembly used to establish two separate buildings in accordance with Section 510, a stairway constructed of combustible materials may extend below the 3-hour horizontal assembly if it is enclosed within a 3-hour *fire-resistance rated* shaft enclosure in accordance with Section 713, extending from the 3-hour horizontal assembly through the lowest basement level.

. . . .

23.10.1612.3 International Building Code Section 1612.3 amended – Establishment of flood hazard areas. International Building Code Section 1612.3 is hereby amended to read as follows:

1612.3 Establishment of flood hazard areas. To establish *flood hazard areas*, the applicable governing authority shall adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineering report entitled "The Flood Insurance Study for King County," dated May 16, 1995, as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this section.

1612.3.1 Design flood elevations. Where design flood elevations are not included in the flood hazard areas established in Section 1612.3, or where floodways are not designated, the building official is authorized to require the applicant to:

1. Obtain and reasonably utilize any design flood elevation and floodway data available from a federal, state or other source; or

2. Determine the design flood elevation and/or floodway in accordance with the City of Bellevue LUC 20.25H.175A and Engineering Standards, Section D4-04.5, "Floodplain/Floodway Analysis" ~~accepted hydrologic and hydraulic engineering practices used~~ to define special flood hazard areas. Determinations shall be undertaken by a *registered design professional* who shall document that the technical methods used reflect currently accepted engineering practice.

1612.3.2 Determination of impacts. In riverine *flood hazard areas* where design flood elevations are specified but floodways have not been designated, the

applicant shall provide a floodway analysis that demonstrates that the proposed work will meet the City of Bellevue Engineering Standards, Section D4-04.5, "Floodplain/Floodway Analysis."~~not increase the design flood elevation more than 1 foot (305 mm) at any point within the jurisdiction of the applicable governing authority.~~

23.10.1612.4 International Building Code Section 1612.4 amended – Design and construction. International Building Code Section 1612.4 is hereby amended to read as follows:

1612.4 Design and construction. The design and construction of buildings and structures located in *flood hazard areas*, including ~~*coastal high hazard areas* and *coastal A zones*,~~flood hazard areas subject to high-velocity wave action, shall be in accordance with Chapter 5 of ASCE 7~~, and~~ ASCE 24 and with BCC Section 20.25H.175.

23.10.1613.1 International Building Code Section 1613.1 amended – Scope. International Building Code Section 1613.1 is hereby amended to read as follows:

1613.1 Scope. Every structure, and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, shall be designed and constructed to resist the effects of earthquake motions in accordance with ASCE 7, excluding Chapter 14 and Appendix 11A. The *seismic design category* for a structure is permitted to be determined in accordance with Section 1613 or ASCE 7.

Exceptions:

1. Detached one- and two-family dwellings, assigned to *Seismic Design Category* A, B, or C, or located where the mapped short-period spectral response acceleration, S_s, is less than 0.4 g.

2. The seismic force-resisting system of wood-frame buildings that conform to the provisions of Section 2308 are not required to be analyzed as specified in this section.

3. Agricultural storage structures intended only for incidental human occupancy.

4. Structures that require special consideration of their response characteristics and environment that are not addressed by this code or ASCE 7 and for which other regulations provide seismic criteria, such as vehicular bridges, electrical transmission towers, hydraulic structures, buried utility lines and their appurtenances and nuclear reactors.

5. Seismic design of automatic sprinkler systems when hanging, bracing, and restraint is designed and installed in accordance with the 2013 edition of NFPA 13 and the coefficient Cp for seismic bracing design calculations in accordance with NFPA 13 is either a value of 0.70, or a value based on site specific USGS data.

23.10.1705.17 International Building Code Section 1705.17 deleted – Fire-resistant penetrations and joints. International Building Code Section 1705.17 is hereby deleted.

23.10.2701 International Building Code Section 2701 amended – GENERAL. International Building Code Section 2701 is hereby amended as follows.

SECTION 2701

GENERAL

2701.1 Scope. This chapter governs the electrical components, equipment and systems used in buildings and structures covered by this code. Electrical components, equipment and systems shall be designed and constructed in accordance with the provisions of ~~(NFPA 70)~~ the *Washington Cities Electrical Code*.

23.10.2702 International Building Code Section 2702 amended – EMERGENCY AND STANDBY POWER SYSTEMS. International Building Code Section 2702 is hereby amended as follows.

SECTION 2702

EMERGENCY AND LEGALLY REQUIRED STANDBY POWER SYSTEMS

[F] 2702.1 Installation. Emergency power systems and legally required standby power systems shall comply with Sections 2702.1.1 through 2702.1.7 and Table 2702.

[F] 2702.1.1 Stationary generators. Stationary emergency and legally required standby power generators required by this code shall be *listed* in accordance with UL 2200.

[F] 2702.1.2 Electrical. Emergency power systems and legally required standby power systems required by this code or the *International Fire Code* shall be installed in

accordance with the *International Fire Code*, ~~NFPA 70~~ the *Washington Cities Electrical Code*, NFPA 110 and NFPA 111.

[F] 2702.1.3 Load transfer. Emergency power systems shall automatically provide secondary power within 10 seconds after primary power is lost, unless specified otherwise in this code. ~~Standby~~Legally required standby power systems shall automatically provide secondary power within 60 seconds after primary power is lost, unless specified otherwise in this code. Transfer to full emergency or legally required standby power shall take place within the maximum time to energize loads specified in Table 2702.

[F] 2702.1.4 Load duration. Emergency power systems and legally required standby power systems shall be designed to provide the required power for a minimum duration of 8 hours for fire pumps serving high-rise buildings in accordance with NFPA 20, and 2 hours for other systems without being refueled or recharged, unless specified otherwise in this code.

[F] 2702.1.5 Uninterruptable power source. An uninterrupted source of power shall be provided for equipment when required by the manufacturer's instructions, the listing, this code or applicable referenced standards.

[F] 2702.1.6 Interchangeability. Emergency power systems shall be an acceptable alternative for installations that require standby power systems.

[F] 2702.1.7 Group I-2 occupancies. In Group I-2 occupancies, in new construction or where the building is substantially damaged, where an essential electrical system is located in flood hazard areas established in Section 1612.3, the system shall be located and installed in accordance with ASCE 24.

[F] 2702.1.8 Equipment room. If a legally required standby or emergency power system includes a generator set inside or serving a building, the generator set shall be located in a separate room enclosed with 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both, to separate it from the remainder of the building, the transfer switches, and from the normal power source including transformers and distribution equipment. The transfer switches shall also be located in a separate room enclosed with 2-hour fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both, to separate it from the remainder of the building. Power distribution from the emergency source to the emergency transfer switch shall be by an independent route from the normal power source. System supervision with manual start and transfer features shall be provided at the *fire command center* or an *approved* location when a fire command center is not required. Such equipment rooms shall be ventilated directly to the exterior for generator combustion air and radiator cooling air. Any ducts required for such ventilation shall not be dampered, and shall be *fire-resistance rated* to the same level

of protection as that required for the equipment room. The requirements of this subsection 2702.1.8 do not apply to optional tenant-owned or landlord-owned generator sets.

Exception: Legally required standby or emergency power system generator sets inside a building other than a high-rise building in accordance with Section 403 and other than an underground building space in accordance with Section 405, may be located in equipment rooms with a 1-hour *fire-resistance rating*.

[F] 2702.1.9 Routing of legally required standby and emergency power. Equipment and systems requiring legally required standby or emergency power shall be supplied with two sources of power. Primary power shall be from the normal building power system. Legally required standby power or emergency power shall be from an *approved* source complying with the Washington Cities Electrical Code. The legally required standby power or emergency power source and its transfer switches shall be in ~~a~~ separate rooms from the normal power transformers and switch gears, and ventilated directly to and from the exterior. The room shall be completely enclosed in not less than 1-hour fire barriers constructed in accordance with Section 707, or 1-hour horizontal assemblies constructed in accordance with Section 711, or both, except 2-hour fire-resistance construction shall be required for high-rise and underground buildings per Sections 403 and 405 respectively. Power distribution from the two sources shall be by independent routes to the room containing the automatic transfer switch(s). Independent routes shall mean either a minimum 1-hour fire-resistance separation, or a physical distance of not less than 50 feet. Transfer to full emergency power shall be automatic and shall take place within the maximum time to energize loads. The systems shall comply with the *Washington Cities Electrical Code*.

[F] 2702.1.10 Fuel-fired genator sets and fuel storage locaton. Fuel-fired generator sets and associated fuel storage, including optional landlord-owned or tenant-owned generator sets, located more than 75 feet above the lowest level of Fire Department vehicle access, or located at a floor level more than 30 feet below the lowest level of exit discharge, require the approval of the fire code official.

[F] 2702.2 Where required. Emergency and legally required standby power systems shall be provided where required by Sections 2702.2.1 through 2702.2.16 and other sections of this code.

[F] 2702.2.1 Emergency alarm systems. Emergency power shall be provided for emergency alarm systems as required by Section 415.5.

[F] 2702.2.2 Elevators and platform lifts. ~~Standby~~Legally required standby power shall be provided for elevators and platform lifts used as accessible means of egress as required in Sections 1009.4~~,~~ and 1009.5~~, 3003.1, 3007.8 and 3008.8~~. Emergency power shall be provided for elevators in high-rise buildings as required in Section 403.4.8.4.

[F] 2702.2.3 Emergency responder radio coverage systems. Standby power shall be provided for emergency responder radio coverage systems required in Section 915 and the *International Fire Code*. The standby power supply shall be capable of operating the emergency responder radio coverage system for a duration of not less than 24 hours.

[F] 2702.2.4 Emergency voice/alarm communication systems. Emergency power shall be provided for emergency voice/alarm communication systems as required in Section 907.5.2.2.5. The system shall be capable of powering the required load for a duration of not less than 24 hours, as required in NFPA 72.

[F] 2702.2.5 Exit signs. Emergency power shall be provided for exit signs as required in Section 1013.6.3. The system shall be capable of powering the required load for a duration of not less than 90 minutes.

[F] 2702.2.6 Group I-2 occupancies. Essential electrical systems for Group I-2 occupancies shall be in accordance with Section 407.10.

[F] 2702.2.7 Group I-3 occupancies. Emergency power shall be provided for power-operated doors and locks in Group I-3 occupancies as required in Section 408.4.2.

[F] 2702.2.8 Hazardous materials. Emergency or legally required standby power shall be provided in occupancies with hazardous materials where required by the *International Fire Code*.

[F] 2702.2.9 High-rise buildings. Emergency ~~and standby~~ power shall be provided in high-rise buildings as required in Section~~s~~ 403.4.8.

[F] 2702.2.10 Horizontal sliding doors. ~~Standby~~Legally required standby power shall be provided for horizontal sliding doors as required in Section 1010.1.4.3. The standby power supply shall have a capacity to operate not fewer than 50 closing cycles of the door.

[F] 2702.2.11 Means of egress illumination. Emergency power shall be provided for means of egress illumination as required in Section 1008.3. The system shall be capable of powering the required load for a duration of not less than 90 minutes.

[F] 2702.2.12 Membrane structures. ~~Standby~~Legally required standby power shall be provided for auxiliary inflation systems in permanent membrane structures as required in Section 3102.8.2. ~~Standby~~Legally required standby power shall be provided for a duration of not less than 4 hours. Auxiliary inflation systems in temporary air-supported and air-inflated membrane structures shall be provided in accordance with Section 3103.10.4 of the *International Fire Code.*

[F] 2702.2.13 Pyrophoric materials. Emergency power shall be provided for occupancies with silane gas in accordance with the *International Fire Code.*

[F] 2702.2.14 Semiconductor fabrication facilities. Emergency power shall be provided for semiconductor fabrication facilities as required in Section 415.11.10.

[F] 2702.2.15 Smoke control systems. ~~Standby~~ Emergency power shall be provided for smoke control systems as required in Sections 404.7, 909.11, 909.20.5.7, 909.20.6.2 and 909.21.5. Legally required standby power systems shall be provided for pressurization systems in low-rise buildings in accordance with Washington State Building Code Section 504.4.1 and Section 909.20.6.

[F] 2702.2.16 Underground buildings. Emergency ~~and standby~~ power shall be provided in underground buildings as required in Section 405.

[F] 2702.3 Critical circuits. Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196. Electrical circuit protective systems shall be installed in accordance with their listing requirements.

[F] 2702.4 Maintenance. Emergency and standby power systems shall be maintained and tested in accordance with the *International Fire Code*.

TABLE 2702
LEGALLY REQUIRED STANDBY AND EMERGENCY POWER

Type of Equipment	Maximum Time to Energize Loads	Minimum Run Time (Duration)	IBC Section	IFC or NFPA Section
Emergency Power Systems[1]				
Exit signs	10 seconds	2 hours	1013.6.3	604.2.9 High rises 604.2.16Underground buildings 1013.6.3 Exit signs 604.2.13 Temporary tents, canopies, membrane structures NFPA 70
Exit illumination	10 seconds	2 hours	1008.3	1008.3 604.2.9 High rises 604.2.16 Underground buildings

Any emergency voice/alarm communication including area of refuge communication systems (barrier-free and horizontal exits)	NFPA 72	24 hours (battery) 4 hours (generator)	402.7.3, 402.7.4, and 907.5.2.2 Covered mall buildings 403.4.8 and 907.5.2.2 High rises 405.8, , and 907.5.2.2 Underground buildings 907.2.1, and 907.5.2.2 Assembly occupancies	907.2.20 Covered mall building 604.2.9 High rises 604.2.16 Underground buildings 907.2.1.1 Assembly occupancies NFPA 72
Fire detection and fire alarms	NFPA 72	24 hours (battery) 4 hours (generator)	403.4.8 High rises 405.8 Underground buildings 909.20.6.2 Smokeproof enclosures 907	604.2.9 High rises 604.2.16 Underground buildings 907.6.2 NFPA 72
Smoke control systems in high-rise buildings, underground buildings and covered mall buildings including energy management systems if used for smoke control or smoke removal	60 seconds	2 hours	403.4.8 High rises 404.7 Atriums 405.8 Underground buildings 909.11 Smoke control	909.11

Fire pumps in high-rise buildings and underground buildings	10 seconds	8 hours (NFPA 20)	403.4.8 High rises 405.8 Underground buildings	604.2.9 High rises and NFPA 20 604.2.16 Underground buildings 913.2 All Fire Pumps
Smokeproof enclosures and elevator shaft pressurization	60 seconds for pressurization	4 hours	403.4.8 High rises 909 and 909.20.6.2	
Any shaft exhaust fans required to run continuously in lieu of dampers	60 seconds	4 hours	717.5.3	
Fire service or occupant evacuation elevator car operation in high-rise and underground buildings (including control system, motor controller, operation control, signal equipment, machine room cooling/heating, etc.)	60 seconds	4 hours	3003, 3007, and 3008	604.2.9 High rises 604.2.16 Underground buildings
Elevator car lighting and communications in high-rise and underground buildings	10 seconds	4 hours	3003, 3007, and 3008	604.2.9 High rises 604.2.16 Underground buildings 604.2.1 Elevators
Lights, heating, and cooling for building fire command center and mechanical equipment rooms serving the fire command center	60 seconds	24 hours		604.2.9 High rises

Power (other than lights, heating and cooling) for building fire command center	60 seconds	4 hours		
Mechanical and electrical systems required by IFC 27 (hazardous materials including UPS rooms)	60 seconds	4 hours		Chapter 27
Legally Required Standby[1]				
Exhaust fans for any loading dock located interior to a building	60 seconds	4 hours		
Transformer vault ventilation equipment	60 seconds	4 hours		
Heat tape for sprinkler lines and heating in sprinkler riser rooms	60 seconds	24 hours		
Fuel pump system for any legally required system	60 seconds	4 hours		
Elevators in high rise or underground buildings used for accessible means of egress	60 seconds	2 hours		
Any shaft exhaust fans required to run continuously in lieu of dampers	60 seconds	4 hours	717.5.3	

TABLE 2702 FOOTNOTE:

1. The fuel pump and associated systems for the emergency or legally required generator shall be provided with power from the generator to maintain fuel supply.

23.10.3002.4 International Building Code Section 3002.4 amended – Elevator car to accommodate ambulance stretcher.
International Building Code Section 3002.4 is hereby amended to read as follows:

> **3002.4 Elevator car to accommodate ambulance stretcher.** Where elevators are provided in buildings four or more *stories* above, or four or more *stories* below, *grade plane*, or in any R-1, R-2, or I occupancy building provided with an elevator regardless of the number of stories, not fewer than one elevator shall be provided for fire department emergency access to all floors. The elevator car shall be of such a size and arrangement to accommodate an ambulance stretcher 24 inches by 84 inches (610 mm by 2134 mm) with not less than 5-inch (127 mm) radius corners, in the horizontal, open position and shall be identified by the international symbol for emergency medical services (star of life). The symbol shall not be less than 3 inches (76 mm) in height and shall be placed inside on both sides of the hoistway door frame.

23.10.3007.1 International Building Code Section 3007.1 Amended – General.
International Building Code Section 3007.1 is hereby amended to read as follows:

3007.1 General. Where required by Section 403.6.1, every floor of the building shall be served by fire service access elevators complying with Sections 3007.1 through 3007.9. Except as modified in this section, fire service access elevators shall be installed in accordance with this chapter and ASME A17.1/CSA B44.

Exceptions:

1. When below grade portions of high rise buildings are served by elevators not serving above grade portions extending more than 75 feet above the lowest Fire department access and such elevators do not serve levels more than 80 feet below grade plane.
2. Elevators serving mezzanines located below the 7th story.

23.10.3007.6.2 International Building Code Section 3007.6.2 Amended – Lobby enclosure.
International Building Code Section 3007.6.2 is hereby amended to read as follows:

> **3007.6.2 Lobby enclosure.** The fire service access elevator lobby shall be enclosed with a *smoke barrier* having a *fire-resistance rating* of not less than 1 hour, except that lobby doorways shall comply with Section 3007.6.3.

Exceptions:

1. Enclosed fire service access elevator lobbies are not required at the *levels of exit discharge*.

2. Enclosed fire service access elevator lobbies are not required for elevators with pressurized hoistways.

23.10.3007 International Building Code Section 3007 Amended – Phase I Emergency recall operation. International Building Code Section 3007 is hereby amended to add the following subsection 3007.10 to read as follows:

3007.10 Phase I Emergency recall operation. Actuation of any building fire alarm-initiating device shall initiate Phase I emergency recall operation on all fire service access elevators in accordance with the requirements in ASME A17.1/CSA B44 with a 5 minute delay except for smoke detectors located in associated elevator lobbies, hoistways or elevator machine rooms. All other elevators shall remain in normal service unless Phase I emergency recall operation is manually initiated by a separate, required three-position, key-operated "Fire Recall" switch or automatically initiated by the associated elevator lobby, hoistway or elevator machine room smoke detectors. In addition, if the building also contains occupant evacuation elevators in accordance with Section 3008, an independent, three-position, key-operated "Fire Recall" switch conforming to the applicable requirements in ASME A17.1/CSA B44 shall be provided at the designated level for each fire service access elevator.

23.10.3008.6 International Building Code Section 3008.6 amended – Occupant evacuation elevator lobby. International Building Code Section 3008.6 is hereby amended to add new subsections 3008.6.7 and 3008.6.7.1 to read as follows:

3008.6.7 Lobby status indicator. Each occupant evacuation elevator lobby shall be equipped with a status indicator arranged to display all of the following information:

1. An illuminated green light and the message, "Elevators available for occupant evacuation," when the elevators are operating in normal service and the fire alarm system is indicating an alarm in the building.

2. An illuminated red light and the message, "Elevators out of service, use exit stairs" when the elevators are in Phase I emergency recall operation in accordance with the requirements in ASME A17.1/CSA B44.

3. No illuminated light or message when the elevators are operating in normal service.

3008.6.7.1 Location of lobby status indicator. Visual signals for each elevator group shall be installed on each floor served. They shall be located 84 in. (2,130 mm) to 120 in. (3,000 mm) above the floor and centered above a hall call button. Lettering shall be a minimum of 2 in. (50 mm) high and conform to A117.1 requirement 703.2.

23.10.3304.1 International Building Code Section 3304.1 amended – Excavation and fill. International Building Code Section 3304.1 is hereby amended by the addition of a new subsection 3304.1.5 to read as follows:

3304.1.5. Excavation and shoring near improved public places. No person, firm or corporation shall excavate and/or install shoring in excess of four feet, measured vertically, on private property within any area between the vertical prolongation of the margin of an improved public place and a 100 percent slope plane (45 degrees from a horizontal plane) from the existing elevation of the margin of the traveled surface of an improved public place to the proposed elevation of the private property without first obtaining a permit from the building official to do so, and no work shall commence toward such excavation and shoring until a permit therefor has been issued by the building official. Improved public place means any street, alley, easement for water, sewer or storm drainage, or similar parcel of land which is deeded, dedicated or otherwise permanently made available to the City or public for city or public use.

23.10.3306.1 International Building Code Table 3306.1 amended – Protection of pedestrians. International Building Code Table 3306.1 is hereby amended to read as follows:

TABLE 3306.1

PROTECTION OF PEDESTRIANS

HEIGHT OF CONSTRUCTION	DISTANCE FROM CONSTRUCTION TO SIDEWALK, WALKWAY, OR LOT LINE	TYPE OF PROTECTION
8 feet or less	Less than 5 feet	Construction railings
	5 feet or more	None
More than 8 feet	Less than 5 feet	Barrier and covered walkway
	5 feet or more, but not more than one-fourth the height of construction	Barrier and covered walkway
	5 feet or more, but between one-fourth and one-half the height of construction	Barrier
	5 feet or more, but exceeding one-half the height of construction	None

23.10.3306.2 International Building Code Section 3306.2 amended – Walkways.
International Building Code Section 3306.2 is hereby amended to read as follows:

> **3306.2 Walkways.** A walkway shall be provided for pedestrian travel in front of every construction and demolition site unless the applicable governing authority authorizes the sidewalk to be fenced or closed. Walkways shall be of sufficient width to accommodate the pedestrian traffic, but in no case shall they be less than 4 feet (1219 mm) in width. Walkways shall be provided with a durable walking surface. Walkways shall be *accessible* in accordance with Chapter 11 and shall be designed to support all imposed loads and in no case shall the design live load be less than 150 pounds per square foot (psf) (7.2 kN/m^2). Where a sidewalk or walkway passes into or through, or adjacent to, an area under construction or demolition, the building official is authorized to require protection as indicated in this chapter and Table 3306.1.

Section 6. Chapter 23.12 of the Bellevue City Code is hereby repealed in its entirety and replaced with a new Chapter 23.12 to read as follows:

Chapter 23.12
RESIDENTIAL CODE

Sections:

23.12.010 Adoptions.

The following code, as amended, added to or excepted in this chapter, together with all amendments and additions provided in this title, are adopted and shall be applicable within the city:

A. International Residential Code.

1. Code Adoption. The 2015 Edition of the *International Residential Code* published by the International Code Council, as adopted and amended by the State Building Code Council in Chapter 51-51 WAC, excluding Chapter 1, “Scope and Administration,” including Appendix U, is adopted, together with the 2015 International Swimming Pool and Spa Code published by the International Code Council, as adopted and amended in WAC 51-50-3109, shall be applicable within the city.

2. Scope. The provisions of the *International Residential Code*, as adopted, amended, added to, or excepted in this chapter, shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures, including adult family homes, foster family care homes and family day care homes licensed by the Washington State Department of Social and Health Services.

> Exception: Live/work units complying with the requirements of Section 419 of the *International Building Code* shall be permitted to be built as one- and two-family dwellings or townhouses. Fire suppression required by Section 419.5 of the *International Building Code* when constructed under the *International Residential Code for One- and Two-Family Dwellings* shall conform to Section 903.3.1.3 of the *International Building Code*.

23.12.020 Amendments, additions, or exceptions to the 2015 International Residential Code.

Pursuant to RCW 19.27.060, the following contains amendments, additions, or exceptions to the *International Residential Code* applicable and enforceable within the city.

23.12.301.2.1 International Residential Code Table R301.2(1) amended – Climatic and geographic design criteria. International Residential Code Table R301.2(1) is hereby amended to read as follows:

IRC TABLE R301.2(1)

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

Ground Snow Load	WIND DESIGN [l, m]		Seismic Design Category[f]	SUBJECT TO DAMAGE FROM			Winter Design Temp[e]	Ice Barrier Under-layment Required[h]	Flood Hazards[g]	Air Freezing Index[i]	Mean Annual Temp[j]
	Speed[d] (mph)	Topographic effects[k]		Weathering[a]	Frost line depth[b]	Termite[c]					
25 (roof snow load shall also be 25 psf unless proven otherwise by the licensed structural engineer-of-record.	85	NO	D2	MODERATE	12"	Slight to Moderate	22	NO	March 12, 1974 entry into National Flood Insurance Program. Current maps dated May 16, 1995 entitled “The Flood Insurance Study for King County”	170	51

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index (i.e., “negligible,” “moderate” or “severe”) for concrete as determined from the Weathering Probability Map [Figure R301.2(3)]. The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.

b. The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.

c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.

d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(4)A]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.

e. The outdoor design dry-bulb temperature shall be selected from the columns of 97 1/2-percent values for winter from Appendix D of the International Plumbing Code. Deviations from the Appendix D temperatures shall be permitted to reflect local climates or local weather experience as determined by the building official.

f. The jurisdiction shall fill in this part of the table with the Seismic Design Category determined from Section R301.2.2.1.

g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the Flood Insurance Study and (c) the panel numbers and dates of all currently effective FIRMs and FBFMs or other flood hazard map adopted by the authority having jurisdiction, as amended.

h. In accordance with Sections R905.2.7.1, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."

i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99 percent) value on the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32° Fahrenheit)" at www.ncdc.noaa.gov/fpsf.html.

j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°F)" at www.ncdc.noaa.gov/fpsf.html.

k. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall indicate "NO" in this part of the table.

l. In accordance with Figure R301.2(4) A, where there is local historical data documenting unusual wind conditions, the *jurisdiction* shall fill in this part of the table with "YES" and identify any specific requirements. Otherwise, the *jurisdiction* shall indicate "NO" in this part of the table. The City of Bellevue has "NO" requirements for unusual wind conditions.

m. In accordance with Section R301.2.1.2.1, the *jurisdiction* shall indicate the wind-borne debris wind zone(s). Otherwise, the *jurisdiction* shall indicate "NO" in this part of the table. The City of Bellevue has "NO" requirements for wind-borne debris wind zones.

23.12.322.1.4 International Residential Code Section R322.1.4 amended – Establishing the design flood elevation. International Residential Code Section R322.1.4 is hereby amended to read as follows.

R322.1.4 Establishing the design flood elevation. The design flood elevation shall be used to define flood hazard areas. At a minimum, the design flood elevation shall be one foot above the higher of the following:

1. The base flood elevation at the depth of peak elevation of flooding, including wave height, that has a 1 percent (100-year flood) or greater chance of being equaled or exceeded in any given year, or

2. The elevation of the design flood associated with the area designated on a flood hazard map as identified by the Federal Emergency Management Agency in an engineering report entitled "The Flood Insurance Study for King County," dated May 16, 1995, as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this section.~~adopted by the community, or otherwise legally designated.~~

R322.1.4.1 Determination of design flood elevations. If design flood elevations are not specified, the Building Official is authorized to require the applicant to:

1. Obtain and reasonably use data available from a federal, state or other source; or

2. Determine the design flood elevation ~~in accordance with accepted hydrologic and hydraulic engineering practices used to define special flood hazard areas.~~ and/or floodway in accordance with the City of Bellevue LUC 20.25H.175A and Engineering Standards, Section D4-04.5, "Floodplain/Floodway Analysis" to define special flood hazard areas. Determinations shall be undertaken by a registered *design professional* who shall document that the technical methods used reflect currently accepted engineering practice in accordance with accepted hydrologic and hydraulic engineering practices used to define special flood hazard areas. Studies, analyses and computations shall be submitted in sufficient detail to allow thorough review and approval.

R322.1.4.2 Determination of impacts. In riverine flood hazard areas where design flood elevations are specified but floodways have not been designated, the applicant shall provide a floodway analysis that demonstrates that the proposed work will meet the City of Bellevue Engineering Standards, Section D4-04.5, "Floodplain/Floodway Analysis."~~demonstrate that the effect of the proposed buildings and structures on design flood elevations, including fill, when combined with other existing and anticipated flood hazard area encroachments, will not increase the design flood elevation more than 1 foot (305 mm) at any point within the *jurisdiction*.~~

23.12.U101.1 International Residential Code Appendix U Section U101.1 amended – General. International Residential Code Appendix U Section U101 is hereby amended to read as follows:

U101.1 General. These provisions shall only be applicable for new construction where the building owner voluntarily elects to construct a solar-ready installation~~provisions are required~~.

. . . .

Section 7. Section 23.16.010 of the Bellevue City Code is hereby amended to read as follows:

23.16.010 Barrier requirements – Specifications.

The following requirements shall apply to all outdoor swimming pools, spas and hot tubs associated with one- and two- family residential dwellings heretofore or hereafter constructed or presently under construction within the city. Each such pool, spa, or hot tub shall be enclosed with a pool or yard fence, designed per Section 305 of the 2015 International Swimming Pool and Spa Code, whichever shall apply to the primary use and structure with which the pool, spa, or hot tub is associated.

Exception: Any outdoor swimming pool, spa or hot tub which was constructed prior to adoption of the International Building Code or the International Residential Code under Chapter 23.10 BCC under this chapter need not comply with the terms of this section if such swimming pool, hot tub or spa is enclosed with a pool or yard fence which complies with the applicable Bellevue City Code provision regarding pool, spa, or hot tub enclosures which was in effect at the time the enclosure was constructed.

Section 8. A new Chapter 23.13 of the Bellevue City Code is hereby created to read as follows:

Chapter 23.13
EXISTING BUILDING CODE

Sections:

23.13.010 Amendments and adoptions.

The following code, as amended, added to or excepted in this chapter, together with all amendments and additions provided in this title, are adopted and shall be applicable within the city:

A. International Existing Building Code.

1. Code Adoption. The 2015 Edition of the International Existing Building Code published by the International Code Council, as adopted and amended by the State Building Code Council in Chapter 51-50 WAC, shall be applicable within the city, as amended, added to and excepted in this chapter. The provisions of the International Existing Building Code shall be applied to the repair, alteration, change of occupancy, addition and relocation of existing buildings.

23.13.015 Amendments, additions, or exceptions to the 2015 International Existing Building Code.

Pursuant to RCW 19.27.060, the following contains amendments, additions, or exceptions to the International Existing Building Code applicable and enforceable within the city.

23.13.020 International Existing Building Code

23.13.1401.2 International Existing Building Code Section 1401.2 Amended – Applicability.

International Existing Building Code Section 1401.2 is hereby amended to read as follows:

1401.2 Applicability. When approved by the *code official*, existing structures ~~Structures existing prior to [DATE TO BE INSERTED BY THE JURISDICTION]~~ in which there is work involving *additions*, *alterations* or *changes of occupancy* shall be

made to conform to the requirements of this chapter or the provisions of Chapters 5 through 13. The provisions of Sections 1401.2.1 through 1401.2.5 shall apply to existing occupancies that will continue to be, or are proposed to be, in Groups A, B, E, F, I-2, M, R, S and U. These provisions shall not apply to buildings with occupancies in Group H or I-1, I-3 or I-4.

Section 9. Chapter 23.30 of the Bellevue City Code is hereby amended to read as follows:

Chapter 23.30
ELECTRICAL CODE

Sections:

23.30.010 Short title.
This chapter shall be known as the electrical code of the city of Bellevue, which is hereinafter referred to as the "city of Bellevue electrical code," "electrical code" or as "this chapter."

23.30.015 Washington Cities Electrical Code adopted.
The January 22, 2014~~November 12, 2009~~, Edition of the Washington Cities Electrical Code, Part 1 and Part 3, but excluding Part 2, Administration, as published by the Washington Association of Building Officials is adopted and shall be applicable within the city, as amended, added to, and excepted in this chapter.

23.30.020 Conflicts.
A. The requirements of this chapter will be observed where there is any conflict between this chapter and the National Electrical Code (NFPA 70), ~~Centrifugal Fire Pumps (NFPA 20), the Emergency and Standby Power Systems (NFPA 110),~~ ANSI/TIA/EIA 568-C~~B~~, ANSI/TIA/EIA 569-B~~A~~, ANSI/TIA/EIA 607-B, ~~or~~ ANSI/TIA/EIA 570-B or NESC C2.

B. The National Electrical Code will be followed where there is any conflict between ~~standard for Installation of Stationary Pumps for Fire Protection (NFPA 20), standard for Emergency and Standby Power Systems (NFPA 110),~~ ANSI/TIA/EIA 568-C~~B~~, ANSI/TIA/EIA 569-B~~A~~, ANSI/TIA/EIA 607-B, ANSI/TIA/EIA 570-B, NESC C2 and the National Electrical Code (NFPA 70).

C. In accordance with RCW 19.28.010(3), where the State of Washington Department of Labor and Industries adopts a more current edition of the National Electrical Code (NFPA 70), the building official may supplement use of this code with newly adopted editions of the National Electrical Code. Provisions in the annex chapters of the National Electrical Code shall not apply unless specifically referenced in the adopting ordinance.

23.30.030 Applicability.

A. The electrical code covers the installation of electric conductors, electric equipment and additions, alterations, modifications, or repairs to existing electrical installations for the following:

1. Electric conductors, electric equipment, and electrical raceways installed within or on public and private buildings, property or other structures.

2. Signaling and communications conductors and equipment, telecommunications conductors and equipment, fiber optic cables, and raceways installed within or on public and private buildings, property or other structures.

3. Yards, lots, parking lots, and industrial substations.

4. Temporary electrical installations for use during the construction of buildings.

5. Temporary electrical installations for carnivals, conventions, festivals, fairs, traveling shows, the holding of religious services, temporary lighting of streets, or other approved uses.

6. Installations of conductors and equipment that connect to a supply of electricity.

7. All other outside electrical conductors on the premises.

8. Optional standby systems derived from portable generators.

B. Exception. Installations under the exclusive control of electric utilities for the purpose of communication, transmission, and distribution of electric energy located in buildings used exclusively by utilities for such purposes or located outdoors on property owned or leased by the utilities or on public highways, streets, roads, etc., or outdoors by established rights on private property.

It is the intent of this section that this code covers all premises' wiring or wiring other than utility owned metering equipment, on the load side of the service point of buildings, structures, or any other premises not owned or leased by the utility. Also, it is the intent that this code covers installations in buildings used by the utility for purposes other than listed above, such as office buildings, warehouses, garages, machine shops, and recreational buildings which are not an integral part of a generating plant, substation, or control center.

23.30.040 Maintenance requirements.

Electrical systems, equipment, materials and appurtenances, both existing and new, and parts thereof shall be maintained in proper operating condition in accordance with the original design and in a safe, hazard-free condition. Devices or safeguards that are required by this chapter shall be maintained in compliance with the code edition under which installed. The owner or the owner's designated agent shall be responsible for the maintenance of the electrical systems and equipment. To determine compliance with this provision, the building official shall have the authority to require that the electrical systems and equipment be re-inspected.

23.30.450.14.1 Washington Cities Electrical Code Section 450.14 amended – Disconnecting Means. Washington Cities Electrical Code Section 450.14 is hereby amended to read as follows:

450.14 Disconnecting Means. Transformers, other than Class 2 or Class 3 transformers, shall have a disconnecting means located either in sight of the transformer or in a remote location. Where located in a remote location, the disconnecting means shall be lockable in accordance with 110.25 and its location shall be field marked on the transformer. Transformers shall not be located more than one story above *grade plane* (as defined in the *International Building Code*) unless protected by NEC compliant disconnect and overcurrent protection.

Exception: Where approved by the building code official and the fire code official.

Section 10. Chapter 23.50 of the Bellevue City Code is hereby amended to read as follows:

Chapter 23.50
MECHANICAL CODE

Sections:

23.50.010 Adoptions.

The following codes, all as amended, added to or excepted in this chapter, together with all amendments and additions provided in this title, are adopted and shall be applicable within the city:

A. International Mechanical Code.

1. Code Adoption. The 2015~~2~~ Edition of the International Mechanical Code published by the International Code Council, as adopted and amended by the State Building Code Council in Chapter 51-52 WAC, excluding Chapter 1, “Administration,” is adopted and shall be applicable within the city, as amended, added to and excepted in this chapter.

2. Scope. This code shall regulate the design, installation, maintenance, alteration and inspection of mechanical systems that are permanently installed and utilized to provide control of environmental conditions and related processes within buildings. This code shall also regulate

those mechanical systems, system components, equipment and appliances specifically addressed herein. The installation of fuel gas distribution piping and equipment, fuel gas-fired appliances and fuel gas-fired appliance venting systems shall be regulated by the International Fuel Gas Code.

Exceptions:

1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress and their accessory structures shall comply with the International Residential Code.

2. The standards for liquefied petroleum gas installations shall be the 2014~~1~~ Edition of NFPA 58 (Liquefied Petroleum Gas Code) and the 2015~~2~~ Edition of NFPA 54 (ANSI Z223.12006 National Fuel Gas Code).

B. National Fuel Gas Code (NFPA 54). The 2015~~08~~ Edition of the National Fuel Gas Code published by the National Fire Protection Association, as amended by the State Building Code Council in Chapter 51-52 WAC, is adopted and shall be applicable within the city, as amended, added to and excepted in this chapter.

C. Liquefied Petroleum Gas Code (NFPA 58). The 2014~~1~~ Edition of the Liquefied Petroleum Gas Code published by the National Fire Protection Association, as amended by the State Building Code Council in Chapter 51-52 WAC, is adopted and shall be applicable within the city, as amended, added to and excepted in this chapter.

D. International Fuel Gas Code. The 2015~~2~~ Edition of the International Fuel Gas Code published by the International Code Council, as amended by the State Building Code Council in Chapter 51-52 WAC, excluding Chapter 1, “Administration,” together with Appendix Chapter A, “Sizing and Capacities of Gas Piping,” is adopted and shall be applicable within the city, as amended, added to and excepted in this chapter.

23.50.020 Amendments, additions, or exceptions to the 2015~~2~~ International Mechanical Code. Pursuant to RCW 19.27.060, the following contains amendments, additions, or exceptions to the International Mechanical Code applicable and enforceable within the city.

23.50.202 International Mechanical Code Section 202 amended – Air pollution control devices International Mechanical Code Section 202 is hereby amended to add the following definition to read as follows:

23.50.202 IMC 202 Air Pollution Control Devices. Auxiliary equipment and devices used for the purpose of cleaning air passing through them or by them in such a manner as to reduce or remove impurities.

23.50.401.4 International Mechanical Code Section 401.4 amended – Intake opening location. International Mechanical Code Section 401.4 is hereby amended to read as follows:

401.4 Intake opening location. Air intake openings shall comply with all of the following:

1. Intake openings shall be located a minimum of 10 feet (3048 mm) from lot lines or buildings on the same lot.

2. Mechanical and gravity outdoor air intake openings shall be located not less than 10 feet (3048 mm) horizontally from any hazardous or noxious contaminant source, such as vents, streets, alleys, parking lots and loading docks, except as specified in Item 3 or Section 501.~~2~~3.1. Outdoor air intake openings shall be permitted to be located less than 10 feet (3048 mm) horizontally from streets, alleys, parking lots and loading docks provided that the openings are located not less than 25 feet (7620 mm) vertically above such locations. Where openings front on a street or public way, the distance shall be measured from the closest edge of the street or public way.

Exception: For existing buildings, the building official may approve heights less than 25 feet with alternative designs that account for factors such as distance from lane of vehicle travel, prevailing wind, filtering of intake air, or other elements of the design or the site conditions that affect the adjacent exterior air quality.

3. Intake openings shall be located not less than 3 feet (914 mm) below contaminant sources where such sources are located within 10 feet (3048 mm) of the opening.

4. Intake openings on structures in flood hazard areas shall be at or above the elevation required by Section 1613~~2~~ of the *International Building Code* for utilities and attendant equipment.

23.50.405.1 International Mechanical Code Section 405.1 amended – General. International Mechanical Code Section 405.1 is hereby amended to read as follows:

405.1 General. Mechanical ventilation systems shall be provided with manual or automatic controls that will operate such systems whenever the spaces are occupied. Air-conditioning systems that supply required ventilation air shall be provided with

controls designed to automatically maintain the required outdoor air supply rate during occupancy. For additional mechanical system control requirements, refer to the 2015~~2~~ *International Energy Conservation Code* Section C403.2.4 HVAC System Controls, as amended by the State of Washington.

23.50.501.3 International Mechanical Code Section 501.3 amended – Exhaust discharge. International Mechanical Code Section 501.3 is hereby amended to read as follows:

501.3 Exhaust discharge. The air removed by every mechanical exhaust system shall be discharged outdoors at a point where it will not cause a nuisance and not less than the distances specified in Section 501.2.1. The air shall be discharged to a location from which it cannot again be readily drawn in by a ventilating system. Air shall not be exhausted into an attic or crawlspace.

EXCEPTIONS:

1. Whole-house ventilation-type attic fans shall be permitted to discharge into the attic space of dwelling units having private attics.

2. Commercial cooking recirculating systems.

501.3.1 Location of exhaust outlets. The termination point of exhaust outlets and ducts discharging to the outdoors shall be located with the following minimum distances:

1. For ducts conveying explosive or flammable vapors, fumes or dusts: 30 feet (9144 mm) from the property line; 10 feet (3048 mm) from operable openings into the building; 6 feet (1829 mm) from exterior walls and roofs; 30 feet (9144 mm) from combustible walls and operable openings into the building which are in the direction of the exhaust discharge; 10 feet (3048 mm) above adjoining grade.

2. For other product-conveying outlets: 10 feet (3048 mm) from property lines; 3 feet (914 mm) from exterior walls and roofs; 10 feet (3048 mm) from operable openings into the building; 10 feet (3048 mm) above adjoining grade.

3. **For environmental air exhaust other than enclosed parking garage and transformer vault exhaust:** 3 feet (914 mm) from property lines, 3 feet (914 mm) from operable openings into buildings for all occupancies other that Group U, and 10 feet (3048 mm) from mechanical air intakes. Such exhaust shall not be considered hazardous or noxious.

EXCEPTIONS:

1. The separation between an air intake and exhaust outlet on a single listed package HVAC unit.

2. Exhaust from environmental air systems other than garages may be discharged into an open parking garage.

3. Except for Group I occupancies, where ventilation system design circumstances require building HVAC air to be relieved, such as during economizer operation, such air may be relieved into an open or enclosed parking garage within the same building.

4. Exhaust outlets serving structures in flood hazard areas shall be installed at or above the elevation required by Section ~~1612~~1613 of the *International Building Code*, as amended by the State of Washington, for utilities and attendant equipment.

5. **For enclosed parking garage exhaust system outlets and transformer vault exhaust system outlets:** 10 feet (3048 mm) from property lines which separate one lot from another; 10 feet (3048 mm) from operable openings into buildings; 10 feet (3048 mm) above adjoining sidewalk.

EXCEPTION: Parking garage and transformer vault exhaust outlets may terminate less than 10' above grade at the discretion of the building official.

6. **For elevator machinery rooms in enclosed or open parking garages**~~,~~ ~~:exhaust~~ Exhaust outlets may discharge air directly into the parking garage.

7. For specific systems see the following sections:

7.1 Clothes dryer exhaust, Section 504.4.

7.2 Kitchen hoods and other kitchen exhaust equipment, Sections 506.3.13, 506.4 and 506.5.

7.3 Dust stock and refuse conveying systems, Section 511.2.

7.4 Subslab soil exhaust systems, Section 512.4.

7.5 Smoke control systems, Section 513.10.3.

7.6 Refrigerant discharge, Section 1105.7.

7.7 Machinery room discharge, Section 1105.6.1.

501.3.1.1 Exhaust discharge. Exhaust air shall not be directed onto walkways.

EXCEPTION: For existing buildings, the building official may approve an alternative design for commercial kitchen exhaust discharge that accounts for factors such as height above walkway, horizontal distance from walkway, filtering of exhaust air, or other elements of the design or the site conditions that affect the exhaust air quality and the walkway environment.

23.50.504.4 International Mechanical Code Section 504.4 amended – Exhaust installation. International Mechanical Code Section 504.4 is hereby amended to read as follows:

> **504.4 Exhaust installation.** Dryer exhaust ducts for clothes dryers shall terminate on the outside of the building and shall be equipped with a backdraft damper. Dryer exhaust ducts may terminate at approved exterior louvers with not less than 1/22" inch ~~openings~~ in any direction.

Screens shall not be installed at the duct termination. Ducts shall not be connected or installed with sheet metal screws or other fasteners that will obstruct the exhaust flow. Clothes dryer exhaust ducts shall not be connected to a vent connector, vent or chimney. Clothes dryer exhaust ducts shall not extend into or through ducts or plenums.

Domestic dryer exhaust ducts may terminate at a common location where each duct has an independent back-draft damper.

23.50.506.5 International Mechanical Code Section 506.5 amended – Auxiliary Equipment. International Mechanical Code Section 506.5 is hereby amended to add a new Subsection 506.5.6 to read as follows:

> **506.5.6 Auxiliary Equipment.** Equipment and devices allowed to be installed in the path of exhaust shall be approved for such application. Devises shall comply with Sections 506.3.2.3, 506.3.2.4, 506.3.6, 506.3.11.1, 506.5 and in accordance with the manufacturer's installation design.
>
> 1. Downgrading the exhaust duct system not allowed.
>
> 2. Access for service and replacement required per IMC 306.
>
> 3. An airflow differential pressure control shall be provided to monitor the pressure drop across the filter sections. When airflow is reduced below the designed velocity, the control shall activate a visual alarm located in cooking area.

23.50.507.2 International Mechanical Code Section 507.2 amended – Type I hoods. International Mechanical Code Section 507.2 is hereby amended to read as follows:

507.2 Type I hoods. Type I hoods shall be installed where cooking *appliances* produce grease or smoke as a result of the cooking process. Type I hoods shall be installed over *medium-duty, heavy-duty* and *extra-heavy-duty cooking appliances*.

Exceptions:

1) A Type 1 hood shall not be required for an electric cooking appliance where an approved testing agency provides documentation that the appliance effluent contains 5 mg/m^3 or less of grease when tested at an exhaust flow rate of 500cfm (0.236 m^3/s) in accordance with UL 710B.
2) A Type 1 hood shall not be required in an R-2 type occupancy with no more than 16 residents.
3) A Type 1 hood shall not be required in I-2 cooking facilities that meet IBC 407.2.6 requirements.

23.50.513.10.3 International Mechanical Code Section 513.10.3 amended – Equipment, inlets and outlets. International Mechanical Code Section 513.10.3 is hereby amended to read as follows:

513.10.3 Equipment, inlets and outlets. Equipment shall be located so as to not expose uninvolved portions of the building to an additional fire hazard. Outdoor air inlets shall be located so as to minimize the potential for introducing smoke or flame into the building. Exhaust outlets shall be so located as to minimize reintroduction of smoke into the building and to limit exposure of the building or adjacent buildings to an additional fire hazard. In addition, supply air shall be taken directly from an outside, uncontaminated source located a minimum distance of 20 feet from any air exhaust system or outlet.

Section 11. Chapter 23.60 of the Bellevue City Code is hereby repealed in its entirety and replaced with a new Chapter 23.60 to read as follows:

Chapter 23.60
PLUMBING CODE

Sections:

23.60.010 Uniform Plumbing Code.
The 2015 Edition of the Uniform Plumbing Code published by the International Association of Plumbing and Mechanical Officials, as adopted and amended by the State Building Code Council in Chapters 51-56 WAC, excluding Chapter 1, "Administration," is adopted, together with Appendix C "Alternate Plumbing Systems" excluding Sections C 304.0through C 601.9; and excluding "Lawn Sprinkler Heads" from Table 610.3 and Table 610.4; and shall be applicable within the city, as amended, added to and excepted in this chapter.

23.60.020 Scope.
The provisions of the 2015 Uniform Plumbing Code shall apply to the installation, alteration, repair and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system. Where there is a conflict between the Uniform Plumbing Code and Bellevue City Code Title 24 (Utilities Codes) or utilities engineering standards related to water, sewer or storm drain improvements located more than 24 inches outside a building, the city of Bellevue utilities codes and standards shall prevail.

23.60.030 Amendments, additions, or exceptions to the 2015 Uniform Plumbing Code.
Pursuant to RCW 19.27.060, the following contains amendments, additions, or exceptions to the Uniform Plumbing Code are applicable and enforceable within the city.

23.60.1101.11.2.2(B) Uniform Plumbing Code Section 1101.11.2.2(B) amended – Combined system. Uniform Plumbing Code Section 1101.11.2.2(B) is hereby amended to read as follows:

> 1101.11.2.2(B) Combined System. The secondary roof drains shall connect to the vertical piping of the primary storm drainage system conductor downstream of any horizontal offset below the roof. The primary storm drainage system shall connect to the building storm water that connects to an underground public storm sewer. The combined secondary and primary roof drain systems shall be sized in accordance with Section 1106.0 based on double the rainfall rate for the local area. A relief drain shall be connected to the vertical drain piping, within 20 feet of grade, using a wye-type fitting piped to daylight on the exterior of the building. The piping shall be sized as required for a secondary drain with a 4 inch maximum.

Section 12. This ordinance shall take effect and be in force on July 1, 2016.

Passed by the City Council this __th day of June, 2016, and signed in authentication of its passage this __th day of June, 2016.

(SEAL)

John Stokes, Mayor

Approved as to form:

Lori M. Riordan, City Attorney

Catherine A. Drews, Assistant City Attorney

Attest:

Kyle Stannert, City Clerk

Published: