ATTACHMENT A

CITY OF BELLEVUE, WASHINGTON

ORDINANCE NO. ___

AN ORDINANCE amending Chapter 23.11 of the Bellevue City Code to clarify administrative procedures, correct typographic errors, and ensure consistency with state law; adopting a new section related to Firefighter Air Systems; amending Chapter 1.18 related to fireworks civil penalties; 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 uniform codes; and

WHEREAS, current provisions of the Bellevue Construction Code, Title 23 BCC, adopt and rely upon various state and national codes, which became effective July 1, 2016; and

WHEREAS, adoption of this Ordinance will correct typographic errors, clarify administrative procedures and ensure consistency between the Bellevue Fire Code and the various state and national codes that the Fire Code relies upon; and

WHEREAS, adoption of this Ordinance will amend the Bellevue Fire Code, Chapter 23.11 BCC, to add section 917 (Firefighter Air Systems) to enhance public safety and firefighter safety; and

WHEREAS, adoption of this Ordinance will amend the Bellevue Fire Code, Chapter 23.11 BCC, to add section 5601.9 (Fireworks Violations and Penalties) and amend Chapter 1.18 related to such civil penalties; and

WHEREAS, the City of Bellevue has complied with the State Environmental Policy Act (SEPA), Chapter 43.21C RCW, and the City's Environmental Procedures Code, Chapter 22.02 BCC; now, therefore

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

Section 1. Section 23.11.105.6.17 of the Bellevue City Code is hereby repealed.

Commented [BC1]: Repeals a provision related to permitting for residential oil tank removal. A site specific permit is now required making this section unnecessary.

Section 2. Section 23.11.108 of the Bellevue Fire Code is hereby amended to read as follows:

23.11.108 International Fire Code Section 108 amended – Appeals.

Section 108 of the International Fire Code is hereby amended to read as follows:

108.1 Appeals Established.

1. The City of Bellevue Hearing Examiner may hear appeals relating to the following:

A. The fire code official's denial of an application for an operational permit under Section 105 of the International Fire Code as adopted by this chapter and now or hereafter amended;

B. The fire code official's denial of an application for a construction permit under Section 105 of the International Fire Code as adopted by this chapter and now or hereafter amended;

C. The determination by the fire code official that a nonexempt preventable fire department response to a fire alarm has occurred under BCC 23.11.901.11 as now or hereafter amended;

D. Formal written interpretations of the fire code by the fire code official.

Commented [BC2]: Vests the Hearing Examiner with authority to hear appeals related to the interpretation of the fire code.

2. The applicant in A or B above, the responsible party in C above, or an aggrieved party in D above, may appeal to the City of Bellevue Hearing Examiner within thirty days from the date of the fire code official's determination. The fire code official's determination shall be in writing and shall constitute the final decision of the City. Appeals of determinations made by the fire code official in proceedings authorized under Chapter 1.18 BCC shall be heard simultaneously with the underlying action before the hearing examiner presiding over the proceeding.

Section 3. Section 23.11.113 of the Bellevue Fire Code is hereby amended to read as follows:

23.11.113 International Fire Code Section 113 amended – Fees.

Section 113 of the International Fire Code is hereby amended to read as follows:

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

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113.2 Schedule of permit fees. A fee for each permit shall be paid as required, in accordance with Table 113.6.

These fees shall be reviewed annually, and, effective January 1 of each year, administratively increased or decreased to the nearest whole dollar by an adjustment to reflect the current published annual change in the Seattle Consumer Price Index for Wage Earners and Clerical Workers.

A fee schedule reflecting the base fees in Table 113.6 and any applicable administrative adjustment pursuant to this section will be made available to the public.

Commented [BC3]: Allows fees which are adjusted for inflation annually to be placed in a table that can be updated an easily available to stakeholders.

113.3 Work commencing before permit issuance. Any person who commences any work, activity or operation regulated by this code before obtaining the necessary permits shall reimburse the City for all expenses related to any enforcement proceedings and be subject to a penalty levied in an amount up to double the fee required for the work, activity or operation commenced prior to obtaining the necessary permits which shall be in addition to the required permit fees.

This provision does not apply to emergency work, activity or operations when it is proved to the satisfaction of the Fire Marshal that such work, activity or operation was urgently necessary and that it was not practical to obtain a permit before commencement of the work, activity or operation.

In all such cases, a permit must be obtained as soon as it is practical to do so; and if there is an unreasonable delay in obtaining the permit, a double fee (as provided for in this ordinance) will be charged. The payment of this double fee does not relieve any person from fully complying with the requirements of the Bellevue City Code in the execution of the work or from any other penalties prescribed by law. Such person may also be required to reimburse the City for all expenses related to any enforcement proceedings as determined by the Fire Marshal.

113.4 Related fees. The payment of the fee for the construction, alteration, removal or demolition of work done in connection to or concurrently with the work or activity authorized by a permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.

113.5 Refunds. The applicable governing authority is authorized to establish a refund policy.

Table 113.6

113.6.1 Operational permit fees. A base fee of $115.00, subject to adjustment as specified in BCC 23.11.113.2, shall be charged annually for each type of operational permit (as defined in International Fire Code Section 105.6).

Exceptions:

1. Any hazardous material with multiple classifications shall be charged only once.

2. No fees shall be charged for candles in a place of assembly or parade floats.

3. Fees shall be waived for government agencies and non-profit organizations.

113.6.2. Pyrotechnical effects permits. A base fee of $210.00, subject to adjustment as specified in BCC 23.11.113.2, shall be charged for pyrotechnical effects permits.

113.6.3 Construction permit fees. The fee for each permit shall be as set forth in the fee ordinance, as now or hereafter amended.

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

- Code violations have been identified by the fire code official.

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

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

The fee shall be $148.00 /hour, subject to adjustment as specified in BCC 23.11.113.2, with a one hour minimum.

113.6.5 Event Fee. When the fire chief determines it is necessary to preserve the public health, safety and welfare, event sponsors may be required to compensate the department for staffing and equipment in an amount calculated according to the Washington State Fire Chiefs Association's fee schedule together with Fire Prevention hourly staffing rate as published in Development Services Fee Ordinance 6263 or as amended.

113.6.6 Confidence Test Report Filing Fee. Effective January 1, 2017 confidence test reports must be filed with "The Compliance Engine" (www.thecomplianceengine.com). A $25.00 filing fee remitted to Brycer L.L.C is required at the time of filing. Brycer L.L.C will retain $10.00 and 6% of the balance and return $13.90 to the City of Bellevue to partially offset an incremental increase in staffing required to fully implement this program.

113.6.7 Late Fee. All balances 30 days or greater past the invoice date are assessed a late charge of 1%, with a minimum charge of $25 per month.

Section 4. The Bellevue Fire Code is hereby amended by the addition of a new section 408 to read as follows:

23.11.408 International Fire Code Section 408 added – Qualified Building Representative.

Chapter 4 of the International Fire Code is hereby amended by the addition of a new subsection 408 to read as follows:

408 Qualified Building Representative

Buildings classified as a high-rise in accordance with the *International Building Code* shall employee a Qualified Building Representative available to the Fire Department via phone within 10 minutes and on site within 1 hour of notification. Qualifications and responsibilities shall be as determined by the Bellevue Fire Department in Public Information Sheet F-XX *Qualified Building Representative* and any future revision to this document.

Commented [BC4]: This is a new requirement for all high-rise buildings intended to integrate the knowledge that building owners/managers have related to their building with the Fire Department to jointly mitigate the impacts of emergencies at these buildings.

Section 5. Section 23.11.507.1 of the Bellevue Fire Code is amended to read as follows:

23.11.507.1 International Fire Code Section 507.1 amended – Required water supply.

Section 507.1 of the International Fire Code is hereby amended to read as follows:

507.1 Required Water Supply. An approved water supply capable of supplying the required fire flow for fire protection shall be provided to premises upon which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction.

All underground piping shall be designed, constructed and installed in accordance with NFPA 24 for Private fire service mains and NFPA 13 for water based fire protection systems. In addition to the requirements of these standards, two forms of joint restraint shall be used.

Exception: Underground piping that is threaded, welded, heatfused or utilizes chemical or solvent cemented connections provided that such joints can pass the hydrostatic test without shifting of the piping.

Commented [BC5]: This exception identifies certain underground piping where two forms of restraint is unnecessary.

Point of Information

Piping systems under the control of the Bellevue Utilities Department shall be installed in accordance with the Bellevue Utilities Engineering Standard.

Section 6. Section 23.11.507.5.3 of the Bellevue Fire Code is hereby amended to read as follows:

23.11.507.5.3 International Fire Code Section 507.5.3 amended – Private fire service mains and water tanks.

Section 507.5.3 of the International Fire Code is hereby amended to read as follows:

507.5.3 Private fire service mains and water tanks. Private fire service mains and water tanks shall be periodically inspected, tested and maintained in accordance with NFPA 25 at the following intervals:

1. Private fire hydrants (all types): Inspection annually and after each operation; flow test and maintenance annually. Property owners with private hydrants are responsible to obtain annual, satisfactory inspection of their private hydrant(s) from a qualified inspector. Inspection procedures and forms for inspection by the City or others are set by the fire code official. The fire official may order additional inspections as he deems necessary.

2. Fire service main piping: Inspection of exposed, annually; flow test every 5 years.

3. Fire service main piping strainers: Inspection and maintenance after each use.

507.5.3.1 Private Hydrants – Use

1. Fire hydrant protection may be provided by private fire hydrants.

2. No person may open, damage, interfere with, or otherwise use a private hydrant, except in a manner and subject to such conditions as the fire official may require.

507.5.3.2 Private Hydrants – regulations. The fire code official, with the assistance of the City of Bellevue Utilities Department, is authorized to establish regulations and design standards for private hydrants. These officials have the authority to interpret and apply the regulations and standards and to make rulings and orders consistent with the purpose of this chapter.

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Hydrants shall be 5 1/4" M.V.O. Hydrant with 2-2 1/2 N.S.T. and 1-4" Pumper Ports, City of Seattle Standard Thread – M.J. Inlet with lugs, brass to brass sub-seat. (Ref.: http://www.bellevuewa.gov/pdf/Utilities/2016_W-13.pdf).

507.5.3.3 Private Hydrants – Inspection reports. Inspection reports of private hydrants must be submitted to www.TheComplianceEngine.com within five working days of the date of inspection by the servicing inspector.

Commented [BC6]: All inspection reports for fire/life safety systems are now submitted through The Compliance Engine, this changes corrects a previous oversight.

507.5.3.4 Private Hydrants – damage – malfunction. Property owners, their agents and tenants with private hydrants shall immediately contact the fire department in the event a private hydrant is damaged, malfunctions, or is otherwise out of order. "Immediately" means not more than forty-eight hours after a problem is noticed or should have been noticed in the exercise of reasonable care.

507.5.3.5 Private Hydrants – maintenance and repair. All maintenance and repair of private hydrants shall be solely the responsibility of the property owner. Obligations imposed upon property owners apply also to their managers and other authorized agents.

507.5.3.6 Private hydrants – access. Roads and access to the fire hydrant must be provided in accordance with International Fire Code Sections 503 and 507.

Section 7. Section 23.11.510 of the Bellevue Fire Code is hereby amended to read as follows:

23.11.510 International Fire Code Section 510 amended – Emergency responder radio coverage.

Section 510 of the International Fire Code is hereby amended to read as follows:

510.1 Emergency responder radio coverage in new buildings. Approved radio coverage for emergency responders shall be provided with buildings meeting any of the following conditions:

1. There are more than five stories above grade plane (as defined by the International Building Code, Section 202);

2. The total building is 50,000 square feet or more;

3. The total basement area is 10,000 square feet or more;

Or

4. There are floors used for human occupancy more than 30 feet below the finish floor of the lowest level of exit discharge.

Radio coverage is based upon the existing coverage levels of the public safety communication systems of the jurisdictions at the exterior of the building. This section shall not require improvements of the existing public safety communication system.

Exception: Buildings and areas of buildings that have minimum radio coverage signal strength levels of the King County Regional 800 MHz Radio System within the building in accordance with Section 510.4.1.

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510.2 Emergency responder radio coverage in existing buildings. Existing buildings shall be provided with approved radio coverage for emergency responders as required in BCC 23.11.1103.2.

510.3.2 Operational permit. An operational permit is required to operate an in building radio system in accordance with BCC 23.11.105.6.50.

510.4.2.3 Standby Power. Emergency responder radio coverage systems shall be provided with standby power in accordance with Section 604. The standby power supply shall be capable of operating the emergency responder radio coverage system for a duration of not less than 24 hours.

> Exception: When approved by the Building Official and the Fire Marshal, legally required standby power systems may be designed and constructed as emergency power systems.

510.4.2.4 Signal Booster Requirements. If used, signal boosters shall serve a single building and shall meet the following requirements:

> Exception: Signal boosters may serve multiple buildings when in the opinion of the fire code official there are sufficient redundancies or safeguards.

1. All active signal booster components shall be contained in a (NEMA) 4, IP66 - type waterproof cabinet or equivalent.

2. The battery system shall be contained in a (NEMA) 4, IP66-type waterproof cabinet or equivalent.

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

4. Equipment shall have FCC certification prior to installation.

510.5.3 Acceptance Test procedure. Acceptance testing for Emergency responder radio amplification system is required, upon completion of installation. It is the building owner's responsibility to have the radio system tested by qualified personnel to ensure a minimum of 95% two-way coverage on each floor of the building.

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

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1. Each floor of the building shall be divided into a grid of approximately forty (40) equal areas.

2. Testing shall use a two (2) watt, portable transceiver with speaker/microphone and flexible antenna (or any calibrated device which will produce signal levels useable by the prescribed portable radio). Field strength testing instruments must have been calibrated within one (1) year of the date of the acceptance test. Field strength testing instruments must be of the frequency selective type incorporating a flexible antenna similar to the ones used on the hand held transceivers. City Radio System Manager may designate alternate methods of measuring the signal level, which satisfy appropriate levels of public safety coverage.

3. A maximum of two (2) nonadjacent areas will be allowed to fail the test.

4. In the event that three (3) of the areas fail the test, the floor may be divided into eighty (80) equal areas in order to be more statistically accurate. In such event, a maximum of four (4) nonadjacent areas will be allowed to fail the test. After the eighty (80) area tests, if the system continues to fail, the building owner shall have the system altered to meet the 95% coverage requirement.

5. A spot located approximately in the center of a grid area will be selected for the test, then the radio will be keyed to verify two-way communication to and from the outside of the building through the Regional 800 MHz Radio System. Once the spot has been selected, prospecting for a better spot within the grid area is not permitted. The gain values of all amplifiers shall be measured and the results kept on file with the building owner so that the measurements can be verified each year during the annual tests. In the event that the measurement results become lost, the building owner will be required to rerun the acceptance test to reestablish the gain values.

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

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

510.5.5 Approval Prior to Occupancy. A Certificate of Occupancy will not be issued to any structure if the building fails to comply with BCC 23.11.510.

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

510.6.1 Testing and proof of Compliance. The emergency responder radio coverage system shall be inspected and tested annually, or whenever structural changes occur including additions or remodels that could materially change the original field performance tests. Testing shall consist of the following:

1. In-building coverage test as described in Section 510.5.3.

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

2. Signal boosters shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance.

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

4. All other active components shall be checked to verify operation within the manufacturer's specifications.

5. At the conclusion of the testing, a report, which shall verify compliance with Section 510.5.3, shall be submitted to the fire code official.

510.6.4 Identification. Radio Coverage system shall be identified by a sign located on or near the Fire Alarm Control Panel stating "This building is equipped with an Emergency Responder Radio Coverage System."

510.6.5 Field Testing. Police and Fire Personnel shall at any time have the right to enter onto the property to conduct its own field-testing to be certain that the required level of radio coverage is present.

Section 8. Section 23.11.907.1 of the Bellevue Fire Code is hereby amended to read as follows:

23.11.907.1 International Fire Code Section 907.1 amended – General.

Section 907.1 of the International Fire Code is hereby amended to read as follows:

907.1 General. This section covers the application, installation, performance and maintenance of fire alarm systems and their components in new and existing building and structures:

1. The requirements of Section 907.2 are applicable to new buildings and structures, new fire alarm systems, and replacement of existing fire alarm control panels being installed in existing structures.

2. When an existing fire alarm control units is replaced in existing structures, the entire fire alarm system shall comply with the requirements of Section 907.2

Point of Information Place holder for link to Public Information Sheet

3. The requirements of Section 907.9 are applicable to existing buildings and structures aside from the condition described in item 2.

4. For the purpose of this section, fire barriers shall not be considered to create a separate building.

5. Building 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.

Section 9. Section 909.21.4.4 of the Bellevue Fire Code 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 (.4719m^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.

Section 10. The Bellevue Fire Code is hereby amended by the addition of a new section 917 to read as follows:

23.11.917 International Fire Code Section 917 added – Firefighter Air Systems

Chapter 9 of the International Fire Code is hereby amended by the addition of a new section 917 to read as follows:

SECTION 917
FIREFIGHTER AIR SYSTEMS

917.1 Scope. The design, installation, and maintenance of firefighter air systems shall be in accordance with this section.

Commented [BC7]: Clarifies that when a fire alarm panel is replace, the existing fire alarm system must be brought into compliance with current code requirements.

Commented [BC8]: Correction of typographical error.

Commented [BC9]: These new provisions will require installation of a firefighter air system in all new high-rise buildings and all new transportation tunnels that exceed 300' in length.

Rescue air systems allow firefighters to refill their air bottles in the building rather than shuttling bottles and/or firefighters in and out of the building when their air supply has been depleted.

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917.2 Required installations. Firefighter air system shall be installed in the following buildings:

1. Buildings classified as high-rise in accordance with the *International Building Code*.

2. Transportation tunnels constructed in accordance with NFPA 130 or 502 that exceed 300’ in length.

917.3 Plans and contractor qualifications.

917.3.1 Plans. Prior to the installation of a firefighter air system, a minimum of two sets of plans and specifications shall be submitted to the Bellevue Fire Department for review and approval. Plans shall demonstrate compliance with the requirements of this section and shall include calculations prepared by a registered professional engineer demonstrating that the design criteria for all pressure containing components is satisfied plus a minimum safety factor of 25 percent.

The plans submittal shall also include specifications for the tubing, fittings, and manufacturer data sheets for valves, pressure regulators, pressure relief devices, gauges, RIC universal air connections and cylinder filling hoses.

917.3.2 Contractor qualification. The firefighter air system shall be installed by Washington state licensed contractors. Proof of licensure shall be provided with the plan submittal.

917.4 Design criteria.

917.4.1 The system shall be designed to fill, at each interior cylinder filling panel, one 66 standard cubic foot compressed breathing air cylinder to a maximum pressure of 4,500 psig (31 028 kPa).

917.4.2 The filling operation shall be completed in not more than two minutes upon connection of the cylinder to the fill hose.

917.4.3 The minimum design flow of the breathing air piping system shall be calculated using two interior cylinder filling panels operating simultaneously and located at the highest level above the most remote location from the base station exterior fire department connection panel and enclosure base.

917.5 Operating pressure. All components used in the system shall be rated to operate at a minimum pressure of 5,000 psig (34 475 kPa) at 70°F (21□C).

917.6 Marking. System piping, gauges, valves and air outlets shall be clearly marked by means of steel or plastic labels or tags indicating their function. Markings used for piping systems shall consist of the content's name and include a direction of flow arrow. Markings shall be provided at each valve; at wall, floor or ceiling penetrations; at each change of direction; and at a minimum of every 20 feet (6096 mm) or fraction thereof throughout the piping system.

917.7 Base station exterior fire department connection panel and enclosure.

917.7.1 Location.
A fire department connection panel shall be attached to the building or on a remote monument at the exterior of the building. The panel shall be secured inside of a weather-resistant enclosure. The panel shall be within 50 feet (15 240 mm) of an approved roadway or driveway, or other location approved by the Bellevue Fire Department. The enclosure shall be visible and accessible on approach to the building.

917.7.2 Construction.
The fire department connection panel shall be installed in a cabinet constructed of minimum 18-gauge carbon steel. When constructed of steel, the cabinet shall be provided with coating to protect the cabinet from corrosion. When the enclosure is constructed of nonmetallic materials, the enclosure shall be resistant to ultraviolet and infrared solar radiation.

917.7.3 Vehicle protection.
When the panel is located in an area subject to vehicle traffic, impact protection shall be provided in accordance with this code.

917.7.4 Base station enclosure marking.
The front of the enclosure shall be marked "FIRE-FIGHTER AIR SYSTEM" on securely attached steel, plastic engraved or painted plate. The lettering shall be in a color that contrasts with the enclosure front and in letters that are a minimum of 2 inches (51 mm) high with 3/8-inch (9053 mm) brush stroke. The marking of the enclosure shall be visible.

917.7.5 Base station enclosure components.
The components in the base station panel shall consist of the necessary components to provide air to the air substations located on upper and/or lower building levels. The fire department air supply source shall be designed to connect to the base station panel. The following components shall be installed in the base station enclosure.

1. One Male Rapid Intervention Crew (RIC) Universal Air Connection (UAC) fitting. When connected to a female fitting, the assembled UAC shall meet the construction, performance and dimensional requirements of NFPA 1981,

Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services.

2. One downstream shutoff valve.

3. One pressure gauge to check pressure of the piping distribution to air substations located on upper and lower building levels.

4. One pressure relief valve designed for 1.25 times the design discharge of the fire department air supply or air supply trucks. All fittings, hoses and hard piping in the base station supply panel and distribution piping to air substations supply panels, shall be designed for an air pressure of 1.5 times the pressure of the fire department air delivery system.

5. Base station can be designed for an air pressure supply piping system for supply of air to air substations.

The air supply lines will require an intermediate regulator to provide air pressure for a 5,000 psi (34 473kPa), for a 4.5 air pack system. The air supply lines will be fitted with separate pressure relief valves set at 1.25 times the working pressure of the air supply line and the operating pressure of the pressurized lines.

6. The relief valve, piping, pressure regulator, pressure gauges, fittings and connection hoses shall meet the requirement of the ASME *Boiler and Pressure Code*, 7 Section VIII, *Unified Pressure Vessel Code*. The installation of the piping system, as a minimum, will be based on ASME B31.3-2012.

7. Mechanical supports for piping, hoses, gauges and pressure components, will be designed and built to provide a solid rigid structure.

917.7.5 Base station enclosure components. 1. One- Male Rapid Intervention Crew (RIC) universal air connection (UAC) fitting. When connected to a female fitting, the assembled UAC shall meet the construction, performance and dimensional requirements of NFPA 1981, *Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services*.

917.7.6 Security.
To prevent unauthorized access to or tampering with the system, the fire department connection panel enclosure shall remain locked by an *approved* means.

917.7.7 Fire department key box.
A fire department *key box* shall be provided adjacent to the fire department connection panel and enclosure. A key for the enclosure shall be provided in the *key box*.

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917.8 Interior cylinder fill panels and enclosure—air substation.

917.8.1 Location. Cylinder fill panels shall be installed in the interior of buildings as follows:

1. **Aboveground structure.** An interior air substation cylinder fill panel and enclosure shall be installed on floor landings. In buildings classified as high-rise in all stairwells regardless of height of buildings commencing on the second floor landing above grade, below grade and every other floor thereafter.

2**. Underground structure.** An interior air substation cylinder fill panel and enclosure shall be installed in all stairwells on the floor landing on the third level below grade and every other below-grade level thereafter. The panel shall be located a minimum of 36 inches (914 mm) but not more than 60 inches (1524 mm) above the finished floor or a stairway landing.

917.8.2 Cabinet requirements.
Each air substation cylinder fill panel shall be installed in a cabinet constructed of minimum 18-gauge carbon steel. The depth of the cabinet shall not create an exit obstruction when installed in building stairways. All components, with the exception of the shutoff valve, pressure gauges, fill hoses and ancillary components, shall be contained behind a minimum 18-gauge interior panel.

917.8.3 Door.
Hinges for the cabinet door shall be located inside of the cabinet. The door shall be arranged such that when the door is open, it does not reduce the required exit width or create an obstruction in the path of egress. A minimum of 80 percent of the door surface area shall be constructed of tempered glass. The thickness of the glass shall not be greater than 1/8 inch (3.17 mm).

917.8.4 Cabinet marking.
The front of each cylinder fill panel shall be marked “FIREFIGHTER AIR SYSTEM.” The lettering shall be in a color that contrasts with the cabinet front and in letters that are a minimum of 2 inches (50mm) high with 3/8-inch (5 mm) brush stroke. The marking of the cabinet shall be visible to emergency response personnel.

917.8.5 Air substation cabinet components.
The cabinet shall be of sufficient size to allow for the installation of the following components:

1. One-isolation valve located between the air discharge line to the next air substation and the downstream line to the air base station supply or the air substation immediately below to the next substation above the air base station.

2. The fill hoses and isolation valves shall be installed between the air bottle connection line and the fresh air supply.

3. Excess bleed valves shall be located between the air bottle fill hose and the next air substation.

4. Four SCBA fill hoses are required at a single air substation, the air supply lines shall be identified as 4,500 psig (31 028 kPa) pressure and shall be controlled by a single valve between the air supply and air bottle. The SCBA fill hoses shall be designed with RIC UAC fittings. A protective cap shall be provided for each hose.

5. Mechanical supports for piping, hoses, gauges and pressure components shall be designed and built to provide a solid rigid structure.

917.8.6 Cylinder filling hose.
The design of the cabinet shall provide a means for storing the hose to prevent kinking. When the hose is coiled, the brackets shall be installed so that the hose bend radius is maintained at 4 inches (102 mm) or greater.

The discharge outlet of each cylinder filling hose shall have a female RIC UAC. The female fitting shall be designed to connect to a male RIC UAC. The assembled RIC UAC shall meet the construction, performance and dimensional requirements of NFPA 1981, *Standard on Open Breathing Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services*.

917.8.7 Security.
To prevent unauthorized access to or tampering with the system, each panel cover shall remain locked by an *approved* means.

917.9 Installation of components.

917.9.1 Pressure monitoring switch.
An electric low-pressure monitoring switch shall be installed in the piping system to monitor the air pressure. The pressure switch shall be connected to the building's *fire alarm system*. The pressure switch shall transmit a supervisory signal when the pressure of the breathing air system is less than 3,000 psig (20 685 kPa) at 70° F (21□C), + 100 psig (690 kPa). If the building is not equipped with a *fire alarm system*, activation of the pressure switch shall activate an audible alarm located at the building's main entrance. A weather resistant sign shall be provided adjacent to the audible alarm stating “FIREFIGHTER AIR SYSTEM – LOW AIR PRESSURE ALARM.” The lettering shall be in a contrasting color and the letters shall be a minimum of 2 inches (51 mm) high with 3/8-inch (9.53 mm) brush stroke.

917.9.2 Tubing.
Piping shall be constructed of stainless steel or other *approved* materials that are compatible with breathing air. The use of nonmetallic materials shall be compatible with breathing air. When stainless steel tubing is used, it shall meet ASTM A-269, Grade 316 or an equal standard. Stainless steel fitting shall be Grade 316 and a minimum, 0.375 inch (9.5 mm) outside diameter by .065 inch (1.6 mm) wall Grade 316 fully annealed seamless. Stainless steel fittings shall be at least Grade 316 and meet the requirements of ASTMA 479 or equal. Routing of tubing and bends shall be such as to protect the tubing from mechanical damage.

917.9.3 Support.
Piping shall be supported at maximum intervals of 5 feet (1524 mm). Individual tubing clamps and mounting components shall be mechanically secured to the building support members in accordance with the manufacturer's specifications.

917.9.4 Fittings.
Fittings shall be constructed of stainless steel or other *approved* materials that are compatible with breathing air. The use of nonmetallic materials shall be compatible with breathing air. Stainless steel fittings shall be at least Grade 316 and meet the requirements of ASTMA 479 or an equal standard.

917.9.5 Prohibition.
The use of carbon steel, iron pipe, malleable iron, high-strength gray iron or alloy steel is prohibited.

917.10 System assembly requirements.
The system shall be welded except where the tubing joints are readily accessible and at the individual air fill panels. When mechanical high-pressure tube fittings are used, they shall be *approved* for the type of materials to be joined and rated for the maximum pressure of the system. Welding procedures shall meet ASME B31.1-2010, Part 4 and Chapter V (Exhibit VI). Prior to and during the welding of sections of tubing, a continuous, regulated dry nitrogen or argon purge at 3 psig (20.68 kPa) shall be maintained to eliminate contamination with products of the oxidation or welding flux. The purge shall commence a minimum of 2 minutes prior to welding operations and continue until the welded joint is at an ambient temperature between 60° F and 80°F (15.5°C and 26.6°C).

917.11 Prevention of contamination.
The installing contractor shall ensure that, at all times, the system components are not exposed to contaminants, including, but not limited to, oils, solvents, dirt and construction materials. When contamination of system components has occurred, the effected component shall not be installed in the system.

917.12 Testing and inspection.

917.12.1 Testing.

Following fabrication, assembly, and installation of the piping distribution system, exterior connection panel and interior cylinder fill panels, the Bellevue Fire Department shall witness the pneumatic testing of the complete system at a minimum test pressure of 5,500 psi (37 923 kPa) using oil-free dry air, nitrogen or argon. A minimum 24-hour pneumatic or hydrostatic test shall be performed. During this test all fittings, joints and system components shall be inspected for leaks. A solution compatible with the system component materials shall be used on each joint and fitting. Any defects in the system or leaks detected shall be documented on an inspection report, repaired or replaced. As an alternate, a pressure decay test in accordance with ASME B31.3 is allowed. A test of the low-pressure monitoring switch shall be performed. Each air fill panel shall be tested for compatibility with the fire department's SCBA RIC UAC. The pipe or tubing manufacturer mill report shall be provided to the Bellevue Fire Department.

917.12.2 Air samples.
A minimum of two samples shall be taken from separate air fill panels and submitted to an independent, certified gas analysis laboratory to verify the system's cleanliness and that the air is certified as breathing air. The laboratory shall submit a written report of the analysis to the Bellevue Fire Department documenting that the breathing air complies with this section.

917.12.3 Quality analysis.
During the period of air quality analysis, the air fill panel inlet shall be secured so that no air can be introduced into the system and each air fill panel shall be provided with a sign stating: "AIR QUALITY ANALYSIS IN PROGRESS, DO NOT FILL OR USE ANY AIR FROMTHIS SYSTEM." This sign shall be a minimum of 8 1/2 by □11 inches (215mm by 279 mm) with a minimum of 1-inch (25 mm) lettering.

917.12.4 Inspection.
Annually the breathing air within the system shall be inspected and one air sample shall be taken and certified as breathing air in accordance with the section. The laboratory test results shall be available for review by the Bellevue Fire Department.

917.13 System acceptance and certification.
Prior to the final acceptance of the air system, the building owner shall provide for the testing and certification of the system. As a minimum, this shall include verifying the system's compatibility with the fire department's SCBA apparatus; the system's ability to maintain 5,000 psi (34 475 kPa) working pressure; the operability of the low-pressure monitoring switch and that the system's air quality complies with the requirements of Section 915.12. Prior to final acceptance, the building owner shall provide the Bellevue Fire Department with written verification of a testing and certification contract. Upon satisfactory completion of all tests and verification of air quality, the system shall be considered complete.

Section 11. The Bellevue Fire Code is hereby amended by the addition of International Fire Code Section 5601.2.2 to read as follows:

23.11.5601.2.2 – International Fire Code Section 5601.2.2 amended – Sale and retail display.

Section 5601.2.2 of the International Fire Code is hereby amended to read as follows:

5601.2.2 Explosives, Explosive Materials or Fireworks Sale. It is illegal to offer for sale explosives, explosive materials or fireworks.

Exceptions:

1. The Fire Marshal is authorized to allow sales of explosives or explosive materials for activities such as demolition activities and fireworks for permitted public displays.
2. The use by law enforcement or emergency response agencies of devices that may fall within the definition of explosives, explosive materials or the definition of fireworks, when such devices are to be used in the furtherance of law enforcement or emergency response operations or training.
3. For the purposes of this chapter, small arms ammunition, small arms ammunition primers, smokeless powder not exceeding fifty pounds, and black powder not exceeding five pounds shall not be defined as explosives, unless possessed or used for a purpose inconsistent with small arms use or other lawful purpose.

Commented [BC10]: Clarifies that the sale of explosives, explosive materials or fireworks is illegal.

Section 12. The Bellevue Fire Code is hereby amended by the addition of a new section 5601.9 to read as follows:

23.11.5601.9 – International Fire Code Section 5601.9 added – Violations and Penalties

Chapter 56 of the International Fire Code is hereby amended by the addition of a new Section 5601.9 to read as follows:

5601.9 Violations and penalties.

Violations of BCC 23.11.5601.2.2 or BCC 23.11.5608.2 may be prosecuted as a civil violation under Chapter 1.18 BCC.

Commented [BC11]: Tied to increase in civil penalties below.

Section 13. Section 23.11.5704.2.13 of the Bellevue Fire Code is hereby amended to read as follows:

23.11.5704.2.13 International Fire Code Section 5704.2.13 amended – Abandonment and status of tanks.

5704.2.13 Tanks taken out of service shall be removed in accordance with Section 5704.2.14, or safeguarded in accordance with Sections 5704.2.13.1 through 5704.2.13.2.3 and American Petroleum Institutes (API) 1604.

Residential heating oil tanks required by this code to be removed or decommissioned shall also comply with Public Information Sheet F-07 *Decommissioning Residential Heating Oil Tanks* and any future revision to this document.

Commented [BC12]: Reference correction.

Section 14. Section 1.18.040 E of the Bellevue City Code is hereby amended to read as follows.

E. Monetary Penalty.

1. Except for violations of the sign code (Chapter 22B.10 BCC), violations of the fire code related to explosives or fireworks (Chapter 23.11 BCC), or violations constituting a noise disturbance as set forth in BCC 9.18.040(A)(4) and (5), the monetary penalty for each violation per day or portion thereof shall be as follows, with adjustments as allowed pursuant to subsection (E)(4) of this section for repeat violations:

   a. First day of each violation, $100.00;

   b. Second day of each violation, $200.00;

   c. Third day of each violation, $300.00;

   d. Fourth day of each violation, $400.00;

   e. Each additional day of each violation beyond four days, $500.00 per day.

2. For violations of the sign code (Chapter 22B.10 BCC), the monetary penalty for each violation is $100.00 per sign per day or portion thereof, with adjustments as allowed pursuant to subsection (E)(4) of this section for repeat violations.

3. For violations constituting a noise disturbance as set forth in BCC 9.18.040(A)(4) and (5), the monetary penalty for each violation is $250.00, with adjustments as allowed pursuant to subsection (E)(4) of this section for repeat violations.

4. For violations of the fire code as set forth in BCC 23.11.5601.2.2 or BCC 23.11.5608.2 the monetary penalty for each violation is $1,000.00.

Commented [BC13]: Increases the civil penalty for the illegal sale or discharge of fireworks to $1,000 as a better deterrent.

5. Effect of Repeat Violations.

a. Violations Other than Sign Code (Chapter 22B.10 BCC) Violations or Violations Constituting a Noise Disturbance as Set Forth in BCC 9.18.040(A)(4) and (5). Except in the case of violations of the sign code (Chapter 22B.10 BCC) or violations constituting a noise disturbance as set forth in BCC 9.18.040(A)(4) or (5), the hearing examiner may double the monetary penalty schedule if the violation was a repeat violation. In determining the amount of the monetary penalty for repeat violations, the hearing examiner shall consider the factors set forth in BCC 1.18.050(D)(3)(b).

b. Sign Code Violations (Chapter 22B.10 BCC). The hearing examiner shall successively double the per sign monetary penalty assessed for each repeat violation.

c. Violations Constituting a Noise Disturbance as Set Forth in BCC 9.18.040(A)(4) and (5). The hearing examiner shall successively double the monetary penalty assessed for each repeat violation. Upon the hearing examiner's finding that a second consecutive repeat violation has occurred, the hearing examiner shall prohibit the issuance of sound amplification permits allowing the operation of amplified sound equipment at the same location or on the same property as the repeat violations occurred for a period of two years from the date of the second consecutive repeat violation.

Section 15. This ordinance shall take effect and be in force on _____, 2018.

Passed by the City Council this _____ day of _____, 2018, and signed in authentication of its passage this _____ day of _____, 2018.

(SEAL)

_____
John Chelminiak, Mayor

Approved as to form:

Lori M. Riordan, City Attorney

ATTACHMENT A

Chad Barnes, Assistant City Attorney

Attest:

_____
Kyle Stannert, City Clerk

Published _____