

Report Date: May 16, 2019
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Meeting Date: June 12, 2019

TO: Standing Committee on Policy and Strategic Priorities

FROM: Fire Chief, General Manager of Vancouver Fire Rescue Services

SUBJECT: New Edition of the Fire By-law (2019 Fire By-law)

RECOMMENDATION

- A. THAT Council approve the adoption of the 2018 British Columbia Fire Code, together with amendments to reflect the “Unique to Vancouver Provisions” generally as provided in Appendix A, as the 2019 Fire By-law.
- B. THAT the Director of Legal Services be instructed to bring forward for enactment a By-law to repeal the existing Fire By-law 11312 and to substitute the proposed 2019 Fire By-law as referred to in Recommendation A, to take effect upon enactment.
- C. THAT, if Council approves the proposed 2019 Fire By-law as described in Recommendation A, that Council approve consequential amendments to the Ticket Offences By-law 9360 generally as provided in Appendix B, to reflect the new “Unique to Vancouver Provisions” in the Fire By-law and to make some housekeeping amendments.
- D. THAT, if Council approves the proposed 2019 Fire By-law as described in Recommendation A, that the Director of Legal Services be instructed to bring forward for enactment a By-law to amend the Ticket Offences By-law as referred to in Recommendation C.
- E. THAT Council approve changes to the Building By-law generally as provided in Appendix C, to reflect the changes in the proposed 2019 Fire By-law.
- F. THAT the Director of Legal Services be instructed to bring forward for enactment a By-law to amend the Building By-law as referred to in Recommendation E.

REPORT SUMMARY

This report recommends the adoption of a new Fire By-law (2019 Fire By-law) using the 2018 British Columbia Fire Code as the base document. Among other things, the significant changes to the current Fire By-law which will be unique to Vancouver are: a radio antenna system must be installed and maintained in certain types of buildings; large garbage dumpsters located outside of a building must be made of steel or non-combustible material and dumpsters made of plastic will be prohibited; and fire escapes and other exterior means of egress for buildings over 3 storeys in height must be inspected regularly for their structural integrity by professional engineers.

Changes to the Building By-law are proposed for the design and installation of a radio antenna system in a building.

Consequential amendments to the Ticket Offences By-law are proposed to address the new sections of the Fire By-law regarding outdoor storage receptacles, exterior means of egress, and radio antennas, and to update the numbering of a by-law reference.

COUNCIL AUTHORITY/PREVIOUS DECISIONS

Under Section 311 of the Vancouver Charter, Council may make By-laws to maintain acceptable standards for fire safety in buildings and facilities within the city and within the scope of the provincial Fire Services Act.

Section 306 (w) of the Vancouver Charter provides that Council may make by-laws adopting, by reference, any codes relating to fire safety.

In the past, Council enacted a new Fire By-law to incorporate any new Fire Code enacted by the Province. In 2015, Council passed Fire By-law 11312 which incorporated the provisions of the 2012 British Columbia Fire Code with certain changes to deal specifically with issues that are unique to Vancouver. Since that time, Council has enacted a number of amendments to the Fire By-law.

In 2018 the Province enacted a new 2018 British Columbia Fire Code with some technical changes to the previous Fire Code. Accordingly, staff reviewed the changes and now propose a Fire By-law to adopt the new Fire Code together with new unique to Vancouver provisions.

CITY MANAGER'S/GENERAL MANAGER'S COMMENTS

The City Manager recommends approval of the foregoing.

REPORT

Background/Context

Scope

Staff undertook an extensive regulatory review of our current Fire By-law in relation to the new provincial Fire Code. As a result, this report proposes a new Fire By-law for Council to consider.

The Fire By-law is one of several by-laws that regulate land use and safety.

The Zoning and Development By-law stipulates how various parts of the city are zoned for various types of uses, whether they are industrial, commercial, or residential.

The Building By-law stipulates the minimum requirements for the construction of a building depending on the intended use of the building.

Once a building is built, the Fire By-law stipulates the minimum requirements for maintaining fire, life and health safety in and around the building on the premises.

The Fire By-law also contains provisions regulating public safety on lands and parks in the city where there are no buildings, in relation to matters such as fires, fireworks and explosives.

Although the Standards of Maintenance By-law and the Provincial Health Act also regulate safety in buildings, the Fire By-law and the Building By-law have a unique relationship. The Building and Fire By-laws are complementary by-laws. They originate from the National Building and Fire Codes which were developed as complementary codes designed to operate in unison.

Whereas the Building By-law regulates how a building must be constructed based on the intended use, the Fire By-law regulates the safe use of the building and the surrounding lands after construction.

The Fire By-law addresses the following four broad objectives which align with Council's strategic goals of:

- Safe and secure city
- Sustainable, affordable, and liveable city
- Greenest city, and
- Efficiency in administration

The Fire By-law sets out the technical requirements for:

- Ensuring the use of buildings and premises is consistent with the intended use
- Inspection, testing, and maintenance of fire safety systems, and
- The design of facilities inside or outside the building that involve fire hazards or hazardous materials

By-law Development

The development of the Vancouver Fire By-law is a three stage process that begins at the national level. The National Building and Fire Codes were developed as model

codes that could be adopted as provincial codes by each province. The Vancouver Charter then delegates to Council the authority to adopt such codes as part of the city's building and fire by-laws.

The National Building and Fire Codes are regularly reviewed and updated, generally on a five year cycle. The current National Building and Fire Codes are the 2015 editions. The British Columbia Building and Fire Codes are then reviewed and updated in response to the updated national codes, with provincial changes and variations.

The proposed new 2019 Vancouver Fire By-law will adopt the 2018 BC Fire Code (which was based on the 2015 National Fire Code) with technical changes that are unique-to-Vancouver. Similarly, and at the time of writing this report, staff from the Chief Building Official's office is proposing a new 2019 Building By-law that adopts the 2018 BC Building Code which will be presented to Council in a separate staff report.

We anticipate that in 2020, new National Building and Fire Codes will be published and the five year cycle will begin again. Therefore some time in 2024 the Fire By-law will again need to be reviewed and updated, after publication of the next new BC Fire Code.

Strategic Analysis

The proposed Fire By-law is updated to incorporate changes and revisions from the 2018 British Columbia Fire Code (see Appendix A for the schedule of changes).

There are approximately 1600 technical provisions in the BC Fire Code. The current Fire bylaw 11312 has 80 unique-to-Vancouver provisions. In addition to the work required to review and analyze the impact of the adoption of the current National and Provincial Fire Codes, staff reviewed and reconfirmed the current unique-to-Vancouver requirements.

The significant unique-to-Vancouver provisions proposed are:

1. Requirement for professional engineers to regularly inspect for structural adequacy fire escapes and other exterior means of egress
2. Prohibition of large solid waste containers, or dumpsters, made of plastic
3. Installation of radio antenna systems in buildings

EXTERIOR MEANS OF EGRESS AND FIRE ESCAPES

Exterior passageways, exterior stairs, and other types of exterior means of egress that are intended for use by building occupants during emergencies are commonplace on buildings of all types and sizes.

A "fire escape" is one type of exterior means of egress. However, fire escapes had been prohibited by the Building By-law to be erected on any new building since 1980. A fire escape is any set of exterior stairs, ladders, landings and platforms that do not conform to standard dimensions for treads, run, rise, or width, and may be constructed of steel, concrete, or wood. Fire escapes are commonly accessed from the inside of the building by climbing through windows.

The current Fire By-law requires that property owners inspect, maintain in good repair, and keep means of egress unobstructed at all times.

“Division B, Sentence 2.7.1.6.(1) Means of egress shall be maintained in good repair and free of obstructions.”

Recent legal cases involving persons seriously injured from falls off of fire escapes and exterior passageways which were in disrepair, has prompted the City to consider implementing a new provision in the Fire By-law.

The new By-law provision will require that the building owner engage a professional structural engineer every five (5) years to inspect, evaluate and recertify the structural adequacy of all existing exterior means of egress, including fire escapes, and their guards where the difference in floor or ground level is more than two (2) metres. This By-law provision will not apply to residential buildings that contain only one or two principal dwelling units.

Similar by-laws are already in place in cities such as Seattle, Portland, Eugene, New York City, Boston, and Philadelphia.

It is estimated that the number of buildings that have exterior means of egress and fire escapes that will be subject to the By-law provision to be in the range of 3000 to 5000. This includes many low rise multi-family buildings, Single Room Occupancy buildings (SRO's) and high-rise residential buildings. However, this estimate does not include multiple conversion dwellings (buildings having up to 4 dwelling units) which are not inspected by the fire department on a regular basis.

At this time, staff is recommending the new exterior means of egress regulations apply to buildings more than 3 storeys only and will come into force one year after this Fire By-law is enacted, and that staff will report back to Council on the expansion of the new regulation to smaller buildings once more information is available.

Staff have consulted with industry organizations: Engineers and Geoscientists Association of British Columbia (EGBC), Building Owners and Managers Association (BOMA), and Vancouver Board of Trade, and they support this initiative.

Financial implications

There are no anticipated financial implications to the City. Work done to ensure compliance with the new requirements will be an extension of the existing work done during safety inspections and is not anticipated to require additional resources. Building owners will be responsible for the cost of inspections by structural engineers required every five years. The estimated cost to building owners is expected to range from \$1,200 for simple low rises to \$5,000 for larger or high buildings.

SOLID WASTE CONTAINER CONSTRUCTION

Due to an increase in the number of solid waste container, or dumpster, fires in the downtown district, the fire risk when the dumpster itself is constructed of plastic is also increasing. In the last 5 years, the fire department responded to approximately 1200

outdoor fires involving dumpers and abandoned mattresses located adjacent to dumpsters.

Dumpsters are typically provided by commercial businesses contracted by a property owner to haul away and dispose of solid wastes. Historically dumpsters over 1500 L in capacity have been constructed of steel with steel lids. A fire inside a steel dumpster can be contained within the dumpster and can be readily controlled and extinguished when the fire department arrives.

However, a fire involving a dumpster made of plastic can easily be a much larger fire because the container itself will be burning. Fires involving plastics are known to be very intense with a high level of heat release, causing fire damage to adjacent structures. It is common for a dumpster to be located, either permanently or temporarily on collection days, adjacent to a combustible exterior wall of the building or an overhang or adjacent to a window, in which case fire can easily spread into the building.

The fire department has seen in recent years a trend towards the lid constructed of plastic, and even more recently, the dumpster wholly constructed of plastic. Staff estimates that currently 13% of dumpsters have plastic lids while 10% of dumpsters are constructed entirely of plastic.

Staff propose that solid waste containers over 1500 L in capacity must be made of non-combustible materials if they are to be located outdoors. Plastic dumpsters located outdoors will no longer be permitted to be used in the City. This By-law provision will also apply to any dumpster located inside a building but left unattended outside at any time.

Staff recognize that prohibiting plastic lids may be a hardship for many citizens because of the weight of steel lids and because of the noise impact caused by the lids slamming when open or shut after each use. On the other hand staff recognize that plastic lids are too easily broken into by persons scavenging for goods resulting in the container contents left on the ground outside. Therefore, staff propose that non-combustible steel dumpsters with plastic lids would be acceptable if the dumpster is located within a secured fenced enclosure.

Industry has been consulted and to address concerns for worker safety having to service heavier steel dumpsters, staff propose that only certain locations could be exempt under a permit issued by the Fire Chief. Currently industry uses either steel (noncombustible), or plastic (combustible) solid waste containers. There will be less safety issues for workers who have to push or pull filled plastic containers weighing 1000 kg instead of filled steel containers weighing 1200 kg over sloped or rough terrain. Between 1000 kg and 1200 kg, however, they are still very heavy, and as a matter of course industry must devise ways, tools, or methods to reduce injury.

In the circumstance that industry can demonstrate that the use of plastic bins is the only method to service a customer's location, and if it can be shown that plastic bins do not create a fire hazard, the Fire Chief may issue a site-specific permit to allow the use of plastic bins. As part of the permit application, a site plan showing the location of the outdoor solid waste container will be required and will be retained on file. As an example, locating a bin at least 3 m away from any building or combustible structure and ensuring that the bin is secured against being moved too easily by unauthorized persons, is one way to demonstrate that the plastic bin will not create a fire hazard.

Financial implications

There are no anticipated financial implications to the City. Work done to ensure compliance with the new requirements will be an extension of the existing work done during safety inspections and is not anticipated to require additional resources.

RADIO ANTENNA SYSTEM

Lack of communication ability for first responders put citizens inside a building at risk if first responders cannot communicate the needs of a citizen in distress to each other or to incident command outside of the building.

It is essential for effective firefighting and emergency response and for the safety of firefighters and occupants of a building to be able to relay critical information about fire and life safety hazards in the building and to be able to direct them to safety.

Emergency first responders rely on radio equipment that receive and send radio signals via communication towers located throughout the City and the Lower Mainland.

Today's buildings are designed to be energy efficient. Windows are required by the Building By-law to have minimum thermal loss. Low-E glass provides the required performance for sustainability objectives. However the same glass also prevents radio waves from passing through it. Radio waves also cannot penetrate earth, or concrete walls and floors. The result is that first responders' emergency communication by radio is compromised.

Vancouver Fire Rescue Services has radio repeater equipment on each of their apparatus in order to minimize the loss of signal strength around a dense population of high rises in the downtown core. However, these repeaters have limited effect in penetrating concrete and low-E glass.

Solutions to this problem are readily available on the market. Known variously as a repeater system, in-building communication system, bi-directional antenna system, two-way radio communication enhancement system, et cetera, for the purpose of this report and the Fire and Building By-laws, they are called Radio Antenna Systems. These systems basically comprise of antennas installed outside of a building, and antennas or amplifiers installed throughout the interior of a building. This antenna system carries and amplifies radio signals from inside to the outside of the building, and vice versa.

It is proposed to introduce a Building By-law and a Fire By-law provision that mandates the installation and maintenance of a Radio Antenna System in certain size and types of new buildings except residential buildings that contain only one or two principal dwelling units and other small buildings.

This by-law will be the first edition of a by-law in the City for the requirement of a radio antenna system. The proposed by-law would apply to larger buildings only at this time: buildings that are 7 storeys in height or higher, buildings having basements more than 1200 m² of floor area, or more than 2 basement storeys.

Staff expects further refinement to this by-law and expanding the scope of buildings that would require a radio antenna system to smaller buildings after experience with the larger buildings have been gained.

In the Lower Mainland, only a limited number of system suppliers, installation contractors and consultants are able to perform the anticipated amount of work once this by-law comes into effect. A phased program is required so supply can meet demand (start with largest, most opaque buildings with program expansion into smaller buildings over time).

Every active radio antenna system requires a federal license to operate. The cost of this license is to be borne by the building owner. The cost per year from ISED (formerly Industry Canada) is \$300/year, per bi-directional antenna installed (that is, some large buildings may need more than one bi-directional antenna, and therefore additional costs would apply).

Furthermore, any existing building that is proposed to be altered and the alteration triggers a certain level of upgrade by the Building By-law, will be required to have a Radio Antenna System installed as part of the alterations. Specifically, if alteration to the building triggers a requirement to install a new sprinkler system throughout the building, then it will trigger the requirement to install a Radio Antenna System.

This by-law is a product of extensive consultation with industry and stakeholders and contains many provisions unique from other jurisdictions in the Lower Mainland that have implemented similar by-laws. Staff struck a committee of industry representatives to assist in drafting the technical specifications of a radio antenna system and the Building and Fire By-law provisions required for implementation.

Industry representation on the committee included:

1. Urban Design Institute (UDI)
2. Building Owners and Managers Association (BOMA)
3. Commercial Real Estate Development (NAIOP)
4. Vancouver Board of Trade
5. Engineers and Geoscientists Association of British Columbia (EGBC)
6. Architectural Institute of British Columbia (AIBC)
7. E-Comm
8. University of British Columbia Chief Building Official (UBC)

Over a six month period, the committee met on a monthly basis, and for another six months, staff met with technical experts to refine the technical specifications of the radio antenna system. Throughout the consultation process, the Province has been kept informed.

Financial Implications

There are no anticipated financial implications to the City. Work done to ensure compliance with the new requirements will be an extension of the existing work done during safety inspections and is not anticipated to require additional resources.

The cost to each building owner will be approximately \$1 per square foot installed, incremental costs decreasing as height of building increases. For a 30 storey building

the cost is estimated at \$150,000. Maintenance costs are estimated at \$1,000 to \$1,500, which include an annual license from the federal government.

Implications/Related Issues/Risk

Financial

There are no anticipated financial implications to the City. Work done to ensure compliance with the new requirements will be an extension of the existing work done during safety inspections and is not anticipated to require additional resources.

CONCLUSION

A new Fire By-law is being proposed using the new BC Fire Code issued in 2018 as the base document. There are few technical changes between the previous Fire Code and the new 2018 Fire Code.

As part of the new Fire By-law, staff propose three significant changes in the interest of public safety:

1. Exterior means of egress and fire escapes must be inspected by professional engineers every five years
2. Solid waste containers, or dumpsters, made of plastic will be prohibited.
3. Radio antenna systems will be required to be installed in larger buildings for effective communication during firefighting and rescue operations.

The proposed new Fire By-law, amendment to the Building By-law and consequential amendment to the Ticket Offences By-law will serve to advance Council's strategic objective of a safe city.

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**DRAFT By-law to regulate standards for fire safety in buildings and facilities
and to adopt the British Columbia Fire Code**

Note: A By-law will be prepared generally in accordance with the provisions listed below, subject to change and refinement prior to posting.

**SECTION 1
ADOPTION OF FIRE CODE AND INTERPRETATION**

Adoption of Fire Code

1.1 Council adopts the British Columbia Fire Code (the “Fire Code”) as established under Ministerial Order No. FSA 20181 dated October 16, 2018 and effective December 20, 2018, and incorporates the Fire Code into this By-law to the extent and subject to the changes and additions to the Fire Code which are set out in the attachments marked Schedules A, B, C and D to this By-law.

Name of By-law

1.2 The name of this By-law, for citation, is the “Fire By-law”.

General Changes to Fire Code

1.3 Council:

- (a) strikes out “Code” wherever it appears in the Fire Code, and substitutes “By-law”, except as otherwise specified in this By-law;
- (b) strikes out “British Columbia Fire Code” wherever it appears in the Fire Code, and substitutes “*Fire By-law*”;
- (c) strikes out “British Columbia Building Code” wherever it appears in the Fire Code, and substitutes “*Building By-law*”;
- (d) strikes out “*authority having jurisdiction*” wherever it appears in the Fire Code, except in Article 1.4.1.2., and substitutes “*Fire Chief*”;
- (e) strikes out “construction” wherever it appears in the Fire Code, and substitutes “*construction*”; and
- (f) strikes out “owner” wherever it appears in the Fire Code, and substitutes “*owner*”.
- (g) strikes out “firework” or “fireworks” wherever it appears in the Fire Code, and substitutes “*firework*” or “*fireworks*”.

Schedules

1.4 Schedules A, B, C and D attached to this By-law form part of this By-law.

SCHEDULE A

Changes to Division A of the Fire Code

Council amends the indicated provisions of Division A of the Fire Code as follows:

1. In Article 1.4.1.2., Council:

- (a) strikes out the definition of “authority having jurisdiction”;
- (b) strikes out the definition of “building”; and
- (c) inserts the following definitions:

“Acceptable means acceptable to the Fire Chief.

Area of refuge means a space that facilitates a safe delay in egress, is sufficiently protected from fire conditions developing in the floor area, and provides direct access to an exit or fire fighters’ elevator.

Arts and culture indoor event means an event of an artistic or cultural nature, including but not limited to visual, performing, media, literary, craft or interdisciplinary arts, for a maximum of 250 persons, with or without liquor service, which occurs not more than three days per month in a building or a portion of a building not approved for assembly occupancy.

Blasting means to blow up, break apart or demolish any dirt, rocks, structures, materials or building using explosives.

Bottle rocket means a small tube containing explosive propelling charges secured to a stick that may be discharged from a bottle, pipe, or other container.

Building means building as defined in the Building By-law.

Building By-law means the current Building By-law of the City, as amended from time to time.

Chief Building Official means the Chief Building Official as defined in the Building By-law.

City means the City of Vancouver.

Construction means, with respect to a building or facility: erection, repair, alteration, enlargement, addition, demolition, deconstruction, removal and excavation.

Construction safety plan means a construction safety plan as defined in the Building By-law.

Constructor means constructor as defined in the *Building By-law*.

Consumer fireworks mean *fireworks* that have been classified as Type F.1 in accordance with the Explosives Regulations under the Explosives Act (Canada), but does not include sparklers, Christmas crackers or caps for toy guns.

Consumer pack means six or more *consumer fireworks* which are packaged and sold together as a unit.

Designer means the person responsible for the design.

Display fireworks mean *fireworks* that have been classified as Type F.2 in accordance with the Explosives Regulations under the Explosives Act (Canada).

Explosives mean explosives that are classified as authorized explosives by the Explosives Regulations under the Explosives Act (Canada) and includes *fireworks*.

False alarm means the activation of a fire alarm system, or of a security system or similar system that is designed to notify the Fire Department of a fire or emergency, where:

- a) the Fire Department is notified directly or indirectly,
- b) the Fire Department attends, and
- c) there is no evidence of a fire or emergency.

Field review means a review of the work:

- at a *building* site, and
- where applicable, at locations where *building* components are fabricated for use at the *building* site

that a *registered professional* in his or her professional discretion considers necessary to ascertain whether the work substantially complies in all material respects with the plans and supporting documents prepared by a *registered professional*.

Fire By-law means the current Fire By-law of the *City*, as amended from time to time.

Fire Chief means the person appointed as such by City Council pursuant to the provisions of the Vancouver Charter and any person authorized to act on behalf of the *Fire Chief*.

Firecrackers means a type of *consumer firework* that produces or is capable of producing an explosion and sound without a pyrotechnic display.

Firework or *fireworks* means a device, or devices, containing an *explosive* capable of or discharged for the purpose of producing a pyrotechnic effect, a pyrotechnic signal or a sound signal and includes *consumer fireworks* and *display fireworks*.

Fireworks Supervisor means a person who is certified by Natural Resources Canada to discharge *display fireworks*.

Incident means an accident, occurrence or emergency and includes, but is not limited to, fires, spills or escapes of *dangerous goods*, rescue of persons and medical emergencies.

Licensed beverage establishment means an *assembly occupancy* or part thereof, where people may consume alcohol in a lounge, recreational centre, community hall, cabaret, pub, neighbourhood public house, marine public house, restaurant – class 2 as defined in the Zoning and Development By-law, or similar facility.

Net floor area means the *floor area* of a room intended for occupancy, excluding ancillary areas such as kitchens, washrooms, service rooms, janitor closets, cloakrooms, vestibules adjacent to designated entry or exit doors, structural elements and partitions, and fixtures permanently attached to the floor.

Owner means the registered owner, a lessee, a sublessee, a holder of an agreement for sale and purchase, and, in the case of Crown-owned lands, *owner* shall mean the occupier.

Permit means permission or authorization in writing by the *Fire Chief*.

Project means any *construction*, *alteration* or demolition operation.

Registered professional means:

- a person who is registered or licensed to practise as an architect under the Architects Act, or
- a person who is registered or licensed to practise as a professional engineer under the Engineers and Geoscientists Act.

Service agent means a Registered Fire Protection Technician (RFPT) certified by the Applied Science Technologists and Technicians of British Columbia (ASTTBC) specifically for the testing, inspection and maintenance of fire safety installations and equipment.

Special effects pyrotechnician means a person who is certified by Natural Resources Canada to create and discharge a *pyrotechnic special effect*.

Special effect pyrotechnics means special effect pyrotechnics as defined in the Explosives Regulations under the Explosives Act (Canada).

Spray area means an area that is within 6 m of any part of a *spray booth* and is not separated from the *spray booth* by a vapour-tight separation.

Spray booth means a power-ventilated structure provided to enclose or accommodate a spraying operation so that spray vapour and residue can be controlled and exhausted.

Storage garage means a *building* or part thereof intended primarily for the storage or parking of motor vehicles and containing no provision for the repair or servicing of such vehicles.”.

Schedule B

Changes to Division B of the Fire Code

Council amends the indicated provisions of Division B of the Fire Code as follows:

1. In Sentence 1.1.2.1.(1), Council strikes out “5.7”, and substitutes “5.9”.

2. In Table 1.3.1.2., Council inserts:

“

NRCan	2014	Special Effect Pyrotechnics Manual	5.1.1.2.(2)
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”.

3. In Article 2.1.3.1., Council adds:

“**3)** No locking devices shall be installed on fire department connections unless it is *acceptable* to the *Fire Chief*.”.

4. In Subsection 2.1.3., Council adds:

“2.1.3.8. Carbon Monoxide Alarms

1) This Article applies to every *building* that contains a *residential occupancy*, a *care occupancy* with individual *suites*, or a *care occupancy* containing sleeping rooms not within a *suite*, and that also contains

- a) a fuel-burning *appliance*, or
- b) a *storage garage*.

2) Carbon monoxide alarms shall be installed in accordance with the *Building By-law*.”.

5. In Table 2.16.1.1., after the entry for “**2.1.3.6 Inspection, Maintenance and Testing of Fire Safety Devices**”, Council adds:

“

2.1.3.8. Carbon Monoxide Alarms	
(2)	[F44, F81 – OS3.4]

”.

6. In Article 2.4.1.1., Council adds:

“7) Except as permitted by Sentences (9) and (10), outdoor storage receptacles, such as dumpsters, used for combustible materials that have a capacity of more than 1500 L shall

- a) be constructed of noncombustible materials,
- b) have a close-fitting cover constructed of noncombustible materials, and
- c) have provisions to prevent use by unauthorized persons.

8) Sentence (7) applies to any storage receptacles that are left outdoors unattended at any time, even if they are normally located inside a building.

9) A close-fitting cover constructed of combustible material is permitted where the outdoor storage receptacle is located in an enclosure fenced in conformance with Article 3.3.2.6.

10) The *Fire Chief* may issue a *permit* for the use of an outdoor storage receptacle constructed of combustible materials if it can be shown to the satisfaction of the *Fire Chief* that there is no reasonable alternative to the use of an outdoor storage receptacle constructed of combustible materials, and that it does not create a fire hazard.”.

7. In Subsection 2.4.2. Council strikes out the title “**Smoking**”, and substitutes “**Burning Materials and Smoking**”.

8. In Subsection 2.4.2., Council adds:

“2.4.2.3. Discarded Burning or Smoking Materials

1) Cigarettes, cigars, or any other lighted smoking materials, or any burning materials shall not be discarded in such a manner as to create a risk of fire or explosion.”.

9. In Table 2.16.1.1., Council inserts:

“

2.4.2.3. Discarded Burning or Smoking Materials	
(1)	[F01 – OS1.1]
	[F01 – OP1.1]

”.

10. Council strikes out Article 2.4.5.1., and substitutes:

“2.4.5.1. Prohibition of Open Air Fires

1) A person shall not light or maintain an open air fire without first obtaining a *permit* from the *Fire Chief*.

2.4.5.2. Conditions on Open Air Fire Permits

- 1) The *Fire Chief* may put conditions on a *permit* for an open air fire, including but not limited to, conditions regarding
 - a) establishment of a fire watch, and
 - b) required fire protection equipment. (See Note A-2.4.5.2.)

2.4.5.3. Exception for Cooking Food

- 1) Despite Sentence 2.4.5.1.(1), a person, on private property, may light or maintain an open air fire to cook food in a barbeque or similar equipment that is designed for such purpose and *acceptable* to the *Fire Chief*. (See Note A-2.4.5.3.)”.

11. Council strikes out Article 2.5.1.3., and substitutes:

“2.5.1.3. Emergency Access to Roof and Floor Areas

1) Where access to a roof is provided for firefighting purposes, keys for any locked roof access doors shall be kept on the premises in a secure location that is *acceptable* to the *Fire Chief* and accessible to firefighters.

2) Where access to locked *floor areas* may be necessary for emergency purposes, a master key that fits all locking devices on all doors leading from a floor area to an exit stair shall be kept on the premises in a secure location that is acceptable to the *Fire Chief* and accessible to firefighters.”.

12. In Subsection 2.5.1., Council:

- a) in Article 2.5.1.4, adds the words “for a distance of not less than 1 m” after “at all times”; and
- b) adds the following new Article 2.5.1.6:

“2.5.1.6. Requirements Regarding Street Addresses

1) Every *building*, including *buildings* under construction, shall be identified by the posting of an address that is easily visible from the *street* and complies with the requirements of the *Building By-law*.”.

13. In Table 2.16.1.1., Council:

- a) inserts the following:

“

2.5.1.6. Requirements Regarding Street Addresses	
(1)	[F12 – OP1.2]
	[F12 – OS1.2]

”; and

b) strikes out the rows and columns referring to Article 2.5.1.3., and substitutes:

“

2.5.1.3. Emergency Access to Roof and Floor Areas	
(1)	[F12 – OP1.2]
	[F12 – OS1.2]
(2)	[F12 – OP1.2]
	[F12 – OS1.2]

”

14. Council strikes out Article 2.7.1.3., and substitutes:

“2.7.1.3. Occupant Load

1) Every *building* with an *assembly occupancy* over 60 persons must have an *occupant load permit*, except that the temporary use of a *building* for an *arts and culture indoor event* shall not require an *occupant load permit* provided that the temporary maximum permissible *occupant load* for the *arts and culture indoor event* has been calculated pursuant to the provisions of this By-law.

2) For the purpose of determining the maximum permissible *occupant load* after the *occupant load permit* is issued, the *Fire Chief* may refer to the *permit* or the approved plans attached to the *permit*, or both.

3) Except as provided in Sentences (7) and (8) the maximum permissible *occupant load* for a *floor area* or part of a *floor area* shall be the lesser of

a) the number of persons permitted for the type of use, based on the *net floor area*, and the area per person factor from Table 2.7.1.3., or in the case of *assembly occupancy* having fixed seats, the number of fixed seats, or

b) the occupant load for which means of egress are provided in conformance with Sentence (6).

4) The number of persons permitted to enter or remain in a *floor area* or part of a *floor area* shall not exceed the number on the *occupant load permit*. (See Note A-2.7.1.3.(4))

5) Despite the provisions of Sentence (4), if an *occupant load permit* is not required, the number of persons permitted to enter or remain in a *floor area* or part of a *floor area* shall not exceed the *occupant load* as determined in accordance with this Article.

6) *Means of egress* shall be provided in *buildings* in conformance with the provisions of the *Building By-law* regarding *exit capacity*.

7) The *occupant load*, in a *building* that is not provided with a fire alarm system conforming to Subsection 3.2.4. of the *Building By-law*, shall not exceed

- a) 300 persons in the *building*, other than in open air seating areas,
- b) 150 persons in a *storey* above or below the *first storey* of the *building*, other than in open air seating areas,
- c) 40 persons in a school, college, child care facility, or day care facility located in the *building*, and
- d) 150 persons in a *licensed beverage establishment* or a restaurant located in the *building*.

8) Where Table 2.7.1.3. does not specify the type of use, the figure 1.2 m² per person shall be used to determine the *occupant load* under Clause 2.7.1.3.(3)(a), unless the *Fire Chief* permits a greater *occupant load* based on similar uses and the fire hazards associated with the premises.

Table 2.7.1.3.
Occupant Load
Forming Part of Article 2.7.1.3.

Type of Use	<i>Area per person</i> m ²	Type of Use	<i>Area per person</i> m ²
Assembly Uses		Business and personal services uses	
Space with fixed seats	(1)	personal services shops	4.60
Space with non-fixed seats	0.75	offices	9.30
Stages for theatrical performances	0.75		
Space with non-fixed seats and tables	0.40	Mercantile uses	3.70
Standing space	0.60	<i>Basements and first storeys</i>	
Stadia and grandstands	9.30	Second <i>storeys</i> having a principal entrance from a pedestrian thoroughfare or a parking area	3.70
Bowling alleys, pool and billiard rooms	9.30	Other <i>storeys</i>	5.60
Classrooms	1.85		
School shops and vocational rooms	1.20	Industrial uses	4.60
Reading or writing rooms or lounges	4.60	Manufacturing or process rooms	46.00
dining, beverage and cafeteria space	1.20	Storage garages	28.00
Laboratories in schools		Storage spaces (warehouse)	46.00
<i>Licensed Beverage Establishments</i>		Aircraft hangars	
Care or detention uses		Other uses	
Treatment and sleeping room areas	10.00	Cleaning and repair goods	4.60
Detention quarters	11.60	Kitchens	9.30
		Storage	46.00
		Public corridors intended for occupancies in addition to	3.70

Residential uses <i>Dwelling units</i> Dormitories	(2) 4.60	pedestrian travel	
----------------------------------------------------------	-------------	-------------------	--

Notes to Table 2.7.1.3.:

- (1) The number of seats in an *assembly occupancy* having fixed seats
- (2) 2 persons per sleeping room in a *dwelling unit*.”.

15. In Table 2.16.1.1., Council strikes out the entry for “**2.7.1.3. Occupant Load**”, and substitutes:

“

2.7.1.3. Occupant Load	
(1)	[F10 – OS3.7]
	[F11 – OS1.5]
(4)	[F10 – OS3.7]
	[F11 – OS1.5]

”.

16. In Notes to Part 2 in Division B, Council renumbers A-2.7.1.3.(1) as A-2.7.1.3.(3).

17. In Article 2.7.1.4., Council strikes out Sentence (1), and substitutes:

“**1)** In an *assembly occupancy* with a maximum permissible *occupant load* greater than 60 persons, the *occupant load* shall be posted in an *acceptable* form and in a conspicuous location near each of the principal entrances to the room or *floor area*.”.

18. In Subsection 2.7.1., Council adds:

“2.7.1.9. Inspections and Maintenance of Structures Providing Exterior Means of Egress

1) This Article applies to all *buildings* more than 3 *storeys* in height with any structures providing exterior *means of egress* where the difference in floor or ground level is more than 2 m, except *buildings* with no more than two principal *dwelling units*.

2) All structures providing exterior *means of egress*, including their guards, handrails, and connection to the *building*, shall be inspected for structural integrity by a *registered professional* at intervals not greater than 5 years.

3) All structures providing exterior *means of egress*, including their guards, handrails, and connection to the *building*, shall be maintained so as to be structurally sound at all times.

4) All structures providing exterior *means of egress* shall have a securely affixed tag showing the date of the inspection, maintenance, or repair, and the name, seal and signature of the *registered professional*.

5) The tag referred to in Sentence (4) shall be clearly visible from the adjacent ground level.

6) The tag referred to in Sentence (4) shall be displayed at all times.”.

19. In Section 2.7., Council adds:

“2.7.4. Areas of Refuge

2.7.4.1. Maintenance of Areas of Refuge

1) An *area of refuge* shall be

- a) free of all materials, objects or obstructions,
- b) used only for its intended purpose, and
- c) identified by a sign reading ‘REFUGE AREA KEEP CLEAR’ that is in an *acceptable* form and has lettering not less than 50 mm high with a 12 mm stroke.”.

20. In Table 2.16.1.1., after the entry for “**2.7.3.1. Installation and Maintenance**”, Council adds:

“

2.7.4.1. Maintenance of Areas of Refuge	
(1)	[F82 – OS1.2] [F10,F12 – OS3.7][F30 – OS3.1][F43-OS3.4]
	[F10, F12, F82 – OS1.5]

”.

21. In Sentence 2.8.1.1.(1), Council adds, at the end:

“(See Note A-2.8.1.1.)”.

22. In Notes to Part 2 in Division B, Council inserts:

“A-2.8.1.1.(1). Emergency procedures for all hazards and incidents other than a fire emergency, such as earthquake, flood, active shooter, should be prepared whenever possible and in consultation with the applicable regulatory authorities. These all hazards emergency plans could be integrated with, or appended to, the fire safety plan for the building. A document published by NFPA “Guidelines to Developing Emergency Action Plans for All-Hazard Emergencies in High-Rise Office Buildings” provides guidance.”

23. In Article 2.8.2.1., Council adds:

“3) The fire safety plan shall be resubmitted for review and approval by the *Fire Chief* if

- a) any renovation, alteration, or change of *occupancy* occurs in the *building*, or
- b) there is a change in the type, amount, or arrangement of *dangerous goods* stored in the *building*.”.

24. In Article 2.8.2.5., Council adds:

“4) The fire safety plan for a *building* not within the scope of Division B Subsection 3.2.6 of the *Building By-law* shall be kept in an *acceptable* box at an *acceptable* location near the principal entrance to the *building*.”

25. In Table 2.16.1.1., after row (2) in the entry for “**2.8.2.1. Measures in a Fire Safety Plan**”, Council adds:

“

(3)	[F13, F12 - OP1.2] [F02, F82 – OP1.2]
	[F11, F13, F12, F10 – OS1.5, OS1.2] [F02, F82 – OS1.2]

”

26. In Subsection 2.8.3., Council adds:

2.8.3.3. Log Books

- 1) The *owner* shall
- a) record fire drills in a log book,
 - b) keep the log book on the premises, and
 - c) produce the log book to the *Fire Chief* upon request.”

27. In Article 3.1.2.5., Council strikes out Sentence (2) and substitutes:

“2) Cylinders of *dangerous goods* classified as compressed gases that are in storage shall be

- a) protected against valve damage (See Note A-3.1.2.5.(2)(a)),
- b) firmly secured in a position that will not interfere with the operation of the cylinder valve assembly, and
- c) labelled with an *acceptable* tag.”

28. In Article 4.3.1.7., after Sentence (1), Council adds:

“2) Every aboveground *storage tank* shall have its contents identified on at least 2 sides in letters that are legible from outside a secondary containment area or from 4.5 m, whichever is the greater distance.”

29. In Article 4.3.16.1, after Sentence(1), Council adds:

- “
- 2) An underground *storage tank* that has been out of service for over 2 years shall
 - a) have all *flammable liquids* and *combustible liquids* removed from it,
 - b) be purged of vapours, and
 - c) except as permitted in Sentence (3), be removed from the ground.
 - 3) Where the *Fire Chief* determines that it is impractical to remove an underground *storage tank*
- ”

- a) the tank shall be filled with inert material, and
 - b) the piping shall have the ends permanently sealed by capping or plugging.
- 4) Any associated contamination shall be remediated to the applicable standards as prescribed in the *Contaminated Sites Regulation*.”.
30. In Table 4.12.1.1., after row (1) in the entry for “**4.3.16.1 Underground Storage Tanks**”, Council adds:
- “
- | | |
|-----|-------------|
| (2) | [F44 – OH5] |
|-----|-------------|
- ”.
31. In Article 5.1.1.2., Council strikes out Sentence (1), and substitutes:
- “1) The manufacturing, handling, transportation, sale and use of *dangerous goods* classified as explosives shall conform to
 - a) the requirements of Section 5.7 of this By-law, and
 - b) the Explosives Act (Canada) and its Regulations.
 - 2) The handling and discharge of *pyrotechnic special effects* shall conform to
 - a) the requirements of Section 5.7 of this By-law, and
 - b) the “Special Effect Pyrotechnics Manual” published by Natural Resources Canada.”
32. In Article 5.1.1.3., Council strikes out Sentence (1), and substitutes:
- “1) The handling and discharge of *fireworks* shall conform to
 - a) the requirements of Section 5.7 of this By-law, and
 - b) the “Display Fireworks Manual published by Natural Resources Canada.”.
33. in Article 5.4.5.2., Council adds:
- “2) Notwithstanding other requirements in this Part, all *spray booths*, exhaust and *spray areas* shall be protected with an automatic fire suppression system.”.
34. In Section 5.7, Council:
- a) re-numbers Section 5.7, Subsection 5.7.1. and Article 5.7.1.1. as Section 5.9, Subsection 5.9.1. and Article 5.9.1.1., respectively;
 - b) in re-numbered Article 5.9.1.1. strikes out “Table 5.7.1.1.” and substitutes “Table 5.9.1.1.”;
 - c) re-names Table 5.7.1.1. as Table 5.9.1.1., strikes out the reference to “Sentence 5.7.1.1.(1)” wherever it appears in the title to re-named Table 5.9.1.1., and substitutes “Sentence 5.9.1.1.(1)”; and

d) at the end of Table 5.9.1.1., strikes out the words “Notes to Table 5.7.1.1.” and substitutes “Notes to Table 5.9.1.1.”.

35. In re-numbered Table 5.9.1.1., under “**5.4.5.2. Design, Operation and Maintenance**”, Council adds, after row (1):

“

(2)	[F02 - OP1.2]
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”.

36. In Part 5, Council adds:

“Section 5.7 Additional Requirements for Fireworks and Explosives

5.7.1. Fireworks

5.7.1.1. Fireworks Permits

1) No person shall purchase, sell, offer for sale, transport, store, possess or discharge *fireworks* without first obtaining a *permit* from the *Fire Chief*.

5.7.1.2. Conditions on Permits

1) The *Fire Chief* may add conditions to a *fireworks permit*, including but not limited to, conditions regarding

- a) the location and methods of storage of *fireworks*,
- b) the time and location of the discharge of *fireworks*, and
- c) the maximum distance or volumetric space within which a *pyrotechnical special effect* may be discharged.

5.7.1.3. General Regulations

1) No person shall possess or discharge any *firecrackers* or *firework* that is prohibited by the Explosives Regulations under the Explosives Act (Canada).

2) No person shall purchase, sell, offer for sale, or supply

- a) roman candles with an outside diameter 20 mm or less, except as part of a *consumer pack* in which roman candles constitute not more than 25 percent of the total number of *fireworks* in the *consumer pack*,
- b) any firework that is prohibited by the Explosives Regulations under the Explosives Act (Canada), or
- c) *firecrackers*.”

3) No person shall sell, offer for sale, give or supply *fireworks* to a person under the age of 19 years.

4) No person shall point, direct or throw fireworks towards any person, animal, building or thing.

5) No person under 19 years of age shall possess or discharge fireworks.

- 6) No person shall purchase, sell, offer for sale, possess, or discharge fireworks that produce only
 - a) noise without light, or
 - b) noise with a single flash of light.

5.7.1.4. Seizure of Unlawful Fireworks

- 1) The *Fire Chief* may seize *fireworks* that are sold, offered for sale, supplied, transported, stored, possessed or used in violation of this By-Law and may dispose of such *fireworks* without compensation to any person.

5.7.1.5. Consumer Fireworks

- 1) No person shall sell, offer for sale or supply *consumer fireworks* to a person other than the holder of a *consumer fireworks permit*.
- 2) No person shall sell, offer for sale, supply or possess *consumer fireworks* except between October 25th and October 31st of each calendar year.
- 3) A person who sells or supplies *consumer fireworks* to a *consumer fireworks permit* holder shall
 - a) ensure that the *consumer fireworks permit* is current,
 - b) require the *consumer fireworks permit* holder to produce the two pieces of identification referred to in Sentence (6), and
 - c) comply with any applicable conditions on the *consumer fireworks permit*.
- 4) No person shall possess or discharge *consumer fireworks* unless that person is the holder of a *consumer fireworks permit*.
- 5) The holder of a *consumer fireworks permit* shall comply with the conditions on the *consumer fireworks permit*.
- 6) A person who is at least 19 years of age may apply to the *Fire Chief* for a *consumer fireworks permit*, and shall
 - a) submit
 - i) a *permit* application in the form and manner prescribed by the *Fire Chief*,
 - ii) two pieces of identification,
 - iii) an authorization signed by the property *owner* or property *owner's* agent, if the proposed discharge of *consumer fireworks* is to occur on property not owned by the applicant, and
 - iv) such other information or material as the *Fire Chief* may require; and
 - b) successfully complete the Fire Department test regarding handling of *fireworks*, to the satisfaction of the *Fire Chief*.
- 7) The *Fire Chief* may refuse to issue a *consumer fireworks permit*, if
 - a) the applicant fails to comply with the requirements of Sentence (6),

- b) the applicant provides false or inaccurate information on the application for the *consumer fireworks permit*,
 - c) the *Fire Chief* does not approve the proposed location for the discharge of *fireworks*, or
 - d) this By-law otherwise authorizes the *Fire Chief* to refuse to issue a *permit*.
- 8)** The *Fire Chief* may issue a *consumer fireworks permit*, and may impose conditions on the *permit*, regarding
- a) the location of the discharge of *firework*,
 - b) the times during which the discharge of *consumer fireworks* may occur,
 - c) fire safety precautions, and
 - d) storage of the *consumer fireworks*.
- 9)** A person who holds a *consumer fireworks permit* shall only discharge *consumer fireworks* on October 31st, or, if October 31st falls on a Sunday, on October 30th.
- 10)** The *Fire Chief* may revoke a *consumer fireworks permit*, if
- a) the holder of the *consumer fireworks permit*
 - i) provides false or inaccurate information on the application for the *consumer fireworks permit*,
 - ii) violates any applicable law or any condition of the *permit*, or
 - iii) acts in a manner that endangers property or public safety,
 - b) the discharge of *fireworks* would, in the opinion of the *Fire Chief*, endanger property or public safety, due to environmental or weather conditions, or
 - c) this By-law otherwise authorizes the *Fire Chief* to revoke a *permit*.
- 11)** A *consumer fireworks permit*
- a) is only valid for the discharge of *fireworks* at the location and during the days and times specified in the *consumer fireworks permit*, and
 - b) is not transferable.
- 12)** A person who sells or disposes of *consumer fireworks* to the public shall not store, display or sell *consumer fireworks* in a *building* containing a *care* or *detention occupancy*, or a *residential occupancy*, except in a fully *sprinklered building* in a *suite* which is separated from the remainder of the *building* by a 2 h *fire separation* of concrete or masonry.
- 13)** A person who sells or disposes of *consumer fireworks* to the public in a *suite* in accordance with Sentence (12) shall not:
- a) store more than 1000 kg of *fireworks* on the premises, including *fireworks* that are displayed for sale, or
 - b) smoke, or suffer, permit or allow any person to smoke in any room where *consumer fireworks* are stored, displayed or sold.”
- 14)** A person who sells or disposes of *consumer fireworks* to the public shall:
- a) provide at least one portable fire extinguisher with a rating of not less than 4A:80B:C, in good working order, in every room where *consumer fireworks* are stored, displayed or sold, and

- b) post a “No Smoking” sign in a visible location in every room where *consumer fireworks* are stored, displayed or sold.

5.7.1.6. Display Fireworks and Special Effect Pyrotechnics

- 1) No person shall possess or discharge *display fireworks* or *special effect pyrotechnics* without first obtaining a *permit* from the *Fire Chief*.
- 2) An application for a *permit* to authorize the possession or discharge of *display fireworks* shall be made in person to the *Fire Chief* by the *fireworks supervisor* or *special effects pyrotechnician* responsible for the display.
- 3) An application for a *permit* to authorize the possession or discharge of *special effect pyrotechnics* shall be made in person to the *Fire Chief* by the *special effects pyrotechnician* responsible for the display.
- 4) Proof of liability insurance *acceptable* to the *Fire Chief* shall accompany all applications for *permits* for *display fireworks* or *special effect pyrotechnics*.

5.7.2. Explosives

5.7.2.1. Explosives Permits

- 1) No person shall store, possess or use *explosives* without first obtaining a *permit* from the *Fire Chief*.

5.7.2.2. Permit Conditions

- 1) The *Fire Chief* may add conditions to an *explosives permit*, including but not limited to, conditions regarding
 - a) insurance,
 - b) timing and extent of notice to the public,
 - c) public safety,
 - d) traffic control and road closures,
 - e) site safety and security,
 - f) the location and methods of storage of *explosives*, and
 - g) the time and location of the discharge of *explosives*.

5.7.2.3. Blasting Regulations

- 1) No person shall carry on any *blasting* without first obtaining an *explosives permit* from the *Fire Chief*.
- 2) The person applying for an *explosives permit* shall provide information to the satisfaction of the *Fire Chief* regarding liability insurance, site security measures and emergency contacts.
- 3) No person shall carry on *blasting* unless they are licensed to do so under the Explosives Act (Canada).

- 4) No person shall carry on *blasting* until advance written notification has been given to the public to the satisfaction of the *Fire Chief*.
- 5) The licensed person carrying on *blasting* shall supervise all preparations before, during and after the *blasting*.
- 6) The licensed person carrying on *blasting* shall take all precautions necessary for the protection of persons and property in the vicinity, including but not limited to
 - a) securing a clearance area around the *blasting* site, and
 - b) using *acceptable* means to contain any flying material resulting from *blasting*.
- 7) No person shall possess, store or keep at the *blasting* site a greater amount of *explosives* than is reasonably necessary to carry out *blasting*.

Section 5.8 Nuclear Weapons

5.8.1. General

5.8.1.1. Prohibition

- 1) No person shall possess or store a nuclear weapon in the *City*.”.

37. In Subsection 6.1.1., Council adds:

“6.1.1.5. Service Agents

- 1) A *service agent* shall test and inspect all fire extinguishing systems, fire alarm systems, fire pumps, emergency power systems and commercial kitchen exhaust systems.
- 2) A *service agent* shall service portable fire extinguishers in compliance with CAN/ULC-S532 “A Standard for the Regulation of the Servicing of Portable Fire Extinguishers”.
- 3) A *service agent* shall service and clean accumulated grease from commercial kitchen exhaust systems in occupancies that produce grease-laden vapours in cooking operations.
- 4) Where a *service agent* has carried out tests, inspections, repairs or maintenance pursuant to Sentence (1) to (3) the *service agent* shall ensure that the equipment that has been tested, inspected, repaired or maintained is labelled with a securely affixed tag showing the date of the testing, inspection, repair or maintenance, the name and signature of the *service agent*, and if applicable, any additional work required.
- 5) The *owner* shall ensure that a tag referred to in Sentence (3) is securely affixed to the equipment and displayed at all times.”.

38. In Table 6.8.1.1., after the row for 6.1.1.4., Council adds:

“

6.1.1.5. Service Agents	
(1)	[F82-OP1.4]
	[F82-OS1.4]

”

39. In Subsection 6.1.1., Council adds:

“6.1.1.6. False Alarms

1) Fire alarm systems, and any security systems or other systems designed to notify the fire department of a fire or emergency, shall be tested, maintained, and repaired in good working order in order to prevent a *false alarm*. (See Note A-6.1.1.6.(1).)”

40. In Section 6.3, Council strikes out the title **“Fire Alarm and Voice Communication Systems”** and substitutes **“Fire Alarm, Voice Communication, and Radio Antenna Systems”**.

41. In Article 6.3.1.1. **Maintenance**, Council strikes out Sentence (1) and substitutes the following:

“1) Fire alarm, voice communication, and radio antenna systems shall be maintained in operable conditions at all times. (See Note A-6.3.1.1.(1).)”

42. In Subsection 6.3.1. **General**, Council adds a new Article 6.3.1.5. as follows:

“6.3.1.5. Radio Antenna Systems

1) Radio antenna systems shall be tested periodically to the satisfaction of the *Fire Chief*. (See Note A-6.3.1.5.(1).)”

43. In Notes to Part 6 in Division B, Council inserts:

- (a) “A-6.3.1.1.(1). The requirement to maintain a radio antenna system in operable condition includes the obligation to obtain any federal licenses required to operate the radio antenna system, and the obligation to ensure that the radio antenna system provides 98 percent radio coverage in each critical location.”; and
- (b) “A-6.3.1.5.(1). Periodic testing should be conducted using fire department radios to verify that radio signal strength of no less than 98% coverage in each of the critical locations of the building has been maintained. A 10% sample of the critical locations of the building rotating each year may be tested. Variation from the original test

should be within 3 dB. Each year batteries used as a back up power supply should be tested in accordance with the Fire Department publication "Vancouver Fire and Rescue Services Specifications for Radio Antenna System Design, Installation and Acceptance Testing". "

44. In Article 6.4.1.1., Council adds:

"2) No person shall remove a fire hose from a hose cabinet or hose rack, without the permission of the *Fire Chief*.

3) Whenever a fire hose is removed from a hose cabinet or hose rack, a substitute fire hose meeting the requirements of Sentence (4) shall be immediately installed in its place.

4) A substitute fire hose shall meet the design and design verification test in conformance with either NFPA 1961 "Standard on Fire Hose" or ULC S511 "Standard for Rubber Lined Fire Hose".

45. In Notes to Part 6 in Division B, Council inserts:

"A-6.1.1.6.(1)

A *false alarm* includes, but is not limited to

- i) the activation of a fire alarm system during its testing,
- ii) a fire alarm system activated by mechanical failure, malfunction, or faulty equipment,
- iii) a fire alarm system activated by atmospheric conditions, vibrations, or power failure, or
- iv) a fire alarm system activated by user error.

The cause of excessive *false alarms* should be investigated. Fire alarm systems which have been designed, installed, or maintained improperly should be repaired or rectified by a qualified person. During routine testing of a fire alarm system, procedures should be in place to prevent an inadvertent signal to the Fire Department."

46. In Article 7.1.1.4., Council adds:

"6) The standard symbol identifying an elevator for use by firefighters shall be maintained in an *acceptable* condition."

Schedule C

Changes to Division C of the Fire Code

1. Council strikes out Part 1 of Division C of the Fire Code, and substitutes:

**“ PART 1
General**

Section 1.1. Application

1.1.1. Interpretation and Intent

1.1.1.1. Interpretation

- 1) This By-law shall, despite any other provision herein, be interpreted in accordance with this Section.
- 2) The Schedules attached to this By-law form part of this By-law.
- 3) This Part applies to all *buildings* and facilities covered by this By-law. (See Article 1.1.1.1. of Division A)
- 4) Words and phrases used in Division C that are not included in the list of definitions in Article 1.4.1.2. of Division A shall have the meanings that are commonly assigned to them in the context in which they are used, taking into account the specialized use of terms by the various trades and professions to which the terminology applies.
- 5) Where objectives and functional statements are referred to Division C, they shall be the objectives and functional statements described in Division A, Parts 2 and 3.
- 6) Where acceptable solutions are referred to in Division C, they shall be the provisions stated in Division B, Parts 2 to 7.
- 7) Where alternative solutions are referred to Division C, they shall be the alternative solutions mentioned in Division A, Clause 1.2.1.1. (1)(b).
- 8) The words and terms in italics in Division C shall have the meanings assigned to them in Division A, Article 1.4.1.2.
- 9) The symbols and other abbreviations in Division C shall have the meanings assigned to them in Division A, Article 1.4.2.1.

1.1.1.2. Intent

- 1) This By-Law sets standards in the general public interest. It is enacted and retained on the understanding and specifically expressed condition that it creates no duty whatsoever on the *City*, the *Fire Chief* or any employee of the *City* to enforce its provisions, and on the further condition that a failure to administer or enforce its provisions, or the incomplete or inadequate administration or enforcement of its provisions, shall not give rise to a cause of action in favour of any person whatsoever. Accordingly, words in this By-law defining the

responsibilities and authority of the *Fire Chief* shall be construed as internal administrative directions which do not create a duty.

1.1.1.3. Reliance on Registered Professionals

1) The *City* and the *Fire Chief* do not have the resources to deal with matters which fall within the expertise of *registered professionals* and the *City* and the *Fire Chief* rely on letters of opinion, documents sealed with professional seals, and related documents received from *registered professionals*, and on *field reviews* carried out by or under the supervision of *registered professionals*, as evidence that the design and *construction* of *buildings* and facilities complies with the provisions of this By-law, including alternate solutions, and complies with any other applicable enactments.

1.1.1.4. No Representation or Warranty

1) No person shall rely on a *permit* issued by the *Fire Chief* or an inspection carried out by the *Fire Chief* as establishing compliance with this By-Law or any other enactment or assume or conclude that this By-Law has been administered or enforced according to its terms.

2) All persons shall make such independent investigations as they deem necessary to determine whether a *building* or facility complies with this By-law or any other enactment.

Section 1.2. General Prohibitions

1.2.1. Prohibitions

1.2.1.1. Contravention

1) No person shall fail to comply with an order or notice issued by the *Fire Chief*.

1.2.1.2. No Work Without Permit

1) No person shall carry out work or *construction*, or authorize work or *construction*, for which a *permit* is required, on or in a *building*, facility, or premises unless a valid *permit* exists for the work or *construction*.

2) No person shall permit, suffer or allow work or *construction* for which a *permit* is required, to remain on or in a *building*, facility or premises unless a valid *permit* exists for the work or *construction*.

1.2.1.3. Compliance with Conditions of Permit

1) No person shall fail to comply with the conditions of a *permit*.

1.2.1.4. Prior Approval of Deviation

1) No person shall deviate from the plans and supporting documents forming a part of the *permit*, without having first paid all necessary fees and obtained all necessary *permits* and approvals from the *Fire Chief*.

1.2.1.5. Permits for Equipment and Facilities

- 1) No person shall install, operate or modify any *spray booth*, *storage tank* or other facility or equipment for which a *permit* is required, without first obtaining such *permit* from the *Fire Chief*.
- 2) No person shall install, remove or abandon in place any aboveground or underground *storage tank* without first obtaining a *permit* from the *Fire Chief*.

1.2.1.6. Compliance with By-law and Other Enactments

- 1) No person shall undertake any *construction*, work or *occupancy*, or permit, suffer or allow any *construction*, work or *occupancy* that is in contravention of this By-law or any other enactment.

1.2.1.7. False Information

- 1) No person shall submit false or incorrect information to the *Fire Chief*.

1.2.1.8. Tampering with a Posted Notice or Order

- 1) No person, except for the *Fire Chief*, shall reverse, alter, deface, cover, remove or in any way tamper with any notice or order which has been posted on or affixed to a *building* or facility pursuant to this By-law.

1.2.1.9. Obstruction

- 1) No person shall obstruct the *Fire Chief* or a member of the Fire Department authorized by the *Fire Chief* in carrying out an inspection pursuant to this By-law.
- 2) No person shall prevent the *Fire Chief* or a member of the Fire Department authorized by the *Fire Chief* from entering a building or premises at any reasonable time for the purpose of administering and enforcing this By-law.

1.2.1.10. Conduct at Fires and Emergencies

- 1) No person shall hinder or obstruct a member of the Fire Department who is attempting to extinguish a fire, control a *dangerous goods incident* or respond to an emergency.
- 2) No person shall fail to comply with the verbal order of a member of the Fire Department who is attempting to extinguish a fire, control a *dangerous goods incident* or respond to an emergency.
- 3) No person shall refuse to give information with respect to any fire, *dangerous goods incident* or emergency when requested to do so by any member of the Fire Department.
- 4) No person shall refuse to permit the entry of any member of the Fire Department onto any premises in respect of which a call for emergency assistance has been received.

5) No person shall refuse to permit the entry of any member of the Fire Department onto premises in respect of which the member reasonably believes that a condition exists which may cause fire or explosion, or may increase the risk of fire, explosion or danger to persons or property.

1.2.1.11. Interference with Firefighting Equipment

1) No unauthorized person shall climb or ride on or interfere with any fire truck or firefighting equipment or apparatus.

2) No person shall park a vehicle on a fire hose.

3) No person shall cause a fire alarm system to be activated, or permit, suffer or allow the activation of a fire alarm system, when there is no fire or emergency.

4) No person shall cause a false report of a fire, or permit, suffer or allow the false reporting of a fire.

Section 1.3. Obligations of the Owner or Constructor

1.3.1. Obligations

1.3.1.1. Entry

1) The *owner* shall allow the Fire Chief or any member of the fire department authorized by the Fire Chief to enter any building or premises at any reasonable time for the purpose of administering and enforcing this By-law.

1.3.1.2. Compliance with By-law and Other Enactments

1) The issuance of a *permit*, the acceptance of plans and supporting documents submitted for a *permit*, or the making of inspections by the *Fire Chief* shall not relieve the *owner* or *constructor* of a *building*, premises or facility from the full responsibility for carrying out the work or maintaining the use and *occupancy* in accordance with this By-law and all other applicable enactments.

1.3.1.3. Tests to Establish Compliance

1) Where required by the *Fire Chief* the *owner* or *constructor* shall make or have made, at the *owner's* or *constructor's* expense, tests or inspections, as necessary to establish compliance with this By-law and shall promptly provide a copy of all such tests or inspection reports to the *Fire Chief*.

1.3.1.4. Service of Systems and Display of Service Tags

1) The *owner* shall ensure that all fire protection systems, fire pumps, emergency power systems and commercial kitchen exhaust systems are tested, inspected, repaired and maintained by a *service agent*, in accordance with this By-law.

2) The *owner* shall ensure that all equipment tags referred to in Sentence 6.1.1.5.(4) are securely affixed to the equipment and displayed at all times.

1.3.1.5. Request for Inspection

1) The *owner* or *constructor* shall give at least 24 hours' notice to the *Fire Chief* when requesting an inspection of work that is required or ordered to be inspected.

1.3.1.6. Covering Work Prior to Inspection

1) The *owner* or *constructor* shall not cover work prior to inspection.

1.3.1.7. Uncovering Work

1) The *owner* or *constructor* shall uncover any work that has been covered without inspection, when required to do so by the *Fire Chief*.

2) An *owner* or *constructor* who is required to uncover work by the *Fire Chief* shall uncover and replace such work at the *owner's* or *constructor's* expense.

1.3.1.8. Re-Inspection of Work Done With Permit

1) If, during an inspection by the *Fire Chief* of a *project* carried out under *permit*, faulty or incomplete work or faulty materials are discovered, the *owner* or *constructor* shall apply for a re-inspection.

2) Every applicant for a re-inspection of a *project* carried out under *permit*, shall pay the applicable re-inspection fee set out in the Fee Schedule attached to this By-law, prior to the re-inspection.

1.3.1.9. Final Inspection of Work Done With Permit

1) Before the *owner* or *constructor* calls for a final inspection of a *project*, or a portion of a *project*, from the *Fire Chief*, the *owner* or *constructor* shall deliver to the *Fire Chief* a letter of assurance and any supporting documents requested by the *Fire Chief*, in a form *acceptable* to the *Fire Chief*, confirming that the *construction*, installation or operation substantially complies with this *By-law* and other applicable *city by-laws*.

2) Every *owner* or *constructor* calling for a final inspection of a portion of a *project* shall pay the applicable special inspection fee set out in the Fee Schedule attached to this By-law, prior to the inspection, for each final inspection of a portion of the *project* after the first portion.

1.3.1.10. Additional Inspection Following Fire Safety Inspection

1) If, during a routine inspection of a *building*, facility or premises by the *Fire Chief*, contraventions of this By-law related to fire safety are discovered and the *owner* is informed of those contraventions, the *Fire Chief* may return for a re-inspection.

2) Every *owner* whose *building*, facility or premises is subject to a re-inspection shall pay the applicable fees as set out in the Fee Schedule attached to this By-law for each re-inspection conducted to determine whether the contraventions referred to in Sentence (1) have been resolved.

1.3.1.11. Removing Hazardous Condition

1) When a condition exists which may cause fire or explosion, or may increase the risk of fire, explosion or danger to persons or property exists in a *building* or part thereof or in a

facility, the *owner* or *constructor* shall forthwith take all necessary action to remove the hazard or risk.

1.3.1.12. Cleanup and Costs of Dangerous Goods Incident

- 1) In the event of a *dangerous goods incident*, the *owner*, the *constructor* and the person manufacturing, handling or transporting the *dangerous goods* shall
 - a) provide all equipment and materials necessary for the safe containment and removal of the *dangerous goods*,
 - b) forthwith clean up any area or *street* affected by the *dangerous goods incident*, at the cost of the *owner* or other responsible person, to the satisfaction of the *Fire Chief*, and
 - c) reimburse the *City* for any damages, costs and expenses incurred by the *City* as a result of the *dangerous goods incident*.

1.3.1.13. Street Addresses

- 1) An *owner* shall not post any number or letter on a *building* or *suite* entry except for the street address or suite number that has been designated by the *Chief Building Official* pursuant to the *Building By-law*.
- 2) An *owner* shall place and maintain the designated street address or suite number in accordance with the provisions of the *Building By-law*.

1.3.1.14. Construction Safety

- 1) An *owner* or *constructor* who is carrying on work pursuant to this By-law shall ensure that all applicable enactments relating to *construction* safety are complied with.

1.3.1.15 False Alarms

- 1) The *owner* or occupier of a *building* in which there have been three or more *false alarms* in a calendar year shall
 - a) comply with any order issued by the *Fire Chief* regarding the prevention of *false alarms*, and
 - b) pay the applicable *false alarm* fee set out in the Fee Schedule to this By-law.

1.3.1.16 Posting a Permit

- 1) The *owner* or *constructor* shall ensure that a copy of the *permit* authorizing the work or occupancy is posted conspicuously on the site or is affixed to a *building* during the entire *project*.

Section 1.4. Authority of the Fire Chief

1.4.1. Administration

1.4.1.1. Administrator

- 1) The *Fire Chief* is authorized to administer and enforce this By-law.

1.4.1.2. Filing Documents

- 1) The *Fire Chief* is authorized to keep copies of applications received, *permits* and orders

issued, inspections and tests made and papers and documents connected with the administration of this By-law for such time as is required by law.

1.4.1.3. Inspection of Records

1) The *Fire Chief* is authorized to provide plans and documents filed pursuant to the provisions of this By-law for inspection, subject to the provisions of the Freedom of Information and Protection of Privacy Act.

1.4.1.4. Fees for Inspection of Records

1) The *Fire Chief* shall charge a fee as set out in the Fee Schedule, payable in advance, for the inspection of records in accordance with this By-law.

1.4.1.5 Recovery of False Alarm Fees

1) A *false alarm* fee that has not been paid by an *owner* or occupier may be recovered by the *Fire Chief* by insertion on the real property tax roll.

1.4.2. Authorities

1.4.2.1. Power of Entry

1) The *Fire Chief* may enter any *building*, premises or motor vehicle at any reasonable time, for the purpose of administering or enforcing this By-law or inspecting for conditions which may cause fire or explosion, or may increase the risk of fire, explosion or danger to persons or property.

1.4.2.2. Power to Investigate Fires

1) The *Fire Chief* may inquire into, investigate and record the cause of fires occurring in the *City*.

2) The *Fire Chief* may enter and examine any *building*, premises, motor vehicle, vessel, or railway rolling stock where a fire has occurred, for the purpose of inquiring into, investigating or recording the cause of the fire.

1.4.2.3. Construction Safety

1) The *Fire Chief* may review a *Construction Safety Plan* and may require that the *Construction Safety Plan* be changed or amended.

1.4.2.4. Permit Issuance

1) The *Fire Chief* shall issue a *permit* when the applicable requirements of this By-law have been met.

1.4.2.5. Permit Refusal

1) The *Fire Chief* may refuse to issue a *permit*

- a) if drawings, plans or supporting documents are incomplete or do not comply with the provisions of this By-law,
- b) if drawings, plans or supporting documents contain false or incorrect information,

- c) for any activity, *construction*, work or *occupancy* that would not be permitted by this By-law or by another enactment, or
- d) for any activity, *construction*, work or *occupancy* that, in the opinion of the *Fire Chief*, might cause fire or explosion, or increase the risk of fire, explosion or danger to persons or property.

2) The *Fire Chief* shall provide reasons for the refusal to issue a *permit*, on the request of an applicant or *owner*.

1.4.2.6. Conditions on Permits

- 1) The *Fire Chief* may impose conditions on *permits* including, but not limited to, conditions regarding
- a) notifications and notices,
 - b) timing of permitted activities,
 - c) use and *occupancy*,
 - d) upgrading requirements for fire and life safety systems,
 - e) health and safety,
 - f) design requirements,
 - g) *construction* requirements,
 - h) timing of *construction*,
 - i) deadlines for completion of *construction*,
 - j) time limits and expiry of *permits*,
 - k) *field reviews* and inspections,
 - l) responsibilities of the *owner*, *constructor*, and *registered professional*, and
 - m) letters of opinion from *registered professionals* assuring that the design, *construction*, use or *occupancy*, of a *building* or premises, or the operation of a facility, complies with the provisions of this By-law.

1.4.2.7. Permit Suspension

1) The *Fire Chief* may suspend a *permit* by issuing an order to stop the work or activity authorized by the *permit*.

1.4.2.8. Permit Revocation

- 1) A *permit* issued under this By-law may be revoked by the *Fire Chief* if, in the opinion of the *Fire Chief*
- a) the *permit* is used by a person other than the person to whom it was issued,
 - b) the *permit* is used for a location other than that for which it was issued,
 - c) the *permit* holder fails to comply with a condition of the *permit*,
 - d) the *permit* was issued on the basis of false or incorrect information,
 - e) the *permit* was issued in error,
 - f) the work or activity authorized by the *permit* is unsafe or unlawful, or
 - g) the *permit* holder has failed to pay the requisite *permit* fee.

1.4.2.9. Inspection before Permit

1) Before issuing a *permit* the *Fire Chief* may inspect the proposed location of the work or activity for which the *permit* is sought.

1.4.2.10. Expiry of Permit

1) Except as otherwise provided in this By-law, a *permit* shall expire and the rights of the *owner* under the *permit* shall terminate on the expiry date noted on the *permit*.

1.4.2.11. Permit Extension

1) The *Fire Chief* may extend a *permit* in accordance with this By-law.

1.4.2.12. Application to Fire Chief for Permit Extension

1) An *owner* who wishes to seek an extension of a *permit* shall make application to the *Fire Chief* prior to the expiry of the *permit*.

2) An *owner* who wishes to seek an extension of a *permit* shall submit the application in writing accompanied by the requisite extension fee.

1.4.2.13. Extension of Permit by Fire Chief

1) If the *Fire Chief* is of the opinion that substantial completion of the work has been prevented because of exceptional circumstances, the *Fire Chief* may extend the *permit*, provided that, in the meantime, no applicable amendments have been made to this By-law.

1.4.2.14. Proof of Compliance

1) The *Fire Chief* may direct that tests of materials, equipment, devices, or *construction* be made, or sufficient evidence or proof be submitted, at the expense of the *owner*, where, in the opinion of the *Fire Chief*, such evidence or proof is necessary to determine whether the material, equipment, device, or *construction* complies with this By-law.

1.4.2.15. Hazardous Condition

1) Where in the opinion of the *Fire Chief* a condition exists which may cause fire or explosion, or may increase the risk of fire, explosion or danger to persons or property, the *Fire Chief* may take all reasonable and necessary steps to remove the hazard or risk.

1.4.2.16. Order to Remove Hazardous Condition

1) Where in the opinion of the *Fire Chief*, a condition exists which may cause fire or explosion, or may increase the risk of fire, explosion or danger to persons or property, the *Fire Chief* may issue an order to the *owner*, requiring removal of the hazard or risk within a specified time.

2) Where in the opinion of the *Fire Chief*, a condition exists in a *building* which may cause fire or explosion, or may increase the risk of fire, explosion or danger to persons or property, the *Fire Chief* may issue an order to the *owner*, requiring the installation of *fire protection systems*, and may specify the type of installation required.

3) The *Fire Chief* may order the dilution, neutralization or removal of any materials which, in the opinion of the *Fire Chief*, have been contaminated as the result of an *incident* involving *dangerous goods*.

1.4.2.17. Order to Provide Hazardous Condition Report

1) Where as the result of the failure of a facility, equipment or an excavation, a condition exists that causes or has the potential to cause fire or explosion, or may increase the risk of fire, explosion or danger to persons or property, the *Fire Chief* may require the *owner* to submit a report which includes

- a) the name and address of the *owner*,
- b) the address or location of the facility, equipment or excavation,
- c) the name and address of the *constructor*,
- d) the nature of the failure,
- e) the cause of the failure,
- f) a remedial plan to correct the failure, and
- g) a plan to prevent future failure.

1.4.2.18. Hazardous Material

1) The *Fire Chief* may require that any person supervising or doing work to install or remove a *building* material provide evidence of their training, certification or qualifications, if the installation or removal of a *building* material may, in the opinion of the *Fire Chief*, cause or have the potential to cause fire or explosion, or to increase the risk of fire, explosion or danger to persons or property, or affect the fire protection of a *building*.

1.4.2.19. Emergencies

1) If an emergency arising from a fire hazard or from a risk of explosion causes the *Fire Chief* to be apprehensive of imminent and serious danger to life or property, or of a panic, the *Fire Chief* may immediately and without prior notice take any action that, in the opinion of the *Fire Chief*, is advisable to remove the hazard or risk.

2) If, in the opinion of the *Fire Chief*, conditions exist in or near a hotel or public building that, in the event of fire, might seriously endanger life or property the *Fire Chief* may immediately and without prior notice take any action that, in the opinion of the *Fire Chief*, is advisable to remedy the conditions or to eliminate the danger.

3) For the purposes of Sentences (1) and (2), the *Fire Chief* may order the evacuation of any *building* or area or the closure of a hotel or public building and may call on peace officers to assist in the evacuation or closure.

4) If, in the opinion of the *Fire Chief*, all or a part of a *building* or structure should be demolished or otherwise removed in order to prevent the spread of a fire, the *Fire Chief* may order that the *building* or structure be demolished or removed, or may demolish or remove the *building* or structure.

5) The *Fire Chief* may establish limited entry areas or zones in the vicinity of a fire or emergency, and may prohibit any unauthorized person from entering those areas or zones.

6) In the absence of the police, the *Fire Chief* may direct or divert vehicular traffic that is in the vicinity of a fire or emergency and may order persons to comply with those directions, and the directions of the *Fire Chief* shall take precedence over posted traffic signs.

1.4.2.20. Temporary Activities

- 1) If a temporary activity is occurring in a *building* that was not designed to accommodate such activity, and that activity may, in the opinion of the *Fire Chief*, cause or have the potential to cause fire or explosion, or to increase the risk of fire, explosion or danger to persons or property, or affect the fire protection of a *building*, the *Fire Chief* may
 - a) order that the activity cease,
 - b) order that a *permit* be obtained for the activity,
 - c) order that a fire watch be provided by an *owner* or occupant, and
 - d) make such other orders as, in the opinion of the *Fire Chief*, are necessary to remove or reduce any hazard or risk of fire, explosion, or danger to life or property.

1.4.3. Notices and Orders

1.4.3.1. Notices or Orders

- 1) The *Fire Chief* may issue in writing such notices or orders as may be necessary to inform the *owner* of a contravention of this By-law, in the manner set out in this By-law.

1.4.3.2. Scope of Orders

- 1) The *Fire Chief* may order an *owner*, occupant or other person
 - a) to remove or demolish any *building* or facility,
 - b) to repair any *building* or facility,
 - c) to alter the use or *occupancy* of a *building* or facility,
 - d) to remove or securely store combustible or explosive materials,
 - e) to remove a potential source of ignition,
 - f) to remove a hazardous condition,
 - g) to provide, alter, improve or maintain a *means of egress*, *fire separation* or other fire protection system required by this By-law,
 - h) to secure a *building* against unauthorized entry,
 - i) to provide written confirmation from an *acceptable* agency that a fire alarm system is fully operational,
 - j) to take such precautions as may be necessary, in the opinion of the *Fire Chief*, to remove or reduce any hazard or risk of fire, explosion, or danger to life or property, or
 - k) to comply with any other provision of this By-law.

1.4.3.3. Delivery of Orders

- 1) The Fire Chief may deliver an order
 - a) by delivery by hand to an *owner* or representative of the *owner*, or
 - b) by delivery by registered mail to the address of the *owner* as it appears on the records of the Assessment Authority of British Columbia, or
 - c) by delivery by regular mail to the address of the *owner* as it appears on the records of the Assessment Authority of British Columbia, and by posting a copy of it on the *building*, structure, facility or premises, or
 - d) by sending the order by electronic mail to the electronic mail address of the *owner* or a representative of the *owner*.

1.4.3.4. Verbal Orders

1) The *Fire Chief* may issue such verbal orders as may be necessary if the *Fire Chief* is attempting to extinguish a fire, control a *dangerous goods incident* or respond to an emergency.

Section 1.5. Permits, Applications and Fees

1.5.1. Permits Required

1.5.1.1. When a Permit is Required

1) Except as provided in Sentence (2), every *building* with an *assembly occupancy* designed for more than 60 persons shall have an *occupant load permit*.

2) The temporary use of a *building* for an *arts and culture indoor event* shall not require an *occupant load permit* if the temporary *occupant load* for the *arts and culture indoor event* has been calculated pursuant to the provisions of this By-law.

3) A *permit* is required for

- a) the installation of a spill control system for *flammable* or *combustible liquids*,
- b) the installation, removal or abandonment of a *storage tank*, or
- c) the use of an outdoor storage receptacle constructed of combustible materials.

4) A *permit* is required for the construction of

- a) a bulk plant,
- b) a *fuel dispensing station*,
- c) a *process plant*, or
- d) a *distillery*.

5) An annual *permit* is required for the operation of

- a) a bulk plant,
- b) a *fuel dispensing station*,
- c) a *process plant*, or
- d) a *distillery*.

6) A *permit* is required for lighting or maintaining an open air fire, except as provided in Article 2.4.5.3. of Division B.

7) A *permit* is required for the temporary use of a covered mall for any extraordinary activities, such temporary merchandising or special events that take place inside the mall and outside of any premises approved for retail use.

8) A *permit* is required for the possession, storage, sale, or discharge of *fireworks* or *explosives*.

9) A *permit* is required for *blasting*.

1.5.1.2. Construction, Installation or Operation Without a Permit

- 1) If a *construction*, installation or operation for which a *permit* is required has been commenced before a *permit* has been issued, the *owner* shall
 - a) make application for any necessary *permits*, and
 - b) pay to the *City* double the *permit* fee set out in the Fee Schedule attached to this By-law as Schedule D.

- 2) If a *construction*, installation or operation for which a *permit* is required has been commenced before a *permit* has been issued, the *owner* shall, if ordered to do so by the *Fire Chief*
 - a) provide proof that the *construction*, installation or operation complies with this By-law and any other applicable enactments,
 - b) carry out tests and investigations by independent agencies, at the cost of the *owner* to determine whether or not the *construction*, installation or operation complies with this By-law,
 - c) carry out tests and investigations by independent agencies, at the cost of the *owner* to determine appropriate remedial measures to ensure that the *construction*, installation, or operation complies with this By-law,
 - d) provide to the *Fire Chief*, at the cost of the *owner*, the results of any tests and investigations ordered by the *Fire Chief*, and
 - e) provide documentation to the satisfaction of the *Fire Chief* to establish that all remedial measures to ensure the *construction*, installation or operation complies with this By-law have been completed.

1.5.2. Application for Permit

1.5.2.1. Applications

- 1) Applications for permits shall be made to the Fire Department in the form prescribed by the *Fire Chief* and shall be accompanied by such drawings, plans and supporting documents as may be required by the *Fire Chief*.

1.5.2.2. Documentation and Drawings

- 1) A *permit* application must be accompanied by the requisite *permit* fee, in accordance with the Fee Schedule attached as Schedule D to this Part, and by such drawings, plans or supporting documents as may be required by the *Fire Chief* including, without limitation
 - a) details of the location and layout of the *construction*, installation or operation in relation to any adjoining property lines, *buildings* or fencing,
 - b) drawings indicating the size, *capacity*, use, type or trade name, construction, and installation standards of any *construction*, installation or operation for which a permit is sought,
 - c) evidence that drawings or details have been prepared by, or under the supervision of a *registered professional*, and
 - d) a letter that provides assurance of substantial compliance to this By-law and a commitment for *field review* sealed and signed by a *registered professional*.

1.5.2.3. No Refund

- 1) Except as permitted in Article 1.5.2.4., no *permit* fees or part thereof shall be refunded if
 - a) the *construction*, installation or operation authorized by a *permit* has commenced,
 - b) the *permit* has expired, or
 - c) the application has lapsed.

1.5.2.4. Partial Refund and Set-off

- 1) If a *construction*, installation or operation authorized by *permit* has not commenced and the *Fire Chief* approves, the Director of Finance may refund a portion of the fees related to the *permit*, after deduction of any outstanding costs incurred by the *City* in processing the application for the *permit*.

1.5.2.5. Lapse of Application

- 1) An *owner* shall comply with all the necessary requirements to complete an application for a *permit* within 6 months after the date of receipt of the application by the *Fire Chief*.
- 2) If an *owner* fails to comply with the requirements of Sentence (1), the application for a *permit* shall lapse.
- 3) An application for a *permit* which has lapsed is expired and shall not be renewed except in accordance with Article 1.5.2.6.

1.5.2.6. Renewal of Lapsed Application

- 1) The *Fire Chief* may renew a lapsed application for a *permit* if the *Fire Chief* determines that
 - a) no more than 3 months have passed since the date the application lapsed, and
 - b) the failure to complete the requirements of the original application for a *permit* was reasonable in the circumstances.
- 2) Despite the provisions of Sentence (1), the *Fire Chief* shall not renew a lapsed application for a *permit* more than once.
- 3) An application for a *permit* which has been renewed pursuant to Sentence (1) shall comply with any amendments to this By-law made since the date of receipt of the original application by the *Fire Chief*.

1.5.3. Permits

1.5.3.1. Posting of a Permit

- 1) A *permit* required by this Part shall be displayed in the location designated by the *Fire Chief*.

1.5.3.2. Validity of Permit

- 1) A *permit* issued under this By-law continues to be valid unless the time limit on the *permit* expires, the *permit* is revoked, or there is a material change in the conditions under which the *permit* was issued.

1.5.3.3. Permit not Transferable

- 1) A *permit* is not transferable.

1.5.4. Payment of Fees

1.5.4.1. Fees

- 1) The fees set out in Schedule D to this By-law shall be payable to the *City* by all persons applying for *permits*, inspections or services.
- 2) Fees shall be paid at the time of application for a *permit*, inspection or service.
- 3) Fees invoiced by the Fire Department are due and payable within 30 days of invoice issuance.
- 4) A *false alarm* fee that has not been paid by an *owner* or occupier may be recovered by insertion on the real property tax roll.

Section 1.6 Offences and Penalties

1.6.1. Offences

1.6.1.1. Offences

- 1) A person who
 - a) violates any provision of this By-law, or does any act or thing which violates any provision of this By-law, or suffers or allows any other person to do any act or thing which violates any provision of this By-law,
 - b) neglects to do or refrains from doing anything required to be done by any provision of this By-law, or
 - c) fails to comply with an order, direction, or notice given under any provision of this By-law, or suffers or allows any other person to fail to comply with an order, direction, or notice given under any provision of this By-law,

is guilty of an offence against this By-law, and liable to the penalties imposed under this section.

1.6.2. Fines and Penalties

1.6.2.1. Fines

- 1) Except as provided in Sentence (2), every person who commits an offence against this By-law is liable to a fine of not less than \$500 and not more than \$10,000 upon conviction.
- 2) Notwithstanding the minimum fine referred to in Sentence (1), every person who commits an offence against any of the following provisions of this By-law is liable to a fine of not less than \$750.00 and not more than \$10,000 upon conviction

- a) Article 1.2.1.1. of Division C,
- b) Clause 1.3.1.12.(1)(a) of Division C,
- c) Clause 1.3.1.12.(1)(b) of Division C,
- d) Article 2.4.1.1. of Division B,
- e) Sentence 2.4.6.1.(1) of Division B,
- f) Sentence 2.7.1.3.(3) of Division B,
- g) Sentence 2.7.1.6.(1) of Division B,
- h) Sentence 5.8.1.1.(1) of Division B,
- i) Sentence 6.3.1.1.(1) of Division B, or
- j) Sentence 6.4.1.1.(1) of Division B.

3) Except as provided in Sentence (4), every person who commits an offence of a continuing nature is liable to a fine of not less than \$500.00 and not more than \$10,000.00 for each day such offence is continued.

4) Notwithstanding the minimum fine referred to in Sentence(3), every person who commits an offence of a continuing nature against any of the provisions listed in Sentence (2) is liable to a fine of not less than \$750.00 and not more than \$10,000.00 for each day such offence is continued.

Section 1.7 Transition Provisions

1.7.1. General

1.7.1.1. Validity of Permits Issued Under Previous By-law

1) Subject to the provisions of Article 1.5.2.6., *projects* for which *permits* were obtained under By-law No. 11312 may be carried out in accordance with the provisions of that By-law.”.

SCHEDULE D

FEE SCHEDULE

1. Council adds the following Fee Schedule, which shall form part of the Fire By-law, at the end of the Fire By-law:

PERMIT FEES

Item	Activity	Fee	GST applicable
1	Open-air burning (each occurrence)	200.00	-
2	Open-air burning by registered non-profit group (each occurrence)	20.00	-
3	Selling fireworks (wholesale) - annual permit	200.00	-
4	Fireworks vendor - annual permit	250.00	-
6	Firing of display fireworks or explosives (each event)	150.00	-
7	Firing of display fireworks by registered non-profit group (each event)	20.00	-
8	Firing of explosives for blasting operations (per day per project)	200.00	-
9	Installation, removal or abandonment of storage tank (other than single family dwelling)	300.00	-
10	Removal or abandonment of storage tank (single family dwelling)	300.00	-
11	Installation of fuel dispensing station	300.00	-
12	All other permits	200.00	-
13	Extension of permit (each extension)	100.00	-

INSPECTION AND RECORD FEES

Item	Activity	Fee	GST applicable
14	Record search of property (reporting letter), for each civic address on a property (maximum charge 720.00)	100.00	YES
15	Record search regarding incident responded to by Fire Department (for each hour or part thereof)	100.00	YES
16	Each inspection additional to the first inspection for a permit application	100.00	YES
17	Special event plan check or site inspection (for each hour or part thereof)	100.00	YES
18	Re-inspection (for each hour or part thereof)	200.00 first hour or part thereof, plus 100.00 per hour for each subsequent hour or part thereof	YES
19	For installation, modification, or relocation of a lock box	100.00	YES
20	Special inspection or plan check (per site) to determine compliance with By-law, in respect of which no specific fee is otherwise prescribed in this Schedule (for each hour or part thereof)	150.00	YES

SERVICE FEES

Item	Activity	Fee	GST applicable
21	Fire watch at special event or filming (for each hour or part thereof, 4 hour minimum)	150.00	YES
22	Occupancy load certificate (for occupancy by 150 persons or less)	300.00	-
23	Occupancy load certificate (for occupancy by more than 150 persons)	500.00	-
24	Review of fire safety plan for high building (for each hour or part thereof, 2 hour minimum)	100.00	YES
25	Review of fire safety plan for all buildings other than high buildings (for each hour or part thereof)	100.00	YES
26	Review of construction fire safety plan	100.00	YES
27	Responding to the third and each subsequent false alarm for the same address in a calendar year (for each occurrence)	200.00	YES

DRAFT By-law to amend the Ticket Offences By-law No. 9360
Regarding offences pursuant to the Fire By-law

Note: A By-law will be prepared generally in accordance with the provisions listed below, subject to change and refinement prior to posting

1. This By-law amends the indicated provisions of Ticket Offences By-law No. 9360.
2. Council strikes out Tables 8.1 and 8.2 and substitutes Tables 8.1 and 8.2 attached hereto as Schedule A.

Schedule A

Table 8.1
Fire By-Law

Column 1	Column 2	Column 3	Column 4
Fire Chief	Activity creating life safety concerns	2.1.2.2.(1) Division B	\$500.00
	No smoke alarm in dwelling unit	2.1.3.3.(1) Division B	\$500.00
	No CO alarming device in dwelling unit	2.1.3.8.(2) Division B	\$500.00
	Fail to provide portable fire extinguisher	2.1.5.1.(1) Division B	\$500.00
	Fire doors held open	2.2.2.4.(4) Division B	\$500.00
	Accumulate combustible materials	2.4.1.1.(1) Division B	\$750.00
	Accumulate combustible materials in service area or means of egress	2.4.1.1.(2) Division B	\$750.00
	Fail to provide/secure noncombustible outdoor storage receptacle	2.4.1.1.(7) Division B	\$500.00
	Fail to secure vacant building	2.4.6.1.(1) Division B	\$750.00
	Fail to install approved commercial cooking equipment exhaust or fire protection system	2.6.1.9.(1) Division B	\$500.00
	Fail to use/inspect/maintain approved commercial cooking equipment exhaust or fire protection system	2.6.1.9.(2) Division B	\$500.00
	Exceed occupant load on permit	2.7.1.3.(4) Division B	\$750.00
	Exceed occupant load	2.7.1.3.(5) Division B	\$750.00
	Fail to maintain egress	2.7.1.6.(1) Division B	\$750.00
	Fail to inspect exterior egress	2.7.1.9.(2) Division B	\$750.00
Fail to maintain exterior	2.7.1.9.(3) Division B	\$750.00	

Column 1	Column 2	Column 3	Column 4
	egress		
	Fail to illuminate exit lighting/signs	2.7.3.1.(2) Division B	\$500.00
	Fail to inspect/test/maintain/recharge portable fire extinguisher	6.2.1.1.(1) Division B	\$500.00
	Fail to maintain fire alarm/voice communication/radio antenna system	6.3.1.1.(1) Division B	\$750.00
	Fail to test radio antenna system	6.3.1.5.(1) Division B	\$750.00
	Fail to inspect/test/maintain water-based fire protection system	6.4.1.1.(1) Division B	\$750.00
	Fail to install/inspect/test/maintain a smoke alarm	6.7.1.1.(1) Division B	\$500.00
	Fail to inspect/test/maintain a CO alarming device	6.7.1.1.(3) Division B	\$500.00

Table 8.2
Fire By-Law

Column 1	Column 2	Column 3	Column 4
Fire Chief	Discard smoking or burning materials	2.4.2.3.(1) Division B	\$500.00
Police Officer	Light or maintain outdoor fire without permit	2.4.5.1.(1) Division B	\$500.00
	Smoking or open flame in tent/air-supported structure	2.9.3.3.(1) Division B	\$500.00
	Sell fireworks without a permit	5.7.1.1.(1) Division B	\$500.00
	Sell firecrackers, bottle rockets or roman candles	5.7.1.3.(2) Division B	\$500.00
	Sell fireworks to a person under 19 years of age	5.7.1.3.(3) Division B	\$500.00
	Point fireworks at any person/animal/building/thing	5.7.1.3.(4) Division B	\$500.00
	Possess or discharge fireworks by a person under 19 years of age	5.7.1.3.(5) Division B	\$500.00
	Sell fireworks to any person not holding a valid consumer fireworks permit	5.7.1.5.(1) Division B	\$500.00
	Possess fireworks without a consumer fireworks permit	5.7.1.5.(4) Division B	\$500.00
	Fail to comply with the conditions on the consumer fireworks permit	5.7.1.5.(5) Division B	\$500.00
	Fail to comply with Fire Chief order	1.2.1.1.(1) Division C	\$500.00
	Activation of fire alarm system when no fire	1.2.1.11.(3) Division C	\$500.00
	False report of fire	1.2.1.11.(4) Division C	\$500.00

**DRAFT By-law to amend Building By-law No. 10908
Regarding Radio Antenna Systems for Emergency Communications**

Note: A By-law will be prepared generally in accordance with the provisions listed below, subject to change and refinement prior to posting.

1. This by-law amends the indicated provisions of Building By-law 10908.
2. In Division B, Article 3.2.4.10., Council:
 - (a) renumbers Sentence (5) as Sentence (7);
 - (b) after Sentence 4, adds:

“

5) Except as permitted by Sentence (6), a radio antenna system shall perform a self-test at least twice daily and shall be electrically supervised to indicate a trouble signal on the *building* fire alarm system annunciator for:

 - a) loss of power to any head-end equipment, and
 - b) fundamental failure of a self-test.

6) Electrical supervision of a radio antenna system in a *building* in which a fire alarm system is not installed shall be provided by an *acceptable* method.”; and

 - (c) in renumbered Sentence (7), strikes out “Sentence (3)” and substitutes “Sentences (3) and (5)”.
3. In Division B, Article 3.2.4.22., Council strikes out Sentence 3.2.4.22.(6), and substitutes:

“6) Except where a radio antenna system conforming to Sentence 3.2.5.20.(1) is installed, emergency telephones shall be installed and located in each *floor area* near *exit* stair shafts for the 2-way communication system referred to in Clause (1)(a).”.
4. In Division B, Subsection 3.2.5, Council adds:

“3.2.5.20. Radio Antenna Systems

1) Except as permitted by Sentence (2), an *acceptable* radio antenna system shall be installed in every *building* that

 - a) is more than 6 *storeys* in *building height*,
 - b) contains more than 1 *storey* in the basement, or
 - c) contains more than 1200 m² of *floor area* in the basement.

(see Appendix A).

- 2) A radio antenna system shall not be required for
 - a) government *buildings* requiring security against transfer of signals inside and outside of *buildings*, and
 - b) where, in the opinion of the *Chief Building Official*, in consultation with the Fire Chief, radio signals compromise the intended use of the *building*.

- 3) A radio antenna system shall provide not less than 98% coverage in each of the following critical locations in the *building*
 - a) *exit* stair shafts,
 - b) *exit* corridors,
 - c) *public corridors*,
 - d) corridors used by the public,
 - e) corridors serving classrooms or patients' sleeping rooms,
 - f) within 5 m of the fire alarm control unit,
 - g) within 5 m of the central alarm and control facility,
 - h) within 5 m of the fire alarm annunciator,
 - i) fire pump room,
 - j) emergency generator room,
 - k) electrical service and transformer room,
 - l) elevator machine room,
 - m) elevator lobbies,
 - n) elevator hoistways,
 - o) corridors in the basement and not within a *suite*, and
 - p) *storage garages* and associated vehicle ramps.”.

5. In Division B, Table 3.9.1.1., in the appropriate row, Council adds:

“

3.2.5.20. Radio Antenna Systems	
(1)	[F12, F13 – OS1.2,OS1.5] [F12,F13 – OS3.7]
	[F12, F13- OP1.2]

”.

6. In Division B, Article 3.4.4.4., Council:

- (a) at the end of Clause 3.4.4.4.(1)(d), strikes out “and”;
- (b) at the end of Clause 3.4.4.4.(1)(e), adds “, and”; and
- (c) after Clause 3.4.4.4.(1)(e), adds:
 - “f) wires, cables, totally enclosed *noncombustible* raceways, and distributed antenna for a radio antenna system conforming to Sentence 3.2.5.20.(1).”.

7. In Appendix A of Division B, Council adds:

“A-3.2.5.20. Radio Antenna Systems Buildings of noncombustible construction, or buildings that have glazing with a low emissivity rating can cause interference with radio signals that are necessary for emergency, firefighting and rescue operations. See Fire Department publication “Vancouver Fire Rescue Services Specifications for Radio

Antenna System Design, Installation and Acceptance Testing”.

8. In Appendix A of Division B, in **Table 11.2.1.2.B**, in the row entitled Design Level **F4**, under the column entitled “Alternative Acceptable Solution” and at the end of the sentence regarding **Entire Building**, Council strikes out “and building envelope review.” and substitutes “building envelope review and radio antenna systems.”.
9. In Division C, at the end of Part 2, in Schedule B “Assurance of Professional Design and Commitment for Field Review”, after item 6.10, Council adds:

“6.11 Radio antenna systems”.