

SUMMARY:

The Life and Safety Bylaw No. 10760, establishes a municipality to have fundamental powers to impose the requirements in relation to municipal services, firecrackers, fireworks and explosives and to the health, safety or protection of persons or property. The Bylaw authorizes the Municipal Fire Chief and designate to exercise powers for fire related inspections and prevention and regulates the prevention and control of fires and for regulating the conduct of persons at or near fires as identified through the *Community Charter S.B.C. 2003, c. 26* and *Fire Services Act and Regulations*.

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CITY OF KELOWNA

BYLAW NO. 10760

REVISED: January 20, 2020

CONSOLIDATED FOR CONVENIENCE TO INCLUDE:
BYLAW NO. 11116 and 11747

FIRE & LIFE SAFETY BYLAW

WHEREAS the *Community Charter S.B.C. 2003, c. 26*, as amended from time to time, provides that a municipality has the fundamental powers to impose the requirements in relation to municipal services, firecrackers, fireworks and explosives and to the health, safety or protection of persons or property;

AND WHEREAS the *Community Charter S.B.C. 2003, c. 26*, as amended from time to time, provides that a Municipality may by bylaw authorize the Municipal Fire Chief and designate to exercise powers for fire related inspections and prevention;

AND WHEREAS, the *Community Charter S.B.C. 2003, c. 26* and *Fire Services Act and Regulations*, as amended from time to time, a Municipality may by bylaw regulate the prevention and control of fires and for regulating the conduct of persons at or near fires;

NOW THEREFORE the Municipal Council of the City of Kelowna, in open meeting assembled, enacts as follows:

PART ONE: ADOPTION AND APPLICATION OF THE FIRE CODE

- 1.1** The Fire Code, as amended or replaced from time to time, is adopted and made part of this Bylaw, such that every provision of the Fire Code shall be considered a provision of this Bylaw.
- 1.2** Any person who contravenes, violates or fails to comply with a provision of the Fire Code or this Bylaw commits an offence under this Bylaw.
- 1.3** This Bylaw comes into force and takes effect on the date of its adoption by Council.

PART TWO: INTERPRETATION AND GENERAL PROVISIONS

2.1 Words and Phrases

- 2.1.1** Unless specifically defined herein, words and phrases used in this Bylaw shall be construed in accordance with the meanings assigned to them by the *Fire Services Act*, the Building Code, the Fire Code or the *Community Charter S.B.C. 2003, c. 26*, as the context and circumstances require.

2.2 References

- 2.2.1 Any reference to the Fire Chief shall include a reference to any person duly authorized by the Fire Chief to exercise any of the Fire Chief's powers or to carry out any of the Fire Chief's duties under this Bylaw.

2.3 Definitions

- 2.3.1 Schedule "A" of this Bylaw contains definitions of words and phrases used in this Bylaw.

2.4 Severability

- 2.4.1 If any part, section, subsection or phrase of this Bylaw is held to be invalid by a court of competent jurisdiction, the invalid portion shall be severed and the remainder of the Bylaw will be deemed to have been enacted without the invalid portion.

2.5 Application

- 2.5.1 The provisions of this Bylaw apply to all buildings, structures, properties, mobile vendors and conditions within the City and, for certainty, apply to both existing buildings and buildings under construction.

2.6 Gender and Number

- 2.6.1 Wherever the singular or masculine is used in this Bylaw, the same shall be construed as meaning the plural, feminine or the body corporate or politic where the context so requires.

PART THREE: FIRE DEPARTMENT

3.1 Continuation

- 3.1.1 The Fire Department is hereby continued for the purposes of providing fire suppression, first medical response, fire inspections, fire investigations, public education, fire training, fire dispatch, emergency management and rescue services contemplated under this Bylaw.

3.2

Fire Chief

3.2.2 The Fire Chief and any officer, member or other person authorized by the Fire Chief to act on behalf of the Fire Chief, may exercise one or more of the following powers:

- a) make and enforce rules for the proper and efficient administration and operation of the Fire Department and change, replace or withdraw the rules;
- b) enter on property and inspect premises for conditions that may cause a fire, increase the danger of a fire or increase the danger to persons or property from fire;
- c) take measures considered necessary to prevent, investigate and suppress fires, including the demolition of buildings and other structures to prevent the spreading of fires;
- d) require an owner or occupier to undertake any actions the Fire Chief or designate considers necessary for the purpose of removing or reducing any condition or circumstance the Fire Chief or designate considers is a fire hazard or increases the danger to life;
- e) exercise the following powers under of the Fire Services Act:
 - i) if an emergency arising from a fire hazard or from a risk of explosion causes the Fire Chief or designate to apprehend imminent and serious danger to life or property, or of a panic, the Fire Chief or designate may immediately take steps to remove the hazard or risk;
 - ii) if the Fire Chief or designate believes that conditions exist in or near a hotel or public building, that, in the event of a fire, natural disaster, or other emergency incident might seriously endanger life or property, the Fire Chief or designate may immediately take action to remedy the conditions to eliminate the danger and may evacuate and close the hotel or public building; and

without limiting the foregoing, for these purposes may evacuate a building or area, and may call on police and other fire prevention authorities who have jurisdiction to provide assistance;

- f) provide for assistance response;
- g) enforce this Bylaw and any other City bylaws, rules, orders and regulations for the prevention and suppression of fire and the protection of life and property;
- h) inquire into, investigate and record the causes of fires in the City;
- i) collect and disseminate information in regard to fires in the City;
- j) investigate and make inquiries into fires;
- k) research best practices in methods of the areas identified in part 3.1.1;
- l) provide, advise and make recommendations to other officers and employees of the City, to Council, and to the public, in accordance with any applicable City policies and procedures, the British Columbia Building Code, British Columbia Fire Code and the Fire Services Act in relation to:
 - i) the provision of adequate water supply and pressure;

- ii) the installation and maintenance of fire protection equipment;
 - iii) the enforcement of measures for the prevention suppression of fire and the protection of life and property;
 - iv) life safety or rescue equipment; and
 - v) fire prevention generally.
- m) In addition to any agreement to provide services beyond the boundary of the City, at the discretion of the Fire Chief, the fire department may, where consent in accordance with s. 13 of the Community Charter has been provided, respond to requests for assistance beyond the boundary of the City, including but not limited to;
- a) fire suppression;
 - b) technical rescue
 - c) assistance where there is a risk of immediate harm to persons or property including:
 - i) medical emergencies
 - ii) hazardous materials incidents
 - iii) traffic accidents.

3.3 Right to Enter

- 3.3.1 The Fire Chief, designate or Bylaw Enforcement Officers are authorized to enter on property at any time in order to ascertain whether the requirements of this bylaw are being met.

3.4 Prevention, Control and Enforcement

- 3.4.1 The Fire Department may, to the extent authorized by sections 8(3)(g) and 66 of the *Community Charter S.B. 2003, c. 26*, take all necessary measures for the prevention, suppression, control and extinguishment of fires, for mitigating the effects of incidents involving dangerous goods, Natural and/or Man Made Disasters and for the protection of life and property, including conducting assistance response and administering emergency medical services.

3.5 No Interference

- 3.5.1 No person shall interfere with or obstruct the entry of any member or officer onto any land to which entry is made or attempted pursuant to the provisions of this bylaw.
- 3.5.2 No person shall interfere with or refuse to permit any member or officer to enter into or upon premises in relation to which an alarm or other request for assistance has been received or in or upon which a member or officer has reasonable grounds to believe that an incident has occurred or may occur.
- 3.5.3 No person shall interfere with any member or officer or refuse to permit any member or officer to enter into or upon premises or a fire scene to determine

- a) the cause and origin of a fire;
- b) the activation of a fire alarm system, or
- c) the presence and functioning of a sprinkler system or other fire or life safety protection system.

3.6 Prohibition Against Entry

- 3.6.1 A person must not, except as authorized by the Fire Chief, an officer or a member in charge at an incident:
 - a) enter any building or premises threatened by a building incident;
 - b) enter within an area designated by ropes, guards or tape erected by or under the direction of a peace officer or a member across or around any street, lane, alley or building; or
 - c) refuse to move from such designated area when directed to do so by a peace officer or member.

3.7 False Representation

- 3.7.1 A person must not make false representation as to being a member of the Fire Department, or wear or display any Fire Department badge, cap, button, insignia or other paraphernalia for the purpose of such false representation.

3.8 No Obstruction at Assistance Response

- 3.8.1 A person must not impede, hinder or obstruct any member at an assistance response and every person must comply with orders or directions of a member engaged in an assistance response.
- 3.8.2 Any person refusing to comply with an order of a member under Section 3.8.1 may be removed from the scene of such assistance response by a peace officer or any member.

3.9 Fire Department Training

- 3.9.1 Notwithstanding any other provisions of this Bylaw, the Fire Department may burn buildings, structures or other materials for the purpose of training its personnel, educating the public on the dangers of fire or for the purpose of eliminating hazards.

PART FOUR: PERMITS

4.1 Permit Required

- 4.1.1 Every person must obtain a permit issued by the Fire Chief or designate to do any of the following:
- a) installation and removal of gasoline, diesel or oil tanks or dispensing pumps;
 - b) store flammable or combustible liquids in stationary or underground tanks;
 - c) use open flames for display purposes;
 - d) discharge, fire or set off any consumer fireworks or display fireworks as defined under Schedule "A", attached to and forming part of this Bylaw;
 - e) install high rack storage in excess of 12'in height;
 - f) start or permit a fire of any kind whatsoever in the open air unless otherwise permitted within this Bylaw;

4.2 Permit Application

- 4.2.1 Every application for a permit shall be made in the form prescribed by the Fire Chief at the Main Fire Hall Administration Office at 2255 Enterprise Way, Kelowna B.C. during normal business hours between 08:00am –4:00pm Monday to Friday excluding holidays.

4.3 Permit Issuance

- 4.3.1 Council hereby delegates to the Fire Chief, including the Fire Chief's designate, the authority under section 2.4, Division C – Part 2 of the Fire Code to give or deny approval for a permit required under that Division and Part of the Fire Code and to issue permits under this Bylaw.
- 4.3.2 Where an application for a permit is made to the Fire Department on the prescribed form, the Fire Chief or designate may issue the permit if:
- a) the receptacles, vehicles, buildings or other places to be used have been inspected and approved by a Fire Inspector, where the Fire Chief or designate considers such inspection necessary;
 - b) the applicant has paid the applicable fee prescribed in Schedule "B" of this Bylaw.

4.4 Permit Conditions

- 4.4.1 Every permit required by Section 4.1 shall be subject to the following conditions:
- a) a permit may not be transferred to another person;
 - b) the Fire Chief or designate may suspend or revoke a permit if there is a violation of:
 - i) any condition under which the permit was issued, or
 - ii) any requirement of this Bylaw or other applicable legislation; and
 - c) the permit must be posted in a conspicuous place in or on the premises which are subject to the permit, or carried at all times during the permitted use or activity and produced on request by a member.

4.5 Open Air Burning

- 4.5.1 Except in accordance with permission in part 4.5 hereunder, no person shall start or permit a fire of any kind whatsoever in the open air within the City of Kelowna, without first having obtained a written permit to do so from the Fire Chief or the Fire Chief's designate.
- 4.5.2 No permit is required for open air burning:
- a) for the following outdoor appliances; outdoor fire pit, outdoor fireplace and barbeque provided;
 - i) The appliance is CSA/ULC, CGA or equivalent approved;
 - ii) The appliance is fuelled by natural gas, propane, gel or charcoal briquette only;
 - iii) Clearance to combustibles - a minimum of 1 meter clearance must be maintained from the nearest structure, property line, overhead tree or other combustible material for gas fueled appliances;
 - iv) The installation of gas fuelled appliances must be approved by the authority having jurisdiction and installed in accordance to manufacturers specifications;
 - v) Supervision – the operator must keep the unit under constant supervision when in use;
 - vi) Provisions for fire protection – provide an adequate extinguishing agent such as a fire extinguisher or garden hose; and
 - vii) No person shall burn, or allow to be burned, refuse, waste or wood in a barbeque, outdoor fire pit or outdoor fireplace.
 - b) by the Fire Department for the purpose of training members in structural firefighting methods, fire investigation procedures, public education or for the purpose of elimination of fire hazards.

- 4.5.3 In addition to the conditions established in Section 4.4.1, every permit issued for open air burning shall be subject to the following requirements and conditions:
- a) no open air burning may be started or permitted on lots less than one (1) hectare (2.47 acres);
 - b) a minimum of one (1) adult must be in attendance at all times during burning;
 - c) a burning site pile shall be not less than 30.5 metres (100 feet) from
 - i) any combustible structure or combustible material;
 - ii) any standing timber and surrounding brush; or
 - iii) any watercourse;
 - d) A burning pile shall be not less than 30.5 metres (100 feet) from the property lines of all adjacent improved lots in developed areas, except that this distance may be reduced if considered safe by the Fire Chief, and written consent is obtained from the occupiers of all adjacent improved lots;
 - e) Materials to be burned originate only from the property on which the burning permit is issued, and the materials to be burned under the burning permit are restricted to prunings, branches, tree trunks or other dry piled products of land cleaning. Stumps or other material in excess of eight (8) inches in diameter, shall not be burned unless they have been allowed to dry for at least two (2) years or to the satisfaction of the Fire Chief or designate;
 - f) Compostable materials, including grass clippings, leaves, tree needles, garden waste and weeds, shall not be burned;

BL11116 amended sub-paragraph g:

- g) open burning is prohibited when the venting index is less than 65 and the particulate matter PM 2.5 concentration (24 hour rolling average) is $15 \mu\text{g}/\text{m}^3$ or greater. Permit holders are required to ensure these conditions on the day they want to burn;
- h) in all cases:
 - i) rubber tires, oil, petroleum products, tar, asphalt products, batteries, refuse, plastic, construction material, or non-dried materials of any kind shall not be used to start, fuel or feed a fire; and
 - ii) standing crops and grasslands shall not be burned;
- i) if, at any time a permit is suspended or cancelled, the fire must be extinguished, a new permit applied for in writing, and the site and operation re-inspected before recommencing burning;
- j) The operating of a domestic outdoor or backyard incinerator or any structure serving as a domestic incinerator is expressly prohibited;
- k) No person shall start a fire upon the land of another without permission of the owner thereof or his agent;

- l) Subject to any conditions that may be imposed pursuant to this bylaw, permits shall be issued only during the period of October 1st to April 30th each year, provided that where the Fire Chief or designate considers it safe to do so, he may issue a permit for any time during the year under such conditions and restrictions he considers necessary;
- m) In addition to any other remedy or offence imposed by this bylaw, a person who starts a fire without a valid permit pursuant to this Part shall be responsible for the costs of providing the additional personnel and equipment that the Fire Chief or designate may deem necessary to extinguish the fire or to suppress any escape or threatened escape of the fire;
- n) The permit may be revoked or suspended where, in the opinion of the Fire Chief or designate, open air burning under the prevailing weather conditions or other circumstances could reasonably be expected to be hazardous to public safety or to create a nuisance;
- o) The permit holder shall comply with all other conditions, restrictions and requirements imposed by the Fire Chief or designate.

4.5.4 For certainty a permit for open air burning may not be issued for the open burning of wood, trees, stumps, shrubbery and woody debris that results from the land being cleared or partially cleared of vegetation to help prepare the land for a different non-farming use (eg: farmland to residential, forest land to residential, forest land to open areas, or rural lands to subdivisions, etc).

4.5.5 Without limiting section 4.5.1, the Fire Chief or designate may, but is not required to, issue a permit:

- a) to allow burning of wood debris for the purpose of fuel reduction or hazard abatement on private or public property;
- b) for the purpose of burning wood waste removed from any property, of less than 1.0 hectares (2.47 acres) in size damaged by the Mountain Pine Beetle or Western Pine Beetle infestation. Damaged material may be burned on property other than that of its place of origin. Such a permit shall specify the conditions and restrictions the Fire Chief or designate determines are necessary, and shall specify the location at which the waste is to be burned;
- c) to allow pit or trench burning for the purpose of fuel modification or land clearing on the property of origin or on properties other than the property of origin.

4.5.6 Despite section 4.5.3(n), the Fire Chief or designate may issue a permit at any time during the year where it is considered safe to do so and may include such conditions and restrictions as deemed necessary to ensure the burning may be conducted safely.

4.5.7 Despite section 4.5.3 the Fire Chief or designate may include the following conditions or requirements in a permit for open air burning:

- a) an adequate firefighting water supply, firefighting equipment and staff capable of deploying the water supply and firefighting equipment be readily available;
 - b) the burning site must be inspected and approved by the Fire Chief or designate prior to the commencement of operations and is subject to future inspections at any time.
- 4.5.8 The Fire Chief or designate may refuse to issue and may revoke or suspend a permit for open air burning if, in the opinion of the Fire Chief or designate, burning under the prevailing weather conditions or other circumstances could reasonably be expected to be hazardous to public safety or health or to create a nuisance.

PART FIVE: FIRE PROTECTION EQUIPMENT

5.1 Buildings and Occupancies

BL11747 amended Section 5.1.1

5.1.1 Maintenance and Testing

- (a) Every Owner or Occupant of a premise for which a system of fire protection equipment is installed or required under the Building Code or Fire Code must:
 - (i) inspect, test, record, maintain, and repair the system in accordance to the standards and requirements of the Building Code and Fire Code;
 - (ii) where a Fire Protection Service Technician has inspected or tested fire protection equipment pursuant to 9.1 of this bylaw, the fire protection technician shall label the equipment and the owner or occupant shall maintain records in a manner acceptable to the authority having jurisdiction; and
 - (iii) promptly notify the Fire Department:
 - 1. if the system or any part of it has been taken out of service, becomes inoperable, or has otherwise stopped functioning properly; and
 - 2. report to the Fire Department when the service is restored, is fully operable and functioning properly.
- (b) Every Owner or Occupant who is required under the Fire Code to perform or cause to be performed an inspection or test of fire protection equipment must ensure that:
 - (i) the inspection or test is performed by a Fire Protection Service Technician;
 - (ii) a copy of the inspection and/or test form completed by the Fire Protection Service Technician is delivered to the Fire Department; and
 - (iii) all deficiencies are completed by the date provided and delivered to the Fire Department.
- (c) Every Fire Protection Service Technician who carries out inspections, testing, maintenance or repair of fire protection equipment must use an inspection and testing form that is acceptable to the Fire Chief.

- (d) No person shall undertake any work or testing on fire protection equipment or life safety systems that sends an alarm directly to an alarm monitoring company without notifying that company prior to undertaking the work or testing.
 - (e) The Owner or Occupant shall correct any deficiencies to the fire alarm or sprinkler system when the Fire Department attends a premise where a fire alarm or sprinkler system has been activated without proper cause.
- 5.1.2 Every owner of premises must ensure that all fire protection equipment required under the Building Code or Fire Code shall be inspected, tested and maintained in accordance with good engineering practices and the applicable standards, requirements and guidelines of the British Columbia Building Code, the City's Building Bylaw No. 7245, the British Columbia Fire Code, this Bylaw and all other applicable enactments, all as amended or replaced from time to time, and any equivalents or alternative solutions required or accepted under those enactments.
- 5.1.3 A "Notice of Responsibility" form shall be used to document and officially notify building owners/ representative(s) of what is expected of them by the Kelowna Fire Department regarding the restoration of the building's fire protection systems and the owner/ representative's fire watch duties.

The "Notice of Responsibility" form may be used in the following circumstances:

- a) When a building's fire protection system(s) have been compromised.
- b) When a building's fire protection system will not restore to normal working condition.
- c) When a FIREWATCH is required.

5.2 Connections for Building Sprinkler and Standpipe Systems

- 5.2.1 Fire Department pumper connections shall be located and positioned in accordance with the British Columbia Building Code or as approved by the Fire Chief or designate.
- 5.2.2 All Fire Department pumper connections and protective caps shall be kept in place at all times and, where such connections or protective caps are missing, the building owner or occupier shall promptly cause the connections to be examined for accumulated material, back-flushed if such material is present or suspected, or upon the direction of a Fire Inspector, and shall ensure the connections and caps are replaced.
- 5.2.3 Every owner or occupier of a building must ensure that accesses to Fire Department connections for sprinklers or standpipe systems are clearly identified, functional, kept in good repair and maintained free of obstructions at all times.
- 5.2.4 Every owner or occupier of a building shall ensure that signs are displayed identifying:
- a) which Fire Department connection serves a particular sprinkler or standpipe system; and
 - b) the maximum pumping inlet pressure at a Fire Department connection.

5.3 Sprinkler Systems

- 5.3.1 Every owner of premises for which a sprinkler system is required under the British Columbia Building Code must, in accordance with the requirements of the British Columbia Fire Code, British Columbia Building Code, and applicable NFPA (National Fire Protection Association) standards, maintain, repair and upgrade the sprinkler system to accommodate any material change in use or occupancy that results in a greater fire hazard than that which the sprinkler system was intended to accommodate.
- 5.3.2 Where a Fire Inspector considers that a change in the use or occupancy of a building equipped with a sprinkler system may create an increased fire hazard, such that the use or occupancy exceeds the criteria for which the sprinkler system was designed, the Fire Inspector may require the owner or occupier to provide confirmation to the Fire Inspector by a professional engineer that the design limitations of the original sprinkler system installation standard have not been exceeded.
- 5.3.3 The confirmation referred to in Section 5.3.2 shall be in a form acceptable to the Fire Inspector and shall identify, without limitation:
- a) the sprinkler design standard used for comparative analysis;
 - b) the available water supply for sprinkler and hose allowances;
 - c) the current:
 - i) occupancy hazard or commodity classification,
 - ii) method of packaging and encapsulation,
 - iii) method of storage of commodities (e.g. by rack, palletized, solid pile, solid shelving),
 - iv) height of storage, and
 - v) clearance between racks, piles or stacks;
 - d) the required level of manual firefighting equipment (e.g. fire hose and portable fire extinguishers);
 - e) the required and available density of water application;
 - f) the required design area of water application;
 - g) the fire alarm system and central station connection(s); and
 - h) a statement of the current status and level of performance of the sprinkler system, including whether the sprinkler system conforms or does not conform to the identified design standard, and if nonconforming, provide specific instructions for the improvement of the sprinkler system, reduction of the fuel load or other alternative solutions acceptable to the Fire Inspector.
- 5.3.4 Fire sprinkler isolation valves shall be installed so that they are readily accessible. Should the isolation valves be installed higher than 7 feet in height from the floor level, ladders acceptable to the Fire Chief or designate shall be permanently affixed to the wall to provide access.
- 5.3.5 Fire sprinkler control valves and/or fire sprinkler "trees" shall not be installed in a location which is obstructed by adjacent mechanical systems. An unobstructed access of 1m

shall be provided in front of each control valve and a center line radius of 50 cm on either side of the control valve.

5.4 Sprinkler System or Standpipe Operations – Building Demolition

- 5.4.1 When a building equipped with a sprinkler system or a standpipe is being demolished, the system or standpipe shall be maintained in operation, subject to sequential deactivation, until the demolition work is completed.

BL11747 amended Sections 5.5 and sub sections 5.5.1 and 5.5.2:

5.5 Smoke Alarm/Carbon Monoxide Alarms

- 5.5.1 The owner and occupier of every premise with residential occupancy must ensure that operational smoke alarms and carbon monoxide alarms (if required) are maintained, tested, repaired and replaced in accordance with the requirements of the manufacturer.
- 5.5.2 Operational smoke and carbon monoxide alarms must adhere to the standards of the British Columbia Building Code, the British Columbia Fire Code and Amendments thereto. Smoke alarms shall be provided in accordance to the British Columbia Building Code and British Columbia Fire Code and Amendments thereto.

5.6 Fire Hydrants

- 5.6.1 The fire hose connection type, hydrant colour coding and location of all fire hydrants and other Fire Department connections shall be subject to the approval of the Fire Chief or designate.
- 5.6.2 No person except a member shall use or take water from any fire hydrant or standpipe, nor make any attachment thereto, without first obtaining written permission from the authority having jurisdiction.
- 5.6.3 A person must not tamper with the mechanical operation of a fire hydrant.
- 5.6.4 A person must not remove a fire hydrant from its authorized or required location unless authorized to do so by the Fire Chief and in accordance with any direction, conditions, measures or requirements of the Fire Chief.

5.7 Fire Hydrant Maintenance

- 5.7.1 All hydrants shall be maintained and inspected in accordance with the British Columbia Fire Code and the National Fire Protection Association (NFPA) standards.
- 5.7.2 Owner(s) and/or occupier(s) of property where a fire hydrant is located having knowledge of a fire hydrant out of service must notify the fire department as soon as practicable.

- 5.7.3 Owner(s) and/or occupier(s) of property who should have responsibility for the maintenance of such hydrants must tag all out of service hydrants with a tag indicating the hydrant is out of service.

5.8 Fire Hydrants on Private Property

- 5.8.1 Where a fire hydrant is located on private property, the owner or occupier of the premises must:
- a) maintain the space around the fire hydrant with stable ground cover and a clear and unobstructed area for a radius of at least one (1) metre; and
 - b) maintain ground cover and clearance around the hydrant so as to provide a clear view of the fire hydrant from the street when being approached from either direction.
- 5.8.2 If an owner or occupier fails to properly maintain the ground cover and clearance around a fire hydrant as required by Section 5.8.1, the Fire Chief or designate may issue an order to the owner or occupier to provide stable ground cover and clearance around the hydrant within a time period specified in the order.
- 5.8.3 If an owner or occupier fails to comply with an order issued under Section 5.8.2 within the time specified in the order, the City may enter onto the property and carry out such work at the cost of the owner.
- 5.8.4 The owner or occupier of premises on which a private fire hydrant is installed, must ensure that the hydrant is maintained in good working condition at all times and that the hydrant is inspected, serviced and tested in accordance to Part 5.7 of this Bylaw by a Qualified Technician.
- 5.8.5 Without limiting Section 5.8.4, the owner of property on which a private fire hydrant is installed must:
- a) once a year, have the private hydrant flushed and drained and have all the threads of outlets and caps greased with waterproof grease; and
 - b) provide the Fire Chief or designate with a written report of the inspection, servicing and testing performed on the private fire hydrant during the previous twelve months on a form approved by the AHJ.

BL11116 amended sub-paragraph c:

- c) Provide the Fire Chief or designate with a written report of the flow test performed on new or relocated fire hydrants in accordance to NFPA 291 on a form approved by the AHJ. A combination of actual flow and modeling is acceptable
- d) All fire hydrant color coding shall be based on NFPA 291 Standards.

5.9 Premises Under Construction

- 5.9.1 The owner of premises under construction must ensure that an emergency access route is provided that:

- a) is finished in accordance to the requirements set forth in City of Kelowna Subdivision, Development and Servicing Bylaw No. 7900 or other surface materials acceptable to the Fire Chief or designate;
- b) provides adequate access for Fire Department apparatus;
- c) is clearly designated as an emergency access route;
- d) is maintained at all times free of obstruction; and
- e) is secured with a gate, bollard, chain or other structure or assembly approved by the Fire Chief or designate prior to installation.

5.9.2 Every owner of premises under construction must ensure that water supplies for fire protection are installed when construction commences or as determined by the Fire Chief or Engineer.

BL11116 amended sub-section 5.9.3:

5.9.3 Every owner of premises under construction must ensure that the Fire Department is notified of all newly installed or relocated fire hydrants prior to their installation so as to permit testing and approval of all such hydrants.

5.9.4 During construction, servicing or repairs of private fire hydrants and water supply systems, the owner of the premises must ensure that all fire hydrant conditions affecting fire safety, such as fire hydrants temporarily out of service, low water volumes and low water pressures, are immediately made known to the Fire Department.

BL11747 added sub section 5.9.5:

5.9.5 The City of Kelowna Fire Safety Plan for Construction, Demolition and Renovation form must be submitted to the fire department for review prior to the commencement of construction.

5.10 Emergency Access Routes

5.10.1 Every gate, bollard, chain or other structure used to secure a required primary or secondary emergency access route must be approved by the Fire Chief or designate prior to installation.

5.10.2 Every emergency access route must be clearly marked with permanent signage, or with highway marking of lines and words, in a size and colour approved by the Fire Chief or designate, which must read:

FIRE LANE – NO PARKING

5.10.3 Every owner of premises shall ensure that an emergency access route, when secured by a gate, bollard, chain or other structure, has a permanent mounted sign on each side of the obstruction, of a size no less than sixty (60) cm by seventy-five (75) cm, which must read:

**EMERGENCY ACCESS ONLY
NO PARKING OR OTHER OBSTRUCTIONS
Fire and Life Safety Bylaw No. 10760**

- 5.10.4 A person must not:
- a) park a vehicle in an emergency access route; or
 - b) interfere with, hinder or obstruct access to an emergency access route by Fire Department apparatus
- unless authorized to do so by the Fire Chief or designate and in accordance with any direction, conditions, measures or requirements of the Fire Chief or designate.

5.11 Fire Protection Equipment Orders

- 5.11.1 The Fire Chief or designate may order the owner of an existing multiple-family residential, assembly, mercantile, business and personal services, industrial, care or detention occupancy to provide or make alterations to fire protection equipment and systems including heat and smoke detection, fire alarms, fire extinguishers, sprinkler systems, exit signs, emergency lighting, fire separations and means of egress in order to provide adequate life safety to its occupants, provided that the requirements of any such order may not exceed those established by the British Columbia Building Code or British Columbia Fire Code or building regulations established in accordance with the Building Code or Fire Code. An owner may satisfy the requirements of an order through equivalents or alternative solutions accepted by the Fire Chief or designate.

PART SIX: FIRE ALARM SYSTEMS

6.1 Contact Persons

- 6.1.1 The owner or occupier of any premises with a fire alarm system monitored by an outside monitoring agency must ensure that at least one contact person is available 24 hours a day to attend, when notified by the monitoring agency, to enter and secure the premises at a building incident.
- 6.1.2 The owner or occupier of any premises with a fire alarm system not monitored by an outside monitoring agency must maintain and provide to the Fire Department a current list containing the names and telephone numbers of three (3) contact persons, at least one of whom is available 24 hours a day to attend, enter and secure the premises at a building incident, and must notify the Fire Department promptly of any changes in the names or addresses of contact persons.
- 6.1.3 Every contact person designated under Section 6.1.1 or 6.1.2 must have full access to the premises for which they have responsibility and must be able to take control of and secure the premises from the Fire Department on completion of assistance response or other incident.
- 6.1.4 Where a contact person fails to respond to a fire alarm and attend the premises:
- a) the Fire Department may use whatever means are necessary to gain entry to the premises to investigate the fire alarm without payment to the owner or occupier of

any compensation whatsoever for damage caused to the premises by such forced entry while the Fire Department is on scene.

- 6.1.5 Where a contact person fails to respond to a fire alarm and attend the premises within 45 minutes:
- b) the owner or occupier of the premises shall be liable to reimburse the City, at the rates specified in Schedule "B", for the cost to the City of all time during which Fire Department apparatus and members were required to remain on standby at the premises, commencing after the 45 minute time period specified in this Section, until such time as a contact person, owner or occupier arrives to attend at, provide access to, or secure the premises.

6.2 Activation

- 6.2.1 A person must not activate a fire alarm system unless:
- a) there is a fire;
 - b) the person reasonably believes that a fire or other incident is occurring or is imminent; or
 - c) the activation is carried out for testing purposes by authorized person(s).

PART SEVEN: EMERGENCY ACCESS AND EVACUATION

BL11747 deleted section 7.1:

7.1 [deleted]

7.2 Fire Safety Plan

- 7.2.1 The owner or occupier of any building required by the British Columbia Fire Code to have a fire safety plan prepared in cooperation with the Fire Department must:
- a) prepare the fire safety plan in a form, format and diagram template acceptable to the Fire Chief or designate and submit the fire safety plan to the Fire Prevention Branch for review;
 - b) pay the fee prescribed in Schedule "B" of this Bylaw for review of the fire safety plan;
 - c) review the fire safety plan at least annually in accordance with the requirements of the British Columbia Fire Code and if material changes have occurred in relation to the building, use, or occupancy, submit an updated plan to the Fire Prevention Branch for review; and
 - d) locate the fire safety plan on the premises in a location and manner acceptable to the Fire Chief or designate to allow for reference by the Fire Department. The Fire Chief or designate may require the fire safety plan to be stored in a fire safety plan

storage box, of a type and in a location approved by the Fire Chief or designate and accessible by any member using a Fire Department lock box key.

ensure that the analysis required by the British Columbia Building Code in cases of new construction or a change in occupancy relevant to fire and life safety is submitted as part of the Fire Safety Plan.

- 7.2.2 in every case where a fire safety plan for a building is required by the British Columbia Fire Code, the required supervisory staff must consist of a Fire Safety Director and at least one Deputy Fire Safety Director to act when the Fire Safety Director is absent.
- 7.2.3 In every case where a fire safety plan for a building is required by the British Columbia Fire Code, either the Fire Safety Director or the Deputy Fire Safety Director must be present at the premises. .

7.3 Pre Incident Plan

- 7.3.1 The Fire Chief or designate may require, in addition to a Fire Safety Plan, a Pre-Incident Plan submitted in a form acceptable to the Fire Chief or designate;
- 7.3.2 An owner of a building without a Fire Alarm System, other than a single-family dwelling, duplex or triplex, shall submit in a form acceptable to the Fire Chief or designate a current Pre-Incident Plan.
- 7.3.3 The owner of a building or structure who has submitted a Pre-Incident Plan to the Fire Chief or designate shall each year, before the expiry of one (1) year from the last approval of this Pre-Incident Plan, revise it and resubmit it to the Fire Chief or designate if any changes are necessary as a consequence of changes to the building, utilities or Fire and Life Safety Equipment.

7.4 Access and Keys

- 7.4.1 Every owner or occupier of
 - a) premises having a fire alarm system or an automatic fire sprinkler system; and
 - b) all apartment buildings, whether rental or strata owned;
 - c) all buildings for which the British Columbia Fire Code requires a Fire Safety Plan;
 - d) strata titled developments

must ensure that access is readily available and any keys required to obtain access to the following areas are readily accessible, and in an approved Fire Department lock box in a location acceptable to the Fire Chief or designate and such keys are clearly marked:

- e) all common floor areas, service rooms and roof areas;
- f) all doors that are locked from the exit stairs to floor areas;
- g) as required to recall elevators and to permit independent operation of each elevator;

- h) all fire alarm control and annunciator panels and fire fighter telephone boxes; and
- i) all gates on access routes;
- j) all firefighting equipment storage rooms where equipped;
- k) as may be required by the Fire Chief or designate for the purpose of responding to the fire alarm system or automatic fire sprinkler system.

7.4.2 The information on the proposed location of the lock box or key tube shall be provided to the City at the time of application for a building permit.

7.5 Obstructions

7.5.1 A person must not install or maintain any wire, barbed wire, razor ribbon, fence, cable, aerial, antenna or other obstruction on any building roof, parapet wall or openings in an exterior wall required by the British Columbia Building Code or the British Columbia Fire Code for Fire Department access, so as to obstruct access or egress, cause a hazardous condition, or interfere with Fire Department operations in the event of fire or other incident.

7.6 Storage on Roofs

7.6.1 A person must not cause to be placed, stored, or maintained upon any roof or balcony any hazardous materials or any material or object which may interfere with access or egress or Fire Department operations in case of fire or other emergency, and shall remove all such objects or materials upon the order of the Fire Chief or designate.

7.7 Passageways on Roofs

7.7.1 A person must not obstruct access passageways on a roof surface.

7.8 Evacuation of Buildings

7.8.1 The Fire Chief or officer in charge at a building or other incident may order the evacuation of a building, structure or area which, in the opinion of the Fire Chief or officer in charge, is endangered by fire or other risk to life, and no person other than the Fire Chief, a member or other person authorized by the Fire Chief or the officer in charge at an incident, shall remain in or enter that building, structure or area after such an order is made.

7.8.2 The Fire Chief or officer in charge at an incident may post a notice on any building or structure warning that occupancy of the building may be hazardous or that no occupancy of the building is permitted.

7.9 Street Addresses

- 7.9.1 An owner of real property in the City shall ensure that street addresses are displayed in accordance with the City of Kelowna Building Numbering Bylaw No. 7071, as amended or replaced from time to time.

PART EIGHT: REGULATION OF FIRE HAZARDS

8.1 Removal of Fire Hazards

- 8.1.1 A person must not cause or permit combustible materials, growth, waste or rubbish of any kind to accumulate in or around premises in such a manner as to endanger property or to constitute a fire hazard.
- 8.1.2 A Fire Inspector may issue an order to any person to remove or otherwise deal with an accumulation of materials or growth referred to in Section 8.1.1, and upon receipt of such order, that person shall take whatever action is specified in the Fire Inspector's order within the time period specified therein, failing which the Fire Department may take whatever action is necessary to remove the fire hazard at the expense of the person to whom the order is directed or the owner or occupier of the premises.
- 8.1.3 Lids on all containers and doors to rooms or spaces provided for the storage of combustible materials or flammable materials shall be kept closed at all times except when such materials are being placed in the containers, rooms or spaces.
- 8.1.4 No person shall make, construct, maintain or keep an ash-pit or depository for ashes within the City unless the same shall be constructed of brick or other fireproof or non-combustible material.
- 8.1.5 No person shall deposit ashes or other materials taken from any stove, furnace, barbecue or fireplace (or taken from any place in or on which any fire shall have been made) within one (1) meter of any combustible material. All ashes shall be deposited in a non-combustible receptacle.

8.2 Refuse and Recycling Containers

- 8.2.1 Subject to Subsections 8.2.2 and 8.3.3, an owner or occupier of premises with multi-family residential, commercial, professional service, institutional, industrial or assembly occupancies must ensure that all refuse and recycling containers used be non-combustible including lids, unless approved by the Fire Chief or designate and are stored not less than three (3) meters from any:
- a) combustible materials including, without limitation, construction materials; or
 - b) unprotected building openings or overhangs.
- 8.2.2 Where the Fire Chief or designate has specifically approved the location of the refuse or recycling container as requiring less than 3 meters clearance from any combustible

materials, construction materials, unprotected building opening or overhangs, the clearance required by paragraph 8.2.1 does not apply,

- 8.2.3 Where the clearances required by paragraph 8.2.1 are not feasible, a non-combustible container with self-closing lids and no hold-open devices may be stored in a location approved by the Fire Chief or designate and not less than one (1) meter from combustible materials, standing vegetation or unprotected building openings.

8.3 Flammable or Combustible Liquids

- 8.3.1 A person must ensure that all flammable or combustible liquids are stored in accordance with the British Columbia Fire Code.
- 8.3.2 A person must not use any flammable or combustible liquid which reasonably could be expected to endanger life or property for the purposes of cleaning within any building.

8.4 Order to Remove Flammable or Combustible Material

- 8.4.1 A Fire Inspector may issue an order to an owner or occupier of premises to remove, dispose of or otherwise deal with flammable or combustible material, including but not limited to combustible or flammable liquid, combustible metal, and flammable fibre or gas where such material endangers life or property or is being kept or stored in contrary to the British Columbia Fire Code or this Bylaw. Upon receiving an order of the Fire Chief or designate, a person must remove, dispose of or otherwise deal with the flammable or combustible material immediately or within a time period established in the order, failing which the Fire Department may take whatever action is necessary to remove the flammable or combustible material at the expense of the person to whom the order is directed or the owner or occupier of the premises.

8.5 Vehicle Fuel Tank

- 8.5.1 Without limiting any other provision in this Section, an owner of a vehicle must ensure that fuel within the vehicle's fuel tank is removed to a safe area prior to any adjustment to, or relocation of, the fuel tank from its original position on the vehicle.

8.6 Explosion or Potential Explosion, Emission or Spill of Dangerous Goods

- 8.6.1 Every owner or occupier of premises or a motor vehicle, vessel or railway rolling stock, must report immediately to the Fire Chief or designate when an explosion or a discharge, emission, escape or spill of dangerous goods occurs or where the potential exists for an explosion or a discharge, emission, escape or spill of dangerous goods.

8.7 Vacant Premises

- 8.7.1 For the purpose of this Section, vacant premises includes a lot, building or other structure in respect of which a water or electricity service has been intentionally

discontinued, other than for temporary maintenance, repair or upgrading, so that the condition of the premises is not suitable for human habitation or other occupancy that is normally permitted.

- 8.7.2 The owner of vacant premises must promptly act to ensure that, at all times:
- a) the premises are free from litter and debris or accumulations of combustible or flammable materials except where storage of combustible or flammable materials is in strict accordance with the British Columbia Fire Code and this Bylaw; and
 - b) all openings in the premises are securely closed and fastened in a manner acceptable to the Fire Chief or designate so as to prevent fires and the entry of unauthorized persons.
 - c) Sprinkler and fire alarm systems remain operational as per requirements of the British Columbia Fire Code.
- 8.7.3 Where an owner fails to securely close a vacant building as required by Subsection 8.7.2 (b), the Fire Chief or designate may, by notice in writing, order the owner to secure the building or other part of the vacant premises against unauthorized entry in a manner set out in the notice.
- 8.7.4 If an owner of vacant premises fails to bring the premises into compliance with this Bylaw within twenty-four (24) hours of receiving a notice under Subsection 8.7.3, or if the Fire Chief or designate is unable to contact the owner within twenty-four (24) hours of finding vacant premises in an unsecured state, the Fire Chief or designate may cause the premises to be secured by City employees or agents, who may board up or otherwise secure doors, windows and other points of entry into the premises in order to prevent fires and unauthorized entry, at the cost and expense of the owner.

8.8 Damaged Buildings

- 8.8.1 The owner of a building, property or other structure that has been damaged due to fire, explosion, natural or manmade disaster or similar event must immediately act to ensure that the building, property or other structure is guarded or that all openings and points of entry into the building or property are kept securely closed and fastened in a manner acceptable to the Fire Chief or designate so as to prevent the entry of unauthorized persons. If the owner fails to provide the necessary security within 2 hours of being notified by the Fire Department or following an incident, the Fire Chief or designate may cause the work to be carried out at the cost and expense of the owner.

8.9 Exhibits, Fairs, Trade Shows or Vehicle Displays

- 8.9.1 Every owner or occupier of premises containing or used for an exhibit, fair display, trade show display or vehicle display must comply with all applicable provisions of the Fire Code and, without limiting the generality of the foregoing, must ensure that:
- a) no exhibit or display is placed in a lobby or foyer or so as to obstruct the required width of an exit way;

- b) aisles of a minimum of three (3) meters (10 feet) are maintained at all times between displays and the travelled distance to an exit door by an aisle is in accordance with the British Columbia Building Code;
- c) a display of automobiles, motorcycles, scooters, or other vehicles in a public building, other than a building constructed and classified for such purpose by the British Columbia Building Code, meets the following requirements:
 - i) vehicle batteries must be disconnected and the battery cables placed or tied in a position to prevent accidental battery contact;
 - ii) fuel tanks must be equipped with a key-locking cap or other similar device; and
 - iii) the quantity of fuel in the fuel tanks must not exceed the lesser of one quarter (1/4) of the tank capacity or nineteen (19) litres (5 gallons).

8.10 Commercial Cooking Equipment

- 8.10.1 Every owner or occupier of a commercial cooking facility must ensure that the cooking equipment is inspected and maintained in accordance with the requirements of the British Columbia Fire Code and, without limiting the generality of the foregoing, must ensure that:
- a) all filters, grease removal devices, ducts and other appurtenances of commercial cooking equipment are inspected at least weekly to prevent grease and other combustible residues;
 - b) all commercial cooking equipment exhaust systems are serviced and cleaned in accordance to the fire code by a Qualified Technician; and
 - c) the instructions for manually operating the fire protection systems are posted conspicuously in the kitchen as part of a fire safety plan.

8.11 Dangerous Goods

- 8.11.1 If the Fire Chief or designate is satisfied on reasonable and probable grounds that a discharge, emission or escape of dangerous goods has occurred and that immediate action is necessary in order to carry out any reasonable emergency measures, he or she may take such action or cause such action to be taken by any person the Fire Chief or designate considers is qualified to do so.

8.12 Combustible Dust and Removal

- 8.12.1 A person must not cause, permit or allow the accumulation of any combustible dust or particulate on floors, walls, ledges, or other exposed building structural members, piping, conduit, electrical equipment, surface or on the roof of any building on which dust may settle, where the accumulation is sufficient to create a fire hazard or risk of explosion.
- 8.12.2 A person must not use compressed air or other means to blow combustible dust from ledges, walls and other areas unless all machinery in the area has been shut down and all sources of ignition removed.

- 8.12.3 The removal and collection of small quantities of loose combustible dust may be accomplished with an approved industrial vacuum cleaning system.
- 8.12.4 A person must ensure that metallic dust must be stored in tightly covered metal containers in a cool, dry place.

8.13 Electrical Extension Cords

- 8.13.1 A person must not create a fire hazard by using an extension cord as a substitute for permanent wiring.

PART NINE: SAFETY TO LIFE

9.1 Exits and Means of Egress

- 9.1.1 Every owner or occupier of premises must at all times ensure that all exits and means of egress required under the British Columbia Building Code, *Fire Services Act*, British Columbia Fire Code or the City's *Building Bylaw No. 7245*, all as amended from time to time, are properly maintained and remain unobstructed at all times.
- 9.1.2 An owner or occupier must not install or permit or allow the use of a smoke emitting security alarm system or other such system which upon activation may obstruct an exit or means of egress or potentially result in confusion to occupiers or to fire fighters.
- 9.1.3 An owner or occupier must ensure that every required exit door located in a floor area shall be served by an aisle that:
 - a) is kept clear at all times of any materials or products;
 - b) has a clear width of not less than 1100 mm (44 inches), or as required by the British Columbia Building Code;
 - c) is provided with adequate emergency lighting coverage;
- 9.1.4 No locking devices other than locking devices permitted by the British Columbia Building Code shall be installed on any required exit doors.
- 9.1.5 An owner of a building which is equipped with a passenger elevator must ensure that a sign is displayed directly above the elevator call button on each floor reading:

**IN CASE OF FIRE, USE EXIT STAIRWAY
DO NOT USE ELEVATOR**

- 9.1.6 The dimensions of each sign required under Subsection 9.1.5 must be at least 75 mm by 130 mm in size and printed on permanent red and white, or white on red plastic laminate or equivalent material.
- 9.1.7 The owner of every building having three or more storeys must conspicuously display in all stairwells at each floor level, numbers or signs identifying each floor level. If numbers are used, the minimum height of those numbers shall be 150 mm. If wording is used, the

dimensions and type must not be less than 50 mm by 150 mm on permanent red on white, or white on red plastic laminate or equivalent material.

BL11747 amended sub section 9.1.8:

- 9.1.8 A person must not hinder or obstruct the self-closing operation of doors in fire separations or doors separating stair enclosures from the remainder of the building. Fire separations shall be maintained as per the BC Fire Code.
- 9.1.9 A person must not stand, loiter, sit in or otherwise obstruct the aisles, passages or stairways of any church, theatre, hall, skating rink or other place of amusement or public resort or assembly.
- 9.1.10 An owner or occupier of premises must ensure that exit signs are maintained in a clean and legible condition and must be clearly illuminated from behind where such illumination is required by the British Columbia Building Code.
- 9.1.11 An owner or occupier of premises must ensure that self-contained emergency lighting unit equipment and emergency lights are inspected and tested at intervals not greater than one month to ensure that emergency lights will function upon failure of the primary power supply, and at intervals not greater than 12 months to ensure the unit will provide emergency lighting for a duration equal to the design criterion.

9.2 Storage in Buildings, Service Rooms or Areas

- 9.2.1 Every owner or occupier of a building must ensure that no materials or items are stored in storage locker room aisles, elevator rooms, boiler rooms, furnace rooms, rooms that accommodate air-conditioning or heating appliances, pumps, compressors or other building services, except that, the Fire Chief or designate may permit limited or restricted storage of specific materials or items as part of a fire safety plan.
- 9.2.2 Every electrical room and electrical vault shall conform to the *Electrical Safety Regulation* of the *Safety Standards Act* of British Columbia, as amended.

9.3 Tampering with Fire Protection Equipment

- 9.3.1 A person must not tamper with, alter or damage any fire protection equipment or use or operate any fire extinguisher or other fire protection equipment except for the purpose of testing or for the purpose for which the extinguisher or equipment is intended.

PART TEN: INSPECTIONS OF PREMISES

10.1 Authority for Inspection

- 10.1.1 The Fire Chief and any member designated in writing by the Fire Chief are hereby authorized to enter at all reasonable times upon any premises to inspect and determine whether or not:

- a) the premises are in such a state of disrepair that a fire starting therein might spread so rapidly as to endanger life or other premises or property;
- b) the premises are so used or occupied that fire would endanger life or property;
- c) combustible or explosive materials are being kept on the premises or other flammable conditions exist in or about the premises so as to endanger life or property;
- d) in the opinion of the Fire Chief or a member, a fire hazard exists in or about the premises; or
- e) the requirements of this Bylaw and the British Columbia Fire Code are being complied with.

10.2 Entry for Inspection

- 10.2.1 A person must not obstruct, hinder or prevent the Fire Chief or any member from entering into or upon any premises for the purpose of inspecting the premises in the ordinary course of their duties.

PART ELEVEN: INSPECTION OF BUILDINGS

11.1 Frequency of Inspections delegated

- 11.1.1 The authority and duty of the Council under the Fire Services Act to establish, revise and implement a regular system of inspections of hotels, public buildings, churches, theatres, halls, or other buildings used as a place of public resort in the City is delegated to the Fire Chief;
 - a) and for this purpose, the Fire Chief is delegated the authority to establish a system of regular inspections which will provide different frequencies of inspection depending on a building's British Columbia Building Code building classification, its use, age and fire risk assessment;
 - b) amend the frequency of inspection schedules from time to time;
 - c) provide one copy of the current frequency of inspection schedule to each person who requests one.
- 11.1.2 The Fire Chief must report to Council as and when requested by Council on the inspection system created and implemented under section 11.1.1 of this Bylaw.

PART TWELVE: INSPECTION AND TESTING OF FIRE PROTECTION EQUIPMENT

12.1 Maintenance and Testing of Emergency Equipment

- 12.1.1 Every person who is required under a provision of the Fire Code to perform or cause to be performed, annually or less frequently than annually, an inspection or test of fire protection equipment for a hotel or public building, or to perform or cause to be performed an inspection or test of fire suppression systems in commercial kitchen exhaust systems, shall ensure that:
- a) the inspection or test is performed by a qualified technician and in accordance with the Fire Code; and
 - b) the inspection or test is recorded, or the fire protection equipment is tagged or labeled in accordance with the Fire Code, this Bylaw, as amended from time to time, and in a manner acceptable to the authority having jurisdiction.
- 12.1.2 Every person who owns, controls or otherwise has charge of any fixed fire protection equipment must notify the Fire Department at any time such system or systems are inoperable or taken out of service, and must notify the Fire Department again when service is restored.
- 12.1.3 Every qualified technician who carries out inspections and maintenance of fire protection equipment must use the Inspection and Testing form approved under ULC, NFPA, CSA and CGA as amended or replaced from time to time, and must forward a copy of the completed form upon completion of the inspection or maintenance to the owner or occupier of the building. Upon request by the Fire Chief or designate, the owner or occupier must provide a copy of the completed form to the Fire Department.
- 12.1.4 A person must not undertake any work or testing on fire protection equipment or life safety systems that sends an alarm directly to an alarm monitoring company without prior notice to that alarm monitoring company.
- 12.1.5 The owner or occupier of every building that is equipped with a fire alarm system that is not continuously monitored by an approved monitoring agency must ensure that at each manual fire alarm pull station, a permanent sign is mounted reading:

LOCAL ALARM ONLY — IN CASE OF FIRE, TELEPHONE 9-1-1

The dimensions of each such sign must be not less than 50 mm by 100 mm in size and be printed on permanent red on white, or white on red plastic laminate or equivalent material.

PART THIRTEEN: CONTROL OF FIRE ACCESS

13.1 Fire Roads, Fire Trails & Firebreaks

- 13.1.1 The Fire Chief or designate may erect or install gates, cables or other devices and may securely lock the same to prevent the use by unauthorized persons of any emergency access route, truck trail, driveway, path or highway, whether or not a public highway, over which the Fire Department has the lawful right to pass, whether by easement, license, City ownership or possession or otherwise, for purposes relating to fire protection or control and where the exercise of the rights under this section would not be incompatible with the tenure or permission granted.

PART FOURTEEN: HIGH BUILDINGS

BL11747 amended section 14.1 and sub section 14.1.1:

14.1 High Buildings as per the British Columbia Building Code

14.1.1 It is recommended that the owner of any high buildings as per the British Columbia Building Code, for which an application for a building permit is submitted to the City after August 1, 2008, provide the following:

- a) [Delete]
- b) [Delete]
- c) there is a room or closet on every sixth floor above grade or above the main entrance lobby, that is dedicated and clearly identified as a "firefighting equipment" storage area, and is at least 18 inches deep by 3 feet wide and is accessible by a standard height locked person door; and
- d) each firefighting equipment storage area is equipped with the following:
 - i) eight (8) SCOTT self-contained breathing apparatus cylinders (4500psi, 45 minute carbon fibre, part number SCT804721-01);
 - ii) a rack suitable and approved by the Fire Chief of designate for storing the SCOTT cylinders noted in paragraph (i) above;
 - iii) four (4) lengths of 2 ½ inch X 50 feet Ultra-Lite Supreme High-Rise firefighting hose with BCT, meeting the requirements of NFPA 1961 latest edition and ULC. Orange in color;
 - twelve (12) 2 ½ inch high rise hose straps: dimensions – 2 inches wide webbing, 24 inches long, 2 inch welded steel loop, 4 inch red indicator pull tab;
 - one (1) J140F TFT 65 X 38 shutoff w/ 1 3/8 waterway 2.5 inch threads BAT/BCT;
 - one (1) FSS10 –IF TFT smooth bore tip w 1 1/8 (28mm) tip/ 1.5 inch NPSH threads;
 - two (2) 65mm female swivel BAT X 60 degree elbow with male BAT 65mm discharge, firelite anodized aluminum;
 - one (1) 2 ½ inch M/BAT X 1 ½ inch F/NPSH firelite adapter;
 - one (1) 2 ½ inch inline pressure guage BAT/BCT threads – Akron Style 35;
 - two (2) hose spanners; and
 - one (1) high rise appliance bag (to carry adapters and appliances)

- e) [Delete]
- f) [Delete]

14.1.2 If any of the information required to be supplied pursuant to section 14.1 of this Bylaw should change, the owner shall notify the Fire Chief or designate immediately of such change.

PART FIFTEEN: COMMUNICATIONS

15.1 Emergency Services Communications Equipment

BL11747 amended sub section 15.1.1:

- 15.1.1 The design and construction of new buildings shall provide reliable two-way radio communications for emergency responders inside the buildings to command vehicles in accordance with Schedule C. Prior to **occupancy**, the installed system will be subject to a field test and approval by the Kelowna Fire Department to ensure that it meets the Kelowna Fire Department's operational needs.

PART SEVENTEEN: FIREWORKS

17.1 Regulations

- 17.1.1 No person shall sell or offer for sale any firecrackers or fireworks within the City.
- 17.1.2 No person shall discharge, fire or set off any firecrackers or Fireworks within the City, unless authorized under this bylaw.
- 17.1.3 No person shall store Display Fireworks within the City unless authorized under this bylaw.
- 17.1.4 No person shall use, set off or allow to be used or set off any fireworks in such a place or in such a manner as might create danger or constitute a nuisance to any person or property, or to do or cause or allow any unsafe act or omission at the time and place for the setting off of any fireworks.
- 17.1.5 Except as provided in Section 17.2 of this bylaw, no person shall discharge, fire or set off any fireworks, unless the person has obtained a valid Permit from the City.

17.2 Permit for Fireworks

- 17.2.1 The Fire Chief or designate is hereby authorized to issue a Permit to any person or organization for the purpose of the observance or celebration of any special event or festival by the use of fireworks, subject to the terms and conditions outlined in this bylaw.
- 17.2.2 Every application for a permit pursuant to this Section shall be made by the person setting off the fireworks, shall be in writing, addressed to the Fire Chief.
- 17.2.3 Every applicant for a Fireworks Permit pursuant to this Section shall hold a current and valid Fireworks Supervisors and/or Pyrotechnics Certification Card as issued by Natural Resources Canada.
- 17.2.4 The applicant shall, without limiting its obligations or liabilities under the Fireworks Permit, procure and maintain, at its own expense and cost, the insurance policy listed in the Fireworks Permit. The insurance policy shall be maintained continuously from the

date of commencement of the Fireworks Permit until the date of the expiry of the Fireworks Permit or such further period as may be specified in the Permit.

- 17.2.5 An applicant shall submit a written agreement from the owner of the property on which the Fireworks is to take place and a written agreement from any Sponsoring Organization of the Fireworks. In the case of Fireworks that are to take place on City owned property, a Permit under the City's Outdoor Events Bylaw No. 8358 may be required or alternatively a letter of authorization from the City's Director of Leisure Services is required.
- 17.2.6 Every Permit authorized pursuant to this Section shall be in the form prescribed in the Fireworks Permit, and shall be issued by the Fire Chief or designate. Prior to the issuance of a Fireworks Permit, the applicant shall provide evidence of the insurance required under Section 17.2.4 of this Bylaw
- 17.2.7 Fireworks set off from a barge, vessel or floating platform on inland waters for the observance or celebration of any special event or festival in the City shall abide by this Bylaw.
- 17.2.8 Fireworks shall end prior to 11:00pm and may not commence prior to 8:00am on any day and shall be started and completed within the time period specified on the Permit, except as otherwise authorized by the Fire Chief or designate.
- 17.2.9 Fireworks may be inspected by the Kelowna Fire Department to ensure all safety aspects have been adhered to as set out in the Act and in accordance with this Bylaw.
- 17.2.1 0 The Fire Chief or designate is hereby authorized to revoke a Permit issued under this Bylaw at any time.
- 17.2.1 1 The Fireworks shall be set off by the person to whom the Permit is issued and shall be conducted in a manner that is consistent with all safety procedures required under the Act.
- 17.2.1 2 A Permit issued under this Bylaw is non-transferable.
- 17.2.1 3 All Fireworks and all debris from the Fireworks shall be removed and safely disposed of by the Permit Holder as soon as practical after the Fireworks is completed and on or before the expiry of the Permit.

PART EIGHTEEN: ENFORCEMENT

18.1 Fire Orders

- 18.1.1 In addition to authority provided for orders by the Fire Chief or designate elsewhere in this Bylaw, if a person contravenes or fails to comply fully with any provision of this Bylaw, or if conditions exist in or upon any premises which in the opinion of the Fire Chief or designate, constitute a fire hazard or other danger to life or property, the Fire Chief or designate may, in writing, issue such order to that person as necessary to ensure full and proper compliance with this Bylaw or to remove or otherwise deal with the fire hazard or other danger.

- 18.1.2 An order made by the Fire Chief or designate under this Bylaw may be served:
- a) by delivering it or causing it to be delivered to the person to whom it is directed;
 - b) by sending the order by mail to the last known address of the property owner; or
 - c) if the person to whom it is directed cannot be found, is not known or refuses to accept service of the order, by posting a copy of the order in a conspicuous place on the premises that is subject to the order.
- 18.1.3 If an order has been posted in accordance with 18.1.2, a person must not remove, deface or destroy the order.
- 18.1.4 A person against whom an order has been made by a designate of the Fire Chief under this Bylaw may, before the expiration of ten days from the date of the order, appeal in writing to the Fire Chief, who may uphold the order, vary or set aside the order of a Fire Inspector, or issue an alternative order.
- 18.1.5 Every order issued by the Fire Chief or a Fire Inspector shall state a date by which the order shall be carried out, which date shall, in the discretion of the issuer, have regard to the degree of urgency involved in correcting or removing conditions which may tend to increase the hazard of fire or danger to life and property.
- 18.1.6 Where a person is in default of an order made pursuant to this Bylaw, the City by its employees, servants or agents may enter the premises and effect such work as is required in the notice at the cost and expense of the owner or occupier of the premises, payable upon receipt of invoice from the City.

18.2 Penalties

- 18.2.1 Any person guilty of an infraction of this Bylaw shall be liable for a penalty under the City of Kelowna Bylaw Notice of Enforcement Bylaw No. 10475 as amended or replaced from time to time.
- 18.2.2 A person who:
- a) contravenes, violates or fails to comply with any provision of this Bylaw or of any permit or order issued under this Bylaw;
 - b) suffers or allows any act or thing to be done in contravention or violation of this Bylaw or any permit or order issued under this Bylaw; or
 - c) fails or neglects to do anything required to be done under this Bylaw or any permit or order issued under this Bylaw;

commits an offence and is liable on summary conviction to a penalty not exceeding Ten Thousand Dollars (\$10,000.00) and the cost of prosecution.

Each day a violation of the provisions of this bylaw exists or is permitted to exist shall constitute a separate offence.

PART 19: PETROLEUM PRODUCTS STORAGE TANKS

19.1 Above Ground & Below Ground Petroleum Products Storage Tanks

- 19.1.1 In addition to the provisions of this bylaw, owners and operators of petroleum products storage tank systems shall comply with all other applicable statutes and regulations, including, without limitation, *the Waste Management Act, British Columbia Fire Code, Canada Shipping Act, National Fire Code, and British Columbia Coastal Marina Facility and Operating Standards*. In the event of any conflict between this bylaw and any other statute or regulation the more strict shall apply.

19.2 Duty of Care

- 19.2.1 This bylaw does not create a duty of care in respect of the City, its Mayor, Council, officers, employees or other persons acting on behalf of the City concerning any matter in this bylaw or enforcement or failure to enforce the provisions of this bylaw. It shall be the responsibility of the Owner or Operator of petroleum products storage tanks or storage tank systems to ensure compliance with this bylaw and all other statutes and regulations. Neither a failure to administer or enforce or incomplete or inadequate administration or enforcement of this bylaw or any error, omission or other neglect in respect to this bylaw shall give rise to a cause of action in favour of any person including an Owner or Operator.

19.3 Site Designation

- 19.3.1 All existing or proposed site of underground or above ground petroleum products storage tank systems are hereby designated and classified as Class A sites within the meaning of the Codes.

19.4 Design, Construction and Installation of Storage Tank Systems

- 19.4.1 The design, construction and installation of above ground and underground storage tank systems containing petroleum products and allied petroleum products shall be in accordance with the CCME Above Ground Storage Tank Code, the Underground Storage Tank Code and the Fire Code.

19.5 Approval to Construct Storage Tank systems

- 19.5.1 No person shall construct or cause to be constructed, installed, operated or altered an above ground storage tank or underground storage tank system without first obtaining an Installation Permit from the Fire Department.

19.6 Site Requirements for Storage Tanks

- 19.6.1 Above ground storage tanks and underground storage tanks shall not be located above underground utilities of any kind including, without limitation, water, storm or sewer lines, gas lines, telephone or television cable.

19.7 U.L.C. Label

- 19.7.1 All storage tanks shall be certified prior to installation.

19.8 Leak Detection

- 19.8.1 All above ground storage tanks and underground storage tanks including piping shall be tested for leaks and shall contain such leak detection devices and methods required by the CCME Above Ground Storage Tank Code and the Underground Storage Tank Code.

19.9 Record Keeping

- 19.9.1 a. Every Owner or Operator of an above ground storage tank and/or underground storage tank system shall maintain the following records:
 - i. Leak detection test results including line leak testing and precision leak tests.
 - ii. Inventory control records in accordance with the Fire Code.
- b. Every Owner or Operator of an above ground storage tank and/or underground storage tank system shall maintain such further records as required by the CCME Above Ground Storage Tank Code and the Underground Storage Tank Code.

19.10 Operation and Maintenance

- 19.10.1 Every Owner or Operator of an above ground storage tank or underground storage tank system shall operate and maintain the storage tank system in accordance with the CCME Above Ground Storage Tank Code and the Underground Storage Tank Code.

19.11 Alteration

- 19.11.1 The alteration of an above ground storage tank or underground storage tank system must be in accordance with the CCME Above Ground Storage Tank Code and the Underground Storage Tank Code.

19.12 Handling

- 19.12.1 The handling of petroleum products or allied petroleum products involving an above ground storage tank system or underground storage tank system must be in accordance with the Fire Code and the CCME Above Ground Storage Tank Code and the Underground Storage Tank Code.

19.13 Removal

- 19.13.1 All abandoned storage tank systems shall be removed. Prior to removal the Owner or Operator shall provide all available site investigation information to the City and shall apply for a storage tank removal Permit from the Fire Department. During tank removal, the Owner or Operator shall arrange for a Fire Inspector to be present. Removal of an above ground storage tank or underground storage tank must be performed in accordance with the Fire Code and the CCME Above Ground Storage Tank Code and the Underground Storage Tank Code.

PART TWENTY: MARINE FUELLING FACILITIES

20.1 Application

- 20.1.1 All service stations operating as a marine fueling facility must comply with this bylaw.

20.2 Approval to Construct Marine Fueling Facility

- 20.2.1 No person shall install or operate a marine fuel service station facility without first obtaining an Installation Permit.

20.3 Site Regulations

- 20.3.1 All Marine Fueling Facilities shall be located in accordance with the Fire Code and the *British Columbia Coastal Marina Facility and Operating Standards* for environmentally sensitive sites.

20.4 U.L.C. Label

- 20.4.1 All Marine Fueling Facilities shall be certified prior to installation.

20.5 Compliance

- 20.5.1 All marine service stations using underground or above ground storage tanks must comply with Part 20 of this Bylaw.

20.6 Fuel Dispensing and Remote Pumping Stations

- 20.6.1 All dispensing pumps located over a body of water must be installed on piers, wharves, or floating docks, or be located on shore, or on piers made of solid fill. Installation must be in conformance with the Fire Code and the *British Columbia Coastal Marina Facility and Operating Standards* for environmentally sensitive sites.

20.7 Standards

- 20.7.1 All underground and above ground storage tanks must be designed, constructed, installed, operated, maintained or altered in accordance with the Codes.

20.8 Location

- 20.8.1 Where storage tanks are located at an elevation that produces a gravity head on the dispensing device the tank outlet must be equipped and installed so that liquid cannot flow by gravity from the tank in the event of piping or hose failure.

20.9 Leak Detection

- 20.9.1 All underground storage tanks including piping shall be tested for leaks and shall contain such leak detection devices and methods required by the CCME Underground Storage Tank Code.

20.10 Spill Containment Kit

- 20.10.1 A portable spill containment kit must be kept at the dispensing area at all times. The spill containment kit must include absorbent booms and pads in sufficient quantity to meet the needs of the facility so as to address minor spillage.

20.11 Containment

- 20.11.1 The product transfer area around the land based storage tanks must be paved with concrete and graded, curbed or diked to contain all spills that occur during product transfer. The spills collected must be contained, treated and disposed of in accordance with the City Sanitary Sewer/Storm Drainage Regulation Bylaw No. 6618-90 and the *British Columbia Coastal Marina Facility and Operating Standards* where applicable.

20.12 Monitoring

- 20.12.1 a. Leak Detection. All storage tanks including piping must be tested for leaks at the time of installation. A leak test shall be performed at least annually. A leak test must be performed when inventory records indicate losses greater than 0.5 percent of monthly tank throughput or when five consecutive loss/gain computations show a loss.
- b. Record Keeping. Every owner or operator of a marina fueling system shall maintain the following records
- i. Leak detection test results including line testing and all leak tests;
 - ii. inventory control records in accordance with the Fire Code;
 - iii. such further records as required by the Codes.

20.13 Operation and Staff Training

- 20.13.1 All staff must be fully trained in the operation of the facility and training must include spill prevention, containment and control. Only properly trained personnel shall dispense fuel. Self-serve operations are prohibited.

PART TWENTY ONE: AVIATION FUELLING FACILITIES

21.1

- 21.1.1 No owner or operator of an aviation fueling facility located at the Kelowna International Airport shall operate a mobile fuel truck without having an approved storage tank system located at the Airport.

PART TWENTY TWO: FEES AND COST RECOVERY

22.1 Permit and Service Fees

BL11747 amended sub section 22.1.1.1:

- 22.1.1 A person must pay a fee as prescribed in Schedule "B" of this Bylaw for the following;
- a) a permit required under Part Four;
 - b) review of a new fire safety plan;
 - c) review of an existing or amended fire safety plan;
 - d) review of a fire safety plan for demolition and construction;
 - e) special request services;
 - f) fire records search/comfort letter;
 - g) fire reports;
 - h) fire inspection reports;
 - i) copies of audio recordings;
 - j) no PR to attend incident within designated time
 - k) the fire department response to a False Alarm where it is the second or greater number of False Alarms originating from one Fire Alarm system in any twelve (12) month period and the fee is payable by the owner or occupier of the property in which the Fire Alarm system is installed.
 - l) an additional inspection(s) of a burn pile, if on the initial inspection by the fire department the burn pile or site is deemed unacceptable;
 - m) a yearly inspection of a mobile vender, fee to be waived if the inspection is done on a designated weekend.

22.2 Inspection Fees

- 22.2.1 Every person who obtains any of the following inspections by the Fire Department must pay the applicable fee prescribed in Schedule "B" of this Bylaw:
- a) an inspection of a building, structure or site conducted at the request of the owner, owners representative or occupier (and where not otherwise provided for under this Bylaw) to determine compliance with this Bylaw or the Fire Code; or
 - b) re-inspection of premises after an order has been issued under this Bylaw where deficiencies remain.

22.3 No Relief from Other Fees

- 22.3.1 Payment of any of the fees specified in Section 19.1 or 19.2 does not relieve a person from the requirement to pay any other fee prescribed under the Fire Code, the Building Code, the *Fire Services Act*, another City bylaw or any other applicable legislation.

22.4 Nuisance and Dangerous Goods Incidents

22.4.1 Every person who, willfully or recklessly and without reasonable cause, causes a nuisance or disturbance by:

- a) setting a fire to which the Fire Department must respond;
- b) making or causing to be made a false alarm;
- c) causing a fire or loss that can be directly attributed to the use of fireworks contrary to the requirements and restrictions of this Bylaw, as amended, or;
- d) carrying out open air burning of combustible materials without a permit;

shall, in addition to any penalty imposed under this Bylaw or otherwise by law, shall be liable to pay the actual costs and expenses incurred by the Fire Department in abating that nuisance by responding to and investigating the fire, loss or false alarm, calculated in accordance with the rates set out in Schedule "B" of this Bylaw.

22.4.2 Every owner, carrier, agency, organization or other person having responsibility for the transport, storage or use of dangerous goods, shall be responsible, at that person's own cost and expense, for the clean-up and safe disposal of all such dangerous goods arising from any incident, and a person who fails to do so shall be liable to pay the actual costs and expenses incurred by the City of Kelowna;

- a) the costs and expenses incurred by the City of Kelowna or its contractors or agents for the clean-up and safe transport and disposal of the dangerous goods; and
- b) the costs incurred by the City of Kelowna in mitigating the dangerous goods incident, including without limitation, equipment replacement and decontamination costs.

22.5 False Alarm Incident Fees

22.5.1 The owner or occupier of premises containing a fire alarm system shall, on the occurrence of a second false alarm and for each subsequent false alarm occurring in any twelve (12) month period to which the Fire Department must respond, pay the City a fee for each such false alarm in accordance with Schedule B.

22.5.2 Where an owner or occupier notifies the Fire Department that an alarm from a fire alarm system is a false alarm before a vehicle leaves a fire station, the fee prescribed in Schedule "B" shall Not apply

22.5.3 The Fire Chief is authorized to implement a false alarm reduction program, in a form and format determined by the Fire Chief or designate, for any building where the frequent activation of a false alarm signal in the building has, in the opinion of the Fire Chief, reduced or affected safety to life and property.

22.6 Security Alarm Incident Fees

22.6.1 Where the Fire Department is required to respond to any alarm that results from a security alarm system being routed to the Fire Department, the owner or occupier of the

premises must pay the applicable fee prescribed in Schedule "B" for false alarms as described in 22.5 of this Bylaw.

22.7 Fire Alarm Testing Fee

- 22.7.1 Where a person fails to notify the monitoring company or the Fire Department when carrying out testing, repair, maintenance, adjustments or alterations to a fire alarm system, as required by this Bylaw, and such failure results in the activation of the fire alarm system requiring a response by the Fire Department, that person must pay the applicable fee prescribed in Schedule "B" of this Bylaw.

22.8 General Fee Regulations

- 22.8.1 Where more than one person is liable to pay a fee or pay for the actual costs and expenses incurred by the Fire Department, the fee or the costs and expenses may be imposed among the persons involved on a pro rata basis.
- 22.8.2 Where under this Bylaw the City is authorized or required to provide work or services to lands or improvements, and the costs incurred by the City in carrying out such work or services are not paid when due and payable, the City may recover those costs from the owner of the lands or improvements in the same manner and with the same remedies as ordinary taxes and, if the costs remain unpaid on December 31, they shall be deemed to be taxes in arrears.

PART TWENTY THREE: REPEAL

23.1 Repeal of Previous Bylaw

- 23.1.1 The Fire Prevention Regulation Bylaw No. 6110-88, and all amendments thereto, are hereby repealed.
- 23.1.2 The Fireworks Bylaw No. 8789, 2002 and all amendments thereto, are hereby repealed.
- 23.1.3 The Petroleum Products Storage Tank Bylaw No. 8267, 2003 and all amendments thereto, are hereby repealed.

Read a first, second and third time by the Municipal Council this 24th day of June, 2013.

Adopted by the Municipal Council of the City of Kelowna this 15th day of July, 2013.

Walter Gray

Mayor

Stephen Fleming

City Clerk

SCHEDULE "A"

Interpretation

In this Bylaw:

"Abandoned or Abandonment" means a petroleum products storage tank system that has not been used for more than two years for the purpose of handling petroleum products or allied petroleum products;

"Above Ground Storage Tank" means a petroleum products storage tank system with more than 90 percent of the storage tank volume above surface grade;

"Above Ground Storage Tank System" means one or more above ground storage tanks with all connecting piping both above ground and underground including pumps and product transfer apparatus, diking, overfill protection equipment and associated spill containment and collection apparatus;

"accessory building" means a building that is subordinate to the principal use building on the parcel and does not contain a dwelling unit;

"Allied Petroleum Products" means a mixture of hydrocarbons other than a petroleum product that may be water miscible and may have a density greater than water and includes thinners, solvents and chemical as defined and referred to in the Codes; **"Alter or Alteration"** means to enlarge, reduce, refurbish, upgrade, remove or dispose of a storage tank system;

"apparatus" means any vehicle machinery, device, equipment or material used for fire protection or assistance response and any vehicle used to transport members or supplies;

"assistance response" means aid provided in respect of fires, alarms, explosions, medical assistance, floods, earthquakes or other natural disasters, escape of dangerous goods, rail or aeronautical incidents, motor vehicle or other accidents, or circumstances necessitating rescue efforts;

"AHJ - authority having jurisdiction" means the Fire Chief or persons designated by the Fire Chief to exercise any authority under this Bylaw and any person or agency authorized by this or any other bylaw, regulation or statute to inspect or approve any thing or place;

"ASTTBC" means Applied Science Technologist and Technicians of BC which is a self-governing, professional association pursuant to the Applied Science Technologist and Technicians Act RD CHAP. 15, 1996.

"building" means any structure used or intended for supporting or sheltering any use or occupancy;

"Building Bylaw" means the City of Kelowna Building Bylaw No. 7245;

"Building Code" means the *British Columbia Building Code*, as amended or re-enacted from time to time;

"building incident" includes a fire, alarm, explosion, medical assistance call, flood, earthquake or other natural disaster, escape of dangerous goods, motor vehicle or other accident, or circumstances necessitating rescue efforts that occurs at a building or on the property on which the building is situated;

"Building Inspector" means the Building and Permitting Branch Manager of the City of Kelowna or those positions designated by Council under Section 1 of the *Local Government Act*;

"Building Permit" means a permit issued pursuant to the Building Bylaw;

"Bylaw Enforcement Officer" shall mean the person or persons appointed from time to time by the Council as Bylaw Enforcement Officers;

"CCME" means the Canadian Council of Ministers of the Environment;

"CCME Above Ground Storage Tank Code" means applicable section(s) of the CCME Environmental Code of Practice for Aboveground and Underground Storage Tank Systems containing Petroleum Products and Allied Petroleum Products;

"CCME Underground Storage Tank Code" means applicable section(s) of the CCME Environmental Code of Practice for Aboveground and Underground Storage Tank Systems containing Petroleum Products and Allied Petroleum Products;

"Certified" means when used in reference to a storage tank, a component or accessory that the product has been investigated by the Underwriters Laboratories of Canada (U.L.C.) and found to comply with its requirements and is being produced under its service program and identified with its authorized marking;

"chief building official" means the person designated or appointed to that position by the City, and any person named by Council to act in place of the chief building official;

"City" means the City of Kelowna and the geographic area governed thereby, as the context requires;

"Code or Codes" means the CCME Environmental Code of Practice for Aboveground and Underground Storage Tank Systems containing Petroleum Products and Allied Petroleum Products;"

"combustible dust" means dusts and particles that are ignitable and liable to produce an explosion;

"combustible fibre" means finely divided, combustible vegetable or animal fibres and thin sheets or flakes of such materials which, in a loose, unbaled condition, present a flash fire hazard, including but not limited to cotton, wool, hemp, sisal, jute, kapok, paper and cloth;

"combustible liquid" means a liquid having a flash point at or above 37.8 degrees Celsius and below 93.3 degrees Celsius.

"combustible material" means any material capable of being ignited;

“combustible metal” means a metal, including but not limited to magnesium, titanium, sodium, potassium, calcium, lithium, hafnium, zirconium, zinc, thorium, uranium, plutonium or other similar metals, which ignites easily when in the form of fine particles or molten metal;

“construct” includes build, erect, install, repair, alter, add, enlarge, move, locate, relocate or reconstruct;

“construction” includes a building, erection, installation, repair, alteration, addition, enlargement, or reconstruction;

“consumer fireworks” means outdoor, low-hazard recreational fireworks described within Subdivision 1 of Division 2 of Class 7 of the Explosives Regulations, C.R.C., c. 599 and includes showers, fountains, golden rain, Roman candles, volcanoes, sparklers and caps for toy guns.

“Council” means Council for the City;

“dangerous goods” means those products or substances that are regulated under the Canada *Transportation of Dangerous Goods Act* and its Regulation, as amended from time to time;

“Deputy Fire Safety Director” means a person appointed in writing by a building owner, business owner or a Fire Safety Director and given the responsibility and necessary authority to supervise and maintain a fire safety plan in the absence of the Fire Safety Director;

“display fireworks” means outdoor, high-hazard recreational fireworks described within Subdivision 2 of Division 2 of Class 7 of the Explosives Regulations, C.R.C., c. 599 and includes display shells, bombshells, large wheels, barrages, bombardos, waterfalls and mines.

“Dwelling Unit” means a suite operated as a housekeeping unit, used or intended to be used as a residence and usually containing cooking, eating, living, sleeping and sanitary;

“emergency access route” means portion of a roadway or yard providing an access route for fire department vehicles from a public thoroughfare, as required under the Building Code;

“engineer” means a person registered or licensed as a Professional Engineer pursuant to the provisions of the Engineers’ and Geoscientists’ Act of British Columbia.

“explosion” means a rapid release of energy, that may or may not be preceded or followed by a fire, which produces a pressure wave or shock wave in air and is usually accompanied by a loud noise;

“extension cord” means a portable, flexible electrical cord of any length which has one male connector on one end and one or more female connectors on the other;

“false fire alarm” means malicious false alarm and nuisance false alarm;

- (a) malicious false alarm , as referred to in Schedule A , means the negligent or intentional misuse of a fire alarm system resulting in the activation of the system, but does not include the activation of a fire alarm system under circumstances that would have a used a careful or prudent person to believe that a fire related emergency was in progress at the owner’s building or in circumstances where the owner has notified the Fire Department in advance of work being done on the fire alarm system that could cause a false fire alarm;
- (b) nuisance false alarm, as referred to in Schedule A, means the activation of a fire alarm system through a mechanical failure, equipment malfunction or improper maintenance or installation of the system, but does not include the activation of a fire alarm system where the activation occurred as a result of accidental damage to the system;

“fire alarm system” means a device or devices installed on or in real property and designed to issue a warning of a fire by activating an audible alarm signal or alerting a monitoring facility but does not include a fire alarm system that is intended to alert only the occupants of the dwelling unit in which it is installed;

“Fire Chief” means the Director of Fire Department Services for the City, acting as head of the Fire Department, or a person designated to act in the place of the Fire Chief;

“Fire Code” means the Fire Code Regulation made under the *Fire Services Act* of British Columbia, as amended or replaced from time to time;

“firecrackers” means small fireworks with fuses used primarily as noise makers and for pyrotechnic effect;

“Fire Department” means the Kelowna Fire Department established in 1906 and continued under this Bylaw;

“fire hazard” means any condition, arrangement or act which increases the likelihood of fire or which may provide a ready fuel supply to augment the spread or intensity of a fire or which may obstruct, delay, hinder, or interfere with the operations of the Fire Department or the egress of occupants in the event of fire;

“Fire Inspector” means the Fire Chief and every member of the Fire Department or any other person designated as such by the Fire Chief by name or office or otherwise, authorized to act on the behalf of the Fire Chief who shall have the authority under this Bylaw to carry out inspections as authorized by this Bylaw and the Fire Services Act;

“fire protection equipment” includes but is not limited to, fire alarm systems, automatic sprinkler systems, special extinguisher systems, portable fire extinguishers, fire hydrants, water supplies for fire

protection, standpipe and hose systems, fixed pipe fire suppression systems in commercial cooking exhaust systems, smoke control measures and emergency power installations;

“Fire Protection Service Technician” means a person certified under the Applied Science Technologists and Technicians Act “ASTTBC” as a fire protection technologist, or a person having other equivalent certification acceptable to the Fire Chief, that qualifies the person to perform inspections and testing of fire protection equipment.”;

“Fire Safety Director” means a person appointed in writing by a building owner or business owner and given the responsibility and necessary authority to supervise and maintain a fire safety plan;

“fire safety plan” means a fire safety plan for a building required under the British Columbia Fire Code and this Bylaw, that includes, without limitation,

- a) emergency procedures to be used in case of fire,
- b) training and appointment of designated supervisory staff to carry out fire safety duties,
- c) documents showing the type, location and operation of fire emergency systems,
- d) the holding of fire drills,
- e) the control of fire hazards, and
- f) inspection and maintenance of facilities for the safety of the building's occupants;

“Fire Services Act” means the Fire Services Act, RSBC 1996, c. 144, as amended or replaced from time to time;

“firewatch” means the assignment of a person or persons to an area for the express purpose of assuming the responsibility of notifying the fire department, the building occupants, or both, of an emergency; preventing a fire from occurring; extinguishing small fires; or protecting the public from fire or life safety dangers;

“fireworks” means any product or device manufactured or used to produce an explosion, detonation or pyrotechnic effect and includes fireworks, composition and manufactured fireworks as defined in the *Explosives Act*, R.S.C. 1985, c. E-17 or anything within the definition of fireworks under the *Fireworks Act*, R.S.B.C. 1996, c. 146;

“flammable gas” means a gas which can ignite readily and burn rapidly or explosively;

“flammable liquid” shall have the meaning ascribed to it in the Fire Code;

“flammable material” means any free burning material including but not limited to solids, combustible dust, combustible fibres, flammable liquid, flammable gas, and liquified flammable gas;

“flash point” means the minimum temperature at which a liquid within a container gives off vapour in sufficient concentration to form an ignitable mixture with air near the surface of the liquid;

"floor area" means the space on any storey of a building between exterior walls and required firewalls, including the space occupied by interior walls and partitions, but not including exits, vertical service spaces, and their enclosing assemblies.

"Handling" means the storing, transmitting, transporting or distributing of petroleum products or allied petroleum products and includes putting petroleum products into the fuel tank of a motor vehicle, vessel, aircraft or into a container;

"incident" means an event or situation to which the Fire Department has responded or would normally respond;

"Installation Permit" means a permit issued pursuant to the Fire Code;

"institutional occupancy" means the occupancy or use of a building or part thereof by persons who are involuntarily detained, or detained for penal or correctional purposes, or whose liberty is restricted, or require special care or treatment because of age, mental or physical limitations;

"Leak" means any loss of petroleum products or allied petroleum products because of a defect in underground or above ground storage tank systems;

"Leak Test or Leak Detection" means a device or method that is capable of detecting leaks in underground or above ground petroleum storage tank systems and includes Levels 1, 2, 3 or 4 leak detection as defined in and required by the Codes;

"member" means a person employed by the City and holding a position within the Fire Department;

"member in charge" means the senior member at the scene of an incident or the member that is appointed as such by the Fire Chief;

"Mobile Fuel Truck" means a vehicle used to transfer motive fuel from an approved storage tank system and dispense it to an aircraft, vessel or vehicle;

"Motive Fuel" means any fuel to power a vehicle, aircraft or vessel;

"Mobile Vendor" means cooking equipment used in fixed, mobile or temporary concessions, such as trucks, buses, trailers, pavilions, tents, or any form of temporary roofed enclosure. The authority having jurisdiction can exempt temporary facilities, such as a tent, upon evaluation for compliance to the applicable requirements.

"multiple-family residential" means a residential occupancy of a building to which, pursuant to clause 1.3.3.2 of the Building Code. Part 3 of the B.C. Building Code applies;

"occupancy" means the use or intended use of a building or part thereof for the shelter or support of persons, animals or property;

"occupier" includes an owner or agent of the owner, a tenant, lessee, user, agent and any other person who has a right of access to, possession and control of a building or other premises to which this Bylaw applies;

"officer" means the Fire Chief, Deputy Fire Chief, Platoon Captain, Training Officer, Assistant Training Officer, Fire Prevention Officer, Administration Officer, a Captain and a Lieutenant and a member designated by the Fire Chief to act in the capacity of an officer;

"officer in charge" means the senior member of the Fire Department who is present at an incident or a member appointed as such by the Fire Chief;

"open burning" means burning piled products at grade with natural air flow;

"Operator" means a person who is responsible for the operation of an installation where petroleum products storage tanks or storage tank systems are located;

"owner" means a person who has ownership or control of real or personal property, and includes, without limitation,

- a) the registered owner of an estate in fee simple,
- b) the tenant for life under a registered life estate,
- c) the registered holder of the last registered agreement for sale, and
- d) in relation to common property and common facilities in a strata plan, the strata corporation;
- e) any person who has legal ownership or has been assigned the custody or control or management of a petroleum products storage tank or storage tank system;
- f) For the purposes of this Bylaw the Owner of the lands in or on which an underground or above ground storage tank system is located shall be deemed to be the Owner of the storage tank system unless the Owner of the lands satisfies the City to the contrary;

"permit" means a current and valid document issued by the Fire Chief or a member authorizing a person to carry out a procedure or undertaking described in the permit, or to use, store or transport materials under conditions stipulated in the permit;

"person" shall mean and include any individual, corporation, partnership or party and the heirs, executors, administrators, property owner or other legal representative of the same, to whom the context can apply according to Law. The singular shall also include the plural and the masculine shall also include the feminine;

"Petroleum Product" means a single product or a mixture of at least 70 percent hydrocarbons refined from crude oil with or without additives that is used or could be used as a fuel, lubricant, motive fuel or power transmitter. Without restricting the foregoing such products include gasoline, diesel fuel, aviation fuel, kerosene, naphtha, lubricating oil, fuel oil, engine oil and used oil;

“pit or trench burning” means burning in a trench below grade using a mechanical air system to accelerate burning with a minimum of smoke;

“pre-incident plan” means a plan relating to a building, approved by, and in a format acceptable to, the Fire Chief or designate, that:

- (a) Identifies all potential hazards to the lives of fire fighting or building occupants;
- (b) Shows the building layout and identifies the type of materials used in the construction of the building;
- (c) Identifies the type and location of all fire fighting equipment and resources and utility shut offs on site; and
- (d) Identifies the location, type and quantity of any hazardous materials or dangerous goods on site.

“premises” includes the whole or any part of a lot of real property and any buildings or structures on the property;

“Pressurized Stairwells” A type of smoke-control system in which stair shafts are mechanically pressurized, with respect to the fire area, with outdoor air to keep smoke from contaminating them during a fire incident.

“public fire hydrant” A fire hydrant situated and maintained for public use on a public right-of-way (or easement) to provide water for use by the fire department in controlling and extinguishing fires. The location of a public fire hydrant is such that it is accessible for immediate and unrestricted use by the fire department at all times. Public fire hydrants are owned and maintained by the government entity (ex. city, village, etc.) which is responsible for maintaining the hydrants and water supply distribution system in operating condition at all times and is authorized to levy taxes to fund the operation and maintenance programs.

“private fire hydrant” A fire hydrant located on privately owned property, or on streets not dedicated to public use. Although a private fire hydrant may be connected to a public water supply system, maintenance of the hydrant and access to the hydrant is the responsibility of the property owner. Private hydrants are normally required where buildings are so located on the property, or are of such size and configuration that a normal hose lay from a public hydrant would not reach all points on the outside of the building;

“qualified technician” means a person having certification acceptable to the Fire Chief or designate, that qualifies the person to perform inspections and testing on fire protection equipment in accordance to manufacturers specifications;

“security alarm system” means a device or devices installed on or in real property and designed to warn of criminal activity or unauthorized entry by activating an audible alarm signal or alerting a monitoring facility;

“Service Station” means any premises at which petroleum products or other motive fuels are put into the fuel tanks of vehicles, aircraft or vessels;

"Site" means a lot or property upon which there is located or intended to be located on or more petroleum products storage tanks or storage tanks systems;

"smoke alarm" means a combined smoke detector and audible alarm device designed to sound an alarm within the dwelling unit, suite, or room in which it is located upon detection of smoke within that room or suite.

"sprinkler system" means an integrated system of underground and overhead piping designed in accordance with fire protection standards which is normally activated by heat from a fire and discharges water over the fire area;

"Storage Tank" means a closed container with a capacity of more than 230 litres that is designed to be installed either underground or above ground in a fixed location for the storage of petroleum products or allied petroleum products;

"Storage Tank System" means an underground or above ground storage tank system;

"storey" means that portion of a building which is situated between the top of any floor and the top of the floor next above it, and if there is no floor above it, that portion between the top of such floor and the ceiling above it; and

"structure" means a construction or portion thereof, of any kind, whether fixed to, supported or sunk into land or water, except landscaping, fences, paving and retaining structures less than 1.22 metres in height.

"suite" means a single room or series of rooms of complementary use, operated under a single tenancy, and includes individual guest rooms in motels, hotels, boarding houses, rooming houses and dormitories.

"temporary building" means temporary structures, such as construction site structures, seasonal storage buildings, special events structures, emergency facilities and similar structures, as determined by the chief building official.

"U.L.C." means Underwriters Laboratories of Canada;

"Underground Storage Tank" means a storage tank that is partially or completely buried by or covered with earth, backfill or concrete;

"Underground Storage Tank System" means one or more completely buried and/or partially buried storage tanks including all underground and above ground connections, piping, pumps and dispensers; and

"Used oil" means an oil from industrial and non industrial sources that has been acquired for lubricating or other purposes and has become unsuitable for its original purpose due to the presence of impurities or the loss of original properties and shall include lubricating oils (engine, turbine or gear), hydraulic fluids (including transmission fluids) and insulating oils.

Words and phrases that are not defined in this bylaw shall have the meaning defined in the Codes or, if not defined, meanings that are commonly assigned to them in the context in which they are used in the Codes and in this bylaw.

SCHEDULE "B"

FEES AND COST RECOVERY

| Permit & Fee Service | Section | Fee |
|--|---------|----------------------|
| Burning Permit - <i>in effect as of October 1, 2013</i> | 4.5 | \$20.00 |
| Land Clearing Burn Permit - <i>in effect as of October 1, 2013</i> | 4.5 | \$150.00 |
| Fireworks Permit - Consumer Fireworks Low Hazard | 4.1 | \$75.00 |
| Fireworks Permit - Display Fireworks High Hazard | 4.1 | \$150.00 |
| Fuel Dispensing/Underground Tank Permit | 4.1.1 | \$100.00 |
| Fuel Tank Removal Permit | 4.1.1 | \$100.00 |
| High Rack Storage Permit (>12') | 4.1.1 | \$100.00 |
| Special Request Service/person hour – min 2 hours | 22.1 | \$45.00 |
| Re-inspection after order | 22.2 | \$100.00 hr |
| Fire Safety Plan Review - Initial | 22.1 | \$100.00 |
| Fire Safety Plan Review - subsequent reviews | 22.1 | \$50.00 |
| Fire Records Search Comfort Letter | 22.1 | \$100.00 |
| Fire Reports | 22.1 | \$40.00 per incident |
| Fire Inspection Reports | 22.1 | \$40.00 per report |
| Copy of Audio Recording | 22.1 | \$30.00 per incident |
| Fee for no PR to attend incident within designated time | 22.1 | \$200 |
| False Alarm Fee: 1st Alarm | 22.1 | No Charge |
| False Alarm Fee: 2nd Alarm | 22.1 | \$150.00 |
| False Alarm Fee: 3rd Alarm | 22.1 | \$250.00 |
| Re-inspection of burn pile | 22.2 | \$50.00 |
| Inspection of a mobile vender (waived if done on a designated weekend) | 22.2 | \$50.00 |

Schedule C

In-Building Radio Communications Coverage

1.0 PREFACE

This Schedule (Schedule C) shall be the reference document for ensuring and verifying minimum acceptable emergency radio communications reliability inside buildings to meet the emergency response needs of the Kelowna Fire Department (KFD).

This Schedule specifies the minimum radio communications reliability requirements and the procedures and testing requirements for verifying the acceptability of the radio communications coverage inside a building.

Please note that this Schedule shall be used as the reference by KFD to determine the acceptability (or unacceptability) of the in-building radio communications reliability.

2.0 IN-BUILDING RADIO COMMUNICATIONS REQUIREMENTS

2.1 Definition of Reliable Two-Way Radio Communications

Reliable two-way radio communications as defined below shall be achieved between personnel inside the building communicating over the KFD simplex "tactical" radio frequency channel with personnel outside the building.

All two-way radio communications in both directions shall meet a Delivered Audio Quality defined as follows:

"Understandable possibly with some noise"

(DAQ 3.4 – 4.0 as defined in Telecommunications Industry Association TSB 88 standards in all locations and under the operating conditions specified below).

2.2 Description of Interior Building Coverage Requirements

Reliable two-way radio communications shall be achieved in the following areas and locations inside the building:

| | Location | Floor Area for Reliable Two-Way Radio Communications |
|-----|---|--|
| 1. | Public access hallways, elevator lobbies | 95% of each area on each floor |
| 2. | Living areas | 95% of each enclosed areas within each living area |
| 3. | Parking garage | 95% of all areas on each level |
| 4. | Common rooms, recreation rooms and recreation areas such as pools, hot tubs, gyms | 95 % of each enclosed areas and each open area |
| 5. | Foyers, lobbies, atriums, and enclosed entranceways. | 95% of each enclosed area and each open area |
| 6. | Stairwells | 100 % of all areas within each stairwell |
| 7. | Elevators | 100% inside closed elevators |
| 8. | Designated refuge areas (shelter in-place and protected areas) | 100 % of each enclosed area and each open area |
| 9. | Mechanical and electrical rooms | 100% of all areas within each room |
| 10. | Storage areas including hazardous materials storage (paints, solvents, cleaning supplies, etc.) | 100% of each enclosed area and each open area |
| 11. | Fire command centres, alarm panel locations | 100% of each enclosed area and at each location in open areas. |
| 12. | Commercial parking garages | 95% of all areas on each level |
| 13. | Individual offices and open office areas | 95% of each enclosed area and each open area |
| 14. | Warehouse, manufacturing and fabricating plant areas, enclosed rooms and open areas | 95% of each enclosed area and each open area |
| 15. | Retail malls, individual retail stores, open mall areas | 95% of each shop, each enclosed area and each open area |
| 16. | Locations, and areas not listed above will be at the discretion of the Fire Chief | |

Note: The building interior shall be completely constructed with all exterior and interior walls, doors and windows installed.

2.3 Personnel Communications

Reliable two-way radio communications shall be achieved in the above areas between personnel inside the building using a handheld (portable) radio communicating with personnel outside the building who are communicating using a vehicle mobile radio.

The radio communications reliability minimum requirements shall be met when:

1. personnel inside the building are using handheld (portable) radios that are equipped with a flexible whip or helical style antennas with a length not exceeding $1/8$ wavelength and the antenna is securely connected to the antenna connector on the radio.
2. personnel outside the building are using a vehicle mounted radio (mobile) that is connected to a whip style antenna not exceeding $1/4$ wavelength mounted on the roof of the vehicle.

The location of the vehicle shall be specified by the Fire Department.

2.4 Wearing Handheld (Portable) Radio

The reliable two-way radio communications requirements shall be met when the radio is worn in a holster or on a clip on the belt of the person at the waist with the radio antenna against the body and shielded by the person's arm.

2.5 Personnel Body Position Variations

Reliable two-way radio communications shall be met when the person is standing facing North, East, South, and West

3.0 INITIAL DEMONSTRATION OF TWO-WAY RADIO COMMUNICATIONS RELIABILITY

The following shall be carried out after the building has been completed. The building interior shall be completely constructed with all exterior and interior walls, doors and windows installed.

3.1 Handheld (Portable) Radio Equipment Preparation

1. The handheld radio transmitter and receiver (transceiver) shall be tested in accordance with radio equipment manufacturer's instructions to verify that the radio transmitter and receiver performance meets the manufacturer's minimum performance standards and specifications, and shall be in full compliance with relevant Innovation, Science & Economic Development (ISED) standards and specifications, in accordance with the KFD radio station license.
2. The handheld radio battery shall be fully charged and shall not be below the minimum battery charge level for full performance as specified by the radio manufacturer at any time throughout all two-way radio communications tests .
3. The antenna shall be a flexible, helical style antenna (rubber duckie style), free from all defects and damage, and shall connect securely to the transceiver antenna terminal.
4. The handheld radio transmitter output power shall not exceed 5 Watts.
5. The handheld radio shall be equipped with an external/remote speaker microphone to enable the radio to be operated when the radio is in the holster or on a clip at the waist.

6. The external speaker microphone shall be tested with the radio in accordance with the manufacturer's instructions to verify that the radio transmitter modulation level and the voice quality meet the manufacturer's specification and the quality of the received audio in the speaker/microphone is clear and noise-free.
7. The external/remote speaker microphone shall be free from all defects and damage, and shall connect securely to the transceiver connector.

3.2 Vehicle (Mobile) Radio Equipment Preparation

A KFD fire engine, or similar KFD vehicle with an installed radio and rooftop mounted ¼ wave whip antenna shall be used for the tests.

1. The radio transmitter and receiver (transceiver) shall be tested in accordance with the radio manufacturer's instructions to verify that the radio transmitter and receiver performance meets the manufacturer's minimum performance standards and specifications and shall be in full compliance with relevant ISED standards and specifications, in accordance with the KFD fradio station license..
2. The radio tests shall include the vehicle radio microphone to verify that the transmitter modulation level using the microphone meets the manufacturer's specification, and the transmitted audio (modulation) is noise and distortion free.
3. The transceiver shall be connected to a ¼ wave whip antenna mounted on the roof of the vehicle for testing purposes.
4. The antenna and antenna cable shall be free from defects and damage and shall be securely connected to the transceiver antenna terminal.

3.3 Mapping The Areas To Be Tested

Each floor including all levels in parking garages (if applicable) shall be divided into equal area grids to cover all floors throughout the entire building.

Each grid shall not exceed 6 meters by 6 meters.

For large open area structures, such as storage buildings or warehouses, the grid pattern may be larger at the sole discretion of the Fire Chief.

In the case of hallways or areas that may be narrower than 6 metres, and the grid extends into adjacent enclosed areas or rooms, each separate enclosed area or room within the same grid shall be considered to be a separate grid.

The grid shall be overlaid on the floor plans of each floor including parking garages, and each grid shall be labeled with a unique identifier that shall be recorded on the test record forms for each two-way radio communications test.

3.4 Two-Way Communications Reliability Demonstration Procedure

The two-way radio communications tests shall be conducted at each location within each grid as specified above.

The tests shall be carried out with the test personnel positioned in the middle (centre) of each grid (as close to centre as practical).

In enclosed areas that are smaller than 6 metres by 6 metres, the test personnel shall stand in the approximate centre of the area, or as close to the centre of the area as practical.

At each test location, two-way radio communications tests shall be carried out under the following conditions by the test personnel inside the building:

| Test Personnel with Handheld Radio Inside Building | | |
|---|--------------------------|---|
| Position | Facing | Radio On Body |
| Standing | North, East, South, West | Radio worn in a holster or a belt clip on the test personnel belt at waist level – test personnel arm shielding antenna |

1. The in-building test personnel shall make initial communications contact with the test personnel at the outside vehicle location.
2. When contact has been established, the in-building personnel shall transmit a voice message speaking clearly and slowly counting from 1 – 5.
3. The test personnel shall speak directly into the speaker/microphone approximately 5 cm from the microphone.
4. Vehicle test personnel shall transmit their assessment of the quality of the received transmissions to the in-building personnel who shall record the vehicle test personnel's assessment on the test record form for each grid location.
5. After recording the vehicle test personnel assessment on the test record form, the in-building test personnel shall request a clear, slow count from the vehicle test personnel in the same manner as the transmissions by the in-building personnel.

Note: The vehicle test personnel shall verify that there is very low, or no significant local area ambient (background) acoustical noise that could affect the quality of the voice transmission to the in-building test personnel.

6. The vehicle test personnel shall transmit a voice message speaking clearly and slowly counting from 1 – 5.
7. The test personnel shall speak directly into the microphone approximately 5 cm from the microphone.

8. The in-building test personnel shall record their assessment of the quality of the voice message received from the vehicle transmission on the test record for each grid location.

Note: If either the vehicle test personnel or the in-building test personnel suspect that the other end is transmitting a voice message but there is no reception or the received voice is not understandable, contact may be required using commercial mobile telephone service to have the transmission repeated until a firm assessment of the received voice message is made.

3.5 Radio Communications Voice Quality Assessment

The assessment of the quality of each voice message received by the vehicle test personnel and the in-building test personnel shall be one of the following and recorded on the test record for each two-way test:

- 0: No voice or communications
- 1: poor or noisy- barely understandable (DAQ = 1 -2)
- 2: understandable possibly with some noise (DAQ 3.0 – 4.0)
- 3: loud and clear, no noise (DAQ 4.5 – 5.0)

One of the above assessments shall be recorded on the test form for each test voice message received by the vehicle test personnel and the in-building test personnel at each test location inside the building and for each handheld radio and body position specified below.

3.6 Reliability Evaluation

1. For any grid, assessments 2 and 3 in both directions: Pass

A Pass assessment shall be for reception of voice messages by the vehicle test personnel and for reception of voice test messages by the in-building test personnel for the same test location and all body and handheld radio positions specified below.

2. For any grid, assessments 0 and 1 in either or both directions: Fail

A fail assessment shall be for reception of a voice test message by either the vehicle test personnel or by the in-building test personnel (or both).

3. On each floor and in separately identified areas in 2.2 above that do not require 100% radio communications coverage reliability:

- The total number of "Pass" locations divided by the total number of grid locations in each separately identified area shall be at least 95% of the total grid locations for voice communications in both directions; i.e. from the vehicle test personnel to the in-building test personnel, and from the in-building test personnel to the vehicle test personnel.

Note: Failure of any 2 adjacent grids in any area shall result in failure of the entire area including all grids within the area; for example, if an area is covered by 3 or more

grids, failure of 2 adjacent grids shall result in failure of all grids in the area for purposes of calculating areas of reliable coverage.

4. In the case of partial grids, such as in hallways or areas that may be narrower than 6 metres, and the grid extends into adjacent areas or rooms, each separate area or room within the same grid shall be considered to be a separate grid for purposes of calculating the acceptable coverage area.
5. In locations and areas identified in 2.2 above requiring 100% radio communications coverage reliability:
 - All test results in both directions; i.e. by the vehicle test personnel and by the in-building test personnel shall be assessed based on the pass and fail criteria in 1 through 5 in 3.5 above.
 - A failure in any part of an area defined as requiring 100% coverage shall be a failure of the entire area.

4.0 FIRE DEPARTMENT REPORT

KFD will prepare a report that references the two-way radio communications test results and specifies the acceptability or unacceptability of the radio communications coverage throughout the inside of the building in accordance with this Schedule.

5.0 USE OF TECHNOLOGY

5.1 General

The design and installation of any technology that may be required to meet the in-building radio communications reliability requirements, including Distributed Antenna Systems (DAS), bi-directional amplifiers (BDAs), radiating cable, passive reflectors and antenna systems shall meet industry accepted standards and best practice for public safety radio communications systems.

The technology shall meet and as applicable be approved for the intended application in accordance with (ISED Canada standards and specifications CPC-2-1-05 "Zone Enhancers" and RSS-131 "Zone Enhancers for the Land Mobile Service".

All system design and installation shall meet all applicable municipal, provincial and federal codes and regulations.

Other references:

1. Radio manufacturer's maintenance manual and test and maintenance instructions.
2. Telecommunications Industry Association:
 - TIA Systems Bulletin TSB 88: Wireless Communications Systems Performance In Noise And Interference Limited Situations

- EIA/TIA 603: Land Mobile FM or PM Communications Equipment Measurement and Performance Standards
- TIA 156 – Land Mobile Radio Antenna Systems Minimum Standards for RF Signal Booster

All technology shall use an electrical power source that shall not be disabled or disrupted if the primary Fortis BC power source fails or is interrupted.

Backup electrical power in the event of Fortis BC power failure or interruption may be provided by either a building provided backup power source such as an auxillary power generator or a self-contained backup battery power source that shall maintain fulll electrical power capabilities for all technology for a minimum of 4 hours during continuous in-building emergency radio communications.

The use of any in-building radio coverage enhancement technology shall not result in spurious radiation (RF leakage) outside the building except via dedicated, intentional antennas or other intentional radiators required for the in-building coverage enahncement technologies.

Any spurious or leakage radiation outside the building shall not result in any degradation of the performance of any radio communications used by KFD or any other other emergency responders in the area.

5.2 As-Built Drawings and Specifications

As built drawings shall be provided for any technology that is added to the building design or structure specifically to improve the in-building radio communications coverage.

The drawings shall detail the specific technology make and model numbers, interconnections and schematic or block diagrams of the interconnected technology.

6.0 ULTIMATE AUTHORITY

The Fire Chief, or designate, shall have ultimate authority to accept or reject the reliability of the radio communications inside the building, and the test reports submitted by the building owner.

7.0 ANNUAL COVERAGE VERIFICATION TESTS & INSPECTIONS

The following tests, measurements and inspections shall be carried out annually from the date of acceptance of the intial demonstration tests (Section 3.0 in this Schedule).

The two-way voice communications tests shall verify that the in-building radio signal reliability and voice quality assessment for two-way handheld radio communications has not degraded since the tests were conducted initially in Section 3.0.

The technology measurements (as applicable) and installation shall meet the requirements specified in this Schedule.

The annual verification tests, measurements and inspections shall be the responsibility of the building owner (Owner).

The Owner shall certify to KFD in a written statement, that the two-way voice communications quality, the technology and installation continue to meet the requirements specified in this Schedule.

Personnel who are assigned to carry out the two-way radio tests shall be proficient in the use of handheld radios and possess sound knowledge of radio communications voice quality assessment and testing procedures.

Personnel who are assigned to the measurement of the technology and the system inspection shall be fully qualified technicians having sound skills and strong experience with the installation, measurement and inspection of radio communications equipment and previous experience with in-building radio communications coverage enhancement systems.

7.1 Test Radio Equipment Preparation

All radio equipment shall be prepared for the tests in accordance with Sections 3.1 and 3.2 in this Schedule.

7.2 Building Test Locations & Tests

The test locations selected for the annual verification tests shall be based on the grid (map) used for the initial demonstration tests described in Section 3.3 in this Schedule.

1. On each floor of the building, including parking garages in areas identified as 95% coverage in Section 2.2 of this Schedule:
 - a) At least 2 grids on each floor.
 - b) Grids selected from the grids used for the original tests conducted after building completion under Initial Demonstration of Two-Way Radio Communications Reliability tests, (Section 3.3 in this Schedule) .
 - c) Centre of each selected grid shall not be exposed to windows.
 - d) Conduct tests as specified in 3.4 in this Schedule.
 - e) For each test location, assess the two-way voice communications quality as defined in 3.5.
 - f) Evaluate the two-way radio coverage reliability as specified in 3.6 of this Schedule.

2. In each location identified as 100% coverage in Section 2.2 of this Schedule:
 - a) At least 1 two-way voice communications test in each location.

 - b) Each location shall be the same as the location used for the original tests conducted after building completion under Initial Demonstration of Two-Way Radio Communications Reliability tests, (Section 3.3 in this Schedule).

- c) The location shall not be exposed to windows unless window exposure in the location is unavoidable because of the size or the location of the room or space in the building.
- d) Conduct tests as specified in 3.4 in this Schedule.
- e) For each test location, assess the two-way voice communications quality as defined in 3.5.
- f) Evaluate the two-way radio coverage reliability as specified in 3.6 of this Schedule.

7.3 Technology Measurements & Inspections

If technology is used for enhancing the in-building two-way radio communications coverage, such as bi-directional amplifiers (BDA) and distributed antenna system (DAS), the technology shall be determined to be functioning properly by making basic measurements of the amplifier uplink and downlink gain.

The measurement results shall be within the manufacturer's specified limits, and shall be the same as the measurement results that were conducted when the equipment was originally installed.

All antennas, interconnecting cables, and connectors shall be inspected for damage, loose connections, etc.

Any equipment or cables that are located on the exterior of the building and are exposed to the weather shall be inspected for water damage to the equipment and moisture leakage inside the connectors and cables.

Any damaged cables shall be replaced and all loose connections tightened based on industry accepted best practices.

After replacement or repair of any equipment, antennas, or cables the two-way voice communications tests specified in Section 7.2 of this Schedule shall be repeated in the areas that are affected by the repairs or replacement.

7.4 Test Results Confirmation Letter

A test confirmation letter shall be prepared that clearly, and definitively confirms that the annual coverage verification tests, measurements and inspection meets the requirements in accordance with this Schedule and as specified in Sections 3.5 and 3.6.

The test confirmation letter shall be completed using the template attached as part of this Schedule.

PALIDOR Radio Communications Consultants

Annual Test Confirmation Letter Template

Date

Building Owner Name(s)
Owner's address & contact information
Building Name
Building Address

Fire Chief
Kelowna Fire Department
2255 Enterprise Way
Kelowna, BC V1Y 8B8

Certification of In-Building Radio Communications Annual Coverage Testing, Measurements and Inspection of *[Insert Name and Address of Building]*

Reference: City of Kelowna Fire and Life Safety Bylaw No. 10760, Schedule C.

Date(s) of Tests, Measurements and Inspection: Insert date(s) as applicable

We hereby certify that:

1. The annual coverage verification tests, measurements, and system inspections were carried out in full compliance with the requirements in this Schedule.
2. The results of the two-way voice communications tests meet the minimum two-way voice communications quality requirements specified in this Schedule.
3. The technology meets the manufacturer's minimum performance and functional specifications.
4. The installation of the in-building radio coverage enhancement technology and all equipment and materials conform to industry accepted standards and best practice.

Name (Owner or Owner's representative)
Title
Signature
Date