

# Fire Safety and You



## City of Surrey Fire Service

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## Information about your responsibilities as a building owner under the British Columbia Fire Code

### We do our part, you do yours

Making sure buildings are free of fire hazards isn't just common sense – it's the law. The British Columbia Fire Code gives building owners a series of responsibilities and also provides for penalties for non-compliance. Subsection 1.1.1 of the code states, "Unless otherwise specified, the owner or the owner's authorized agent shall be responsible for carrying out the provisions of this code." The Surrey Fire Department has compiled this handout to make local building owners aware of their responsibilities under the Fire Code. This handout includes responsibilities of a general nature as well as those that are specific to particular building types or uses.

### Types of buildings covered in this handout

All buildings in the City of Surrey, other than private family dwellings, are subject to fire inspections and are responsible for meeting certain standards under the B.C. Fire Code. This includes the following types of buildings:

- Multi-unit residential occupancies, such as townhouses and apartments (common areas only)
- Assembly occupancies, used for gatherings of people
- Warehouses
- Restaurants
- Office buildings
- Hospitals and health care facilities
- Manufacturers
- Schools and educational facilities
- Service stations, including gas stations and automotive repair shops

# Most common Fire Code violations

*These five items account for 60% of all B.C. Fire Code violations. These responsibilities – as well as those on the next page – are common to all buildings under the Fire Code, other than dwellings.*

## **1. Portable fire extinguishers: 24%**

- Required in all buildings except dwellings.
- Must be located adjacent to corridors or aisles that provide access to exits. Must be mounted in a visible location, accessible, routinely serviced and contain a full supply of the extinguishing substance.
- Must be listed by a recognizing testing agency and must be in full working condition with no damage, corrosion, leakage, malfunctioning parts or clogged nozzles.
- Are subject to maintenance at least once a year and must have a secure tag or label listing the month and year the maintenance was performed, by whom and if recharging was performed.
- Must each have a permanent record with the maintenance date, examiner's name and brief description of work or hydrostatic test.
- Must have hydrostatic testing carried out at the following intervals:
  - Five years: water or antifreeze (cartridge operated or stored pressure), wetting agent or foam.
  - Twelve years: dry chemical (stored pressure, cartridge or cylinder operated), dry powder (cartridge or cylinder operated).

## **2. Emergency lighting: 14%**

Emergency lighting may be provided by battery packs with remote and attached heads, or by emergency generators that will illuminate specified A/C fixtures or remote light heads. Battery packs must be regularly serviced, and for generators, a fuel supply of at least eight hours must be on hand. The lighting must be operational and have no visible damage.

## **3. Exit signs: 8%**

Exit signs must be installed over every required exit door (other than the main entrance to a room or building) in the following cases: in buildings of more than two storeys tall, in buildings used by more than 150 people, in corridors more than 25 metres long in health care or correctional facilities, in exit corridors where a change of direction is required, in areas with a fire escape that is a required exist, and in all public halls and theatres. The signs must be visible and remain illuminated at all times the building is occupied.

## **4. Automatic sprinkler systems: 7%**

Sprinkler valves must be in the open position, either locked and chained, or sealed and monitored electronically. No storage is permitted within 18 inches of the bottom of sprinkler heads. Sprinkler and standpipe connections must be capped, free of debris and accessible.

## **5. Fire safety plans: 7%**

Fire safety plans include the emergency procedures to be used in case of fire (including sounding the fire alarm, notifying the fire department and evacuation procedures); the appointment and training of supervisory staff to carry out fire safety duties; documents, including diagrams, showing the type, location and operation of building fire emergency systems; the holding of fire drills; the control of fire hazards; the inspection and maintenance of facilities; and a record of inspections, maintenance procedures and tests.

# Fire Code checklist for all buildings

*In addition to the five most common B.C. Fire Code violations listed on the previous page, the following responsibilities are common to all buildings under the Fire Code, other than dwellings.*

**Address** must be visible from road and lane, free from foliage and should be in a contrasting colour.

**Outdoor storage areas** must be in good condition and arranged in a manner that minimizes fire risk.

**Fire hydrants** must be accessible, free of damage and serviced within the specified date.

**Garbage disposal:** Commercial containers must be kept closed when not in use and be located three metres from combustible buildings. If kept inside, commercial containers should have tight-fitting lids and be kept in fire-separated rooms.



Incorrect exit sign use accounts for 8% of all violations.

**Lock boxes** are not required by the Fire Code but are recommended. They should include current keys to the entrance, fire alarm panel and all service rooms.

**Exit corridors** must lead to an approved exit, such as an exterior door or exit stair shaft. The route must be free of obstruction. Exterior passageways and stairs in occupied buildings must be free of snow and ice and have handrails and stair treads.

**Exit doors** must not be locked or blocked from either the inside or outside. They must be unlocked from the inside when the building is occupied. They

must be equipped with latching hardware that will release when a force of 20 pounds or less is applied. Stairwell doors must be equipped with self-closing and latching devices that latch the door shut when released. Draperies and mirrors are not permitted.

**Fire doors** must not be blocked or wedged open, including stairwell doors.

**Storage areas** must be kept free of excessive clutter, with aisle widths of at least 36 inches in larger rooms.

**Mechanical rooms (such as boiler, furnace or electrical rooms)** must provide clear access to equipment, and, in the case of boiler rooms, must contain no storage. Distribution panels should have a clearance of at least 18 to 24 inches. In the breaker box, all switches and/or fuses should be identified, including the fire alarm breaker. Doors must remain closed, with self-closing devices in boiler rooms.

**Laundry rooms:** Keep rear of machines free of dust and lint. Lint traps must be cleaned regularly, with lint waste disposed of safely. Ensure electrical connections are not a fire hazard. Doors are to be kept closed with a self-closing device.

**Fire separations** must have no holes or openings that compromise their purpose.

**Fire alarm systems** must have a working A/C power-on bulb, be kept in good working condition with no audible or visual damage. They must have a current service tag (dated within the last 12 months) and up-to-date logbook. Electrically supervised alarms (with a trouble alarm and light) must be inspected and tested by qualified personnel at least once per year. Systems that aren't electrically supervised must be inspected and tested by qualified personnel each month.

**Fire department vehicle access** must always be available to at least one face of every building via a street, yard or private roadway.

## About the fire inspection process

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### **SOME FACTS TO CONSIDER**

- In the most recent census, a combination of appliances, heating, cooking and electrical equipment caused 20,968 fires across Canada (38% of the total), with \$424.5 million in losses (34.4% of the total), 940 injuries (41%) and 63 deaths (16%).

- Assembly, institutional, business, industrial, storage and mercantile properties across Canada had 7,364 fires per year (13.3% of the total), with \$424 million in losses (34% of the total), 346 injuries and 23 deaths.

The Surrey Fire Department carries out routine, preventative property inspections to identify and correct fire safety hazards in all buildings, aside from private family dwellings.

The initial inspection typically occurs shortly after the business licence is issued. The timing of follow-up inspections largely depends on the nature and number of deficiencies discovered at a particular site.

With the building representative present, the inspector will look over the property, identifying deficiencies and detailing them in a written report. A copy of this report is left behind at

the site with instructions for correcting any deficiencies found.

### **The importance of compliance**

Owners who don't comply with the inspection report face a re-inspection fee plus taxes, as well as the potential of legal action. Penalties can include fines and/or jail time.

The report makes the owner legally responsible for any consequences that may arise from the identified problems.

Additionally, the owner of a building that catches fire may face a civil lawsuit – regardless of whether or not owner has done something wrong.

## Fire Prevention 101: Know thy enemy

Understanding the nature of fire can help you prevent or fight it more effectively.

Three factors are required for a fire to start and keep burning: oxygen, heat and fuel. This is often referred to as the fire triangle. In essence, a form of fuel must be heated in the presence of oxygen for a fire to burn. Remove any one of the elements, and a fire cannot occur.

**FUEL:** Fuel for fires can be any combustible material or substance, whether it is a solid, liquid or gas. While the steel supports in a building won't burn, the wooden beams, furniture, wallpaper and fabrics will. Other examples of fire fuels include sheets and towels, plastic shower stalls, kerosene, paints, oil, natural gas, hydrogen, propane and candle wax.

**HEAT:** Fires create heat, but they also need a heat source to start. Heat can come from chemical, electrical and mechanical sources. Examples include static electricity, a chemical reaction between bleach and oil rags, friction and compressed gas.

**OXYGEN:** Oxygen sustains life, and also sustains fire. Oxygen itself doesn't burn, but the more oxygen that is present during a fire, the faster the burning process, and vice-versa.

### **THE FIRE TRIANGLE**

