The following are excerpts from the Alberta Fire Code (AFC) and the National Fire Protection Association (NFPA). These represent some of the most common infractions that we come across during our inspections.

What is the Alberta Fire Code?
The AFC is a document that works hand in hand with the Alberta Building Code (ABC) and is designed to maintain adequate fire protection that was built in as per the Building Code.

What is the NFPA?
NFPA is an international nonprofit membership organization founded in 1896 as the National Fire Protection Association. Today, with more than 75,000 members representing nearly 100 nations and 320 employees around the world, NFPA serves as the world's leading advocate of fire prevention and is an authoritative source on public safety. In fact, NFPA's 300 codes and standards influence every building, process, service, design, and installation in the United States, as well as many of those used in other countries.

NFPA's focus on true consensus has helped the association's code-development process earn accreditation from the American National Standards Institute (ANSI). Examples of NFPA-developed codes include some of the world's most referenced and respected:

- NFPA 1, Fire Prevention Code™
  Provides the requirements necessary to establish a reasonable level of fire safety and property protection in new and existing buildings.
- NFPA 10, Standard for Portable Fire Extinguishers.
- NFPA 54, National Fuel Gas Code
  The safety benchmark for fuel gas installations.
- NFPA 70, National Electrical Code®
  The world's most widely used and accepted code for electrical installations.
- NFPA 101®, Life Safety Code®
  Establishes minimum requirements for new and existing buildings to protect building occupants from fire, smoke, and toxic fumes.

NFPA Inspection Manual Regarding Flexible Cords (extension cords)
There are a number of several unsafe practises involving flexible cords that may result in fires. Among these are using them in place of fixed wiring. Extension cords should be used only to connect portable equipment that is being used temporarily, not as part of the permanent wiring of a building. Nor should they be used to supply equipment that will load them beyond their rated capacity. Flexible cords should not be nailed, tacked, or stapled to woodwork or tied or taped to pipes. Nor should they be spliced or repaired: A damaged cord should be replaced with a new cord of the proper size and type. The termination of a cord should not be relied on to provide mechanical support. Rather, cords should be clamped in a connector or knotted in an approved manner where they enter appliances to keep them from placing stress on the terminations. Flexible cords should never be left where they can be damaged by vehicles, carts, or pedestrian traffic. Nor should they be left coiled or hanked or run under rugs or carpets.

DOORS, ENTRANCES and EGRESSES
AFC 2.7.1.2 Open Floor Areas
(1) Aisles in conformance with Sentences (2) to (4) shall be provided in every flor area that
(a) is not subdivided into rooms or suites served by corridors giving access to exits, and
(b) is required by the Alberta Building Code 2006 to have more than one egress doorway.
(2) Every required egress doorway shall be served by an aisle that
(a) has a clear width not less than 1100mm,
(b) has access to at least one additional egress doorway, and
(c) at every point on the aisle, provides a choice of 2 opposite directions by wich to reach and egress doorway.
AFC 2.7.1.6. (1) Every means of egress will be kept free of obstruction.
AFC 2.7.2.1. (6) Exit doors and exit hardware shall be maintained in good repair.
AFC 2.2.2.4. (2) Doors in a fire separations shall be inspected daily to ensure that they remain closed unless the door is equipped with an accepted hold-open device that will permit the door to close automatically in the event of a fire.
AFC 2.2.2.1. Openings in Fire Seperations
(1) Openings in Fire Separations shall be protected with closures in conformance with the Alberta Building Code 2006
(2) Where closures in Fire Separations are replaced, the replacements shall be in conformance with the Alberta Building Code 2006.
AFC 2.2.2.2. Where closures are damaged so as to effect the integrity of their fire protection rating, such damaged closures shall be repaired so that the integrity of the closure is maintained in conformance with Article 2.2.2.1.

NFPA reference
2-1.4.1 Self-Closing Doors.
Self-closing doors shall swing easily and freely and shall be equipped with a closing device to cause the door to close and latch each time it is opened. The closing mechanism shall not have a hold-open feature.
2-1.4.2 Automatic-Closing Doors.
Automatic-closing doors shall be permitted to close automatically by means of the installation of a closing device and one of the following:
(a) A separate, labelled, fail-safe door holder/release device or a hold-open mechanism that shall be permitted to be an integral part of the basic closing device
(b) An integral closing device that allows the door to swing freely during normal operation and that automatically closes the door during an alarm condition, provided the hold-open mechanisms are released by one or a combination of automatic fire detectors acceptable to the authority having jurisdiction
7.2.1.7 Panic Hardware and Fire Exit Hardware.
7.2.1.7.1 Where a door is required to be equipped with panic or fire exit hardware, such hardware shall meet the following criteria:
(1) It shall consist of a cross bar or a push pad, the actuating portion of which extends across not less than one-half of the width of the door leaf.
(2) It shall be mounted as follows:
(a) New installations shall be not less than 865 mm (34 in.), nor more than 1220 mm (48 in.), above the floor.
(b) Existing installations shall be not less than 760 mm (30 in.), nor more than 1220 mm (48 in.), above the floor.
(3) It shall be constructed so that a horizontal force not to exceed 66 N (15 lbf) actuates the cross bar or push pad and latches.
7.2.1.7.2 Only approved panic hardware shall be used on doors that are not fire doors. Only approved fire exit hardware shall be used on fire doors.
7.2.1.7.3 Required panic hardware and fire exit hardware, in other than detention and correctional occupancies as otherwise provided in Chapter 22 and Chapter 23, shall not be equipped with any locking device, set screw, or other arrangement that prevents the release of the latch when pressure is applied to the releasing device.

2.7.3 Exit and Emergency Lighting
AFC 2.7.3.1 Installation and Maintenance
(1) Exit Lighting, Exit Signs and Emergency Lighting shall be provided in buildings in conformance with the Alberta Building Code 2006 (see appendix A)
(2) Exit lighting and exit signs shall be illuminated during the times the building is occupied.
(3) Emergency lighting shall be maintained in operating condition, in conformance with **Section 6.5**
AFC 6.5.1.1 Inspection, Testing and Maintenance
AFC 6.5.1.6 Inspection of Unit Equipment
(1) Self-Contained emergency lighting unit equipment shall be inspected at intervals not greater than one month to ensure that
(a) pilot lights are functioning and not obviously damaged or obstructed,
(b) the terminal connections are clean, free of corrosion and lubricated when necessary,
(c) the terminal clamps are clean and tight as per manufacturer's specifications,
(d) the battery surface is kept clean and dry, and
(e) the lightheads are aligned in an acceptable manner.
(2) Self-Contained emergency lighting unit equipment shall be tested
(a) at intervals not greater than one month to ensure that the emergency lights will function upon failure of the primary power supply, and
(b) at intervals not less than 12 months to ensure that the unit will provide emergency lighting for the duration equal to the design criterion under simulated power failure conditions.
(3) After completion of the test required in clause (2)(b), the charging conditions for voltage and current and the recovery period shall be tested to ensure that the charging sytem is functioning in accordance with the manufacturer's specifications.

NFPA Reference
A.11.10.1.8 In stores, for example, an otherwise adequate exit sign could be rendered inconspicuous by a high-intensity illuminated advertising sign located in the immediate vicinity.
Red is the traditional color for exit signs and is required by law in many places. However, at an early stage in the development of the Code, a provision made green the color for exit signs, following the concept of traffic lights in which green indicates safety and red is the signal to stop. During the period when green signs were specified by the Code, many such signs were installed, but the traditional red signs also remained. In 1949, the Fire Marshals Association of North America voted to request that red be restored as the required exit sign color, as it was found that the provision for green involved difficulties in law enactment that were out of proportion to the importance of safety. Accordingly, the 10th edition of the Code specified the use of red where not otherwise required by law.

Emergency Lighting
7.9.2 Performance of System.
7.9.2.1 Emergency illumination shall be provided for not less than 1½ hours in the event of failure of normal lighting. Emergency lighting facilities shall be arranged to provide initial illumination that is not less than an average of 10.8 lux (1 ft-candle) and, at any point, not less than 1.1 lux (0.1 ft-candle), measured along the path of egress at floor level. Illumination levels shall be permitted to decline to not less than an average of 6.5 lux (0.6 ft-candle) and, at any point, not less than 6.5 lux (0.06 ft-candle) at the end of the 1½ hours. A maximum-to-minimum illumination uniformity ratio of 40 to 1 shall not be exceeded.
7.9.2.2 The emergency lighting system shall be arranged to provide the required illumination automatically in the event of any interruption of normal lighting due to any of the following:
(1) Failure of a public utility or other outside electrical power supply
(2) Opening of a circuit breaker or fuse
(3) Manual act(s), including accidental opening of a switch controlling normal lighting facilities
7.9.3 Periodic Testing of Emergency Lighting Equipment.
7.9.3.1 Required emergency lighting systems shall be tested in accordance with one of the three options offered by 7.9.3.1.1, 7.9.3.1.2, or 7.9.3.1.3.
7.9.3.1.1 Testing of required emergency lighting systems shall be permitted to be conducted as follows:
(1) Functional testing shall be conducted at 30-day intervals for not less than 30 seconds.
(2) Functional testing shall be conducted annually for not less than 1½ hours if the emergency lighting system is battery powered.
(3) The emergency lighting equipment shall be fully operational for the duration of the tests required by 7.9.3.1.1(1) and 7.9.3.1.1(2).
(4) Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction.

Fire Extinguishers
AFC 6.2.1.1. (1) Portable fire extinguishers shall be selected and installed in conformance with **NFPA 10** "Portable Fire Extinguishers" and with the requirements of this code.

Excerpts from NFPA 10
1.5.2 Portable fire extinguishers shall be maintained in a fully charged and operable condition and shall be kept in their designated places at all times when they are not being used.
1.5.3 Fire extinguishers shall be conspicuously located where they will be readily accessible and immediately available in the event of fire. Preferably, they shall be located along normal paths of travel, including exits from areas.
1.5.6 Fire extinguishers shall not be obstructed or obscured from view. In large rooms, and in certain locations where visual obstructions cannot be completely avoided, means shall be provided to indicate the extinguisher location.
1.5.7 Portable fire extinguishers other than wheeled extinguishers shall be installed securely on the hanger, or in the bracket supplied by the extinguisher manufacturer, or in a listed bracket approved for such purpose, or placed in cabinets or wall recesses. Wheeled fire extinguishers shall be located in a designated location.
5 Distribution of fire extinguishers
5.2.3 Where the area of the floor of a building is less than that specified in Table 5.2.1, at least one fire extinguisher of the minimum size recommended shall be provided.

Table 5.2.1 Fire Extinguisher Size and Placement for Class A Hazards

Criteria	Light (Low) Hazard Occupancy	Ordinary (Moderate) Hazard Occupancy	Extra (High) Hazard Occupancy
Minimum rated single extinguisher	2-A*	2-A*	4-A†
Maximum floor area per unit of A	3000 ft2	1500 ft2	1000 ft2
Maximum floor area for	11,250 ft‡	11,250 ft‡	11,250 ft‡

extinguisher			
Maximum travel distance to extinguisher	75 ft	75 ft	75 ft

6.1 General
6.1.4* Maintenance, servicing, and recharging shall be performed by trained persons having available the appropriate servicing manual(s), the proper types of tools, recharge materials, lubricants, and manufacturer's recommended replacement parts or parts specifically listed for use in the fire extinguisher.

6.2 Inspection
6.2.4.3 Records shall be kept on a tag or label attached to the fire extinguisher, on an inspection checklist maintained on file or by an electronic method that provides a permanent record.

6.3 Maintenance.
6.3.1 Frequency. Fire extinguishers shall be subjected to maintenance at intervals of not more than 1 year, at the time of hydrostatic test, or when specifically indicated by an inspection or electronic notification.

Restaurants

10.2.3 Automatic fire-extinguishing systems shall comply with standard UL 300, Standard for Fire Testing of Fire Extinguishing Systems for Protection of Restaurant Cooking Areas, or other equivalent standards and shall be installed in accordance with the requirements of the listing.
11.2.1 An inspection and servicing of the fire-extinguishing system and listed exhaust hoods containing a constant or fire-actuated water system shall be made at least every 6 months by properly trained and qualified persons.

11.3 Inspection of Exhaust Systems.
The entire exhaust system shall be inspected by a properly trained, qualified, and certified company or person(s) acceptable to the authority having jurisdiction in accordance with Table 11.3.

Table 11.3 Exhaust System Inspection Schedule

Type or Volume of Cooking Frequency	Frequency
Systems serving solid fuel cooking operations	Monthly
Systems serving high-volume cooking operations such as 24-hour cooking, charbroiling, or wok cooking	Quarterly
Systems serving moderate-volume cooking operations	Semi-annually

11.4 Cleaning of Exhaust Systems.

11.4.1 Upon inspection, if found to be contaminated with deposits from grease-laden vapours, the entire exhaust system shall be cleaned by a properly trained, qualified, and certified company or person(s) acceptable to the authority having jurisdiction in accordance with Section 11.3.