



# The Building and Fire Code for the Health and Safety Professional

Alberta OHS Conference - 2023

# Today's Presenter



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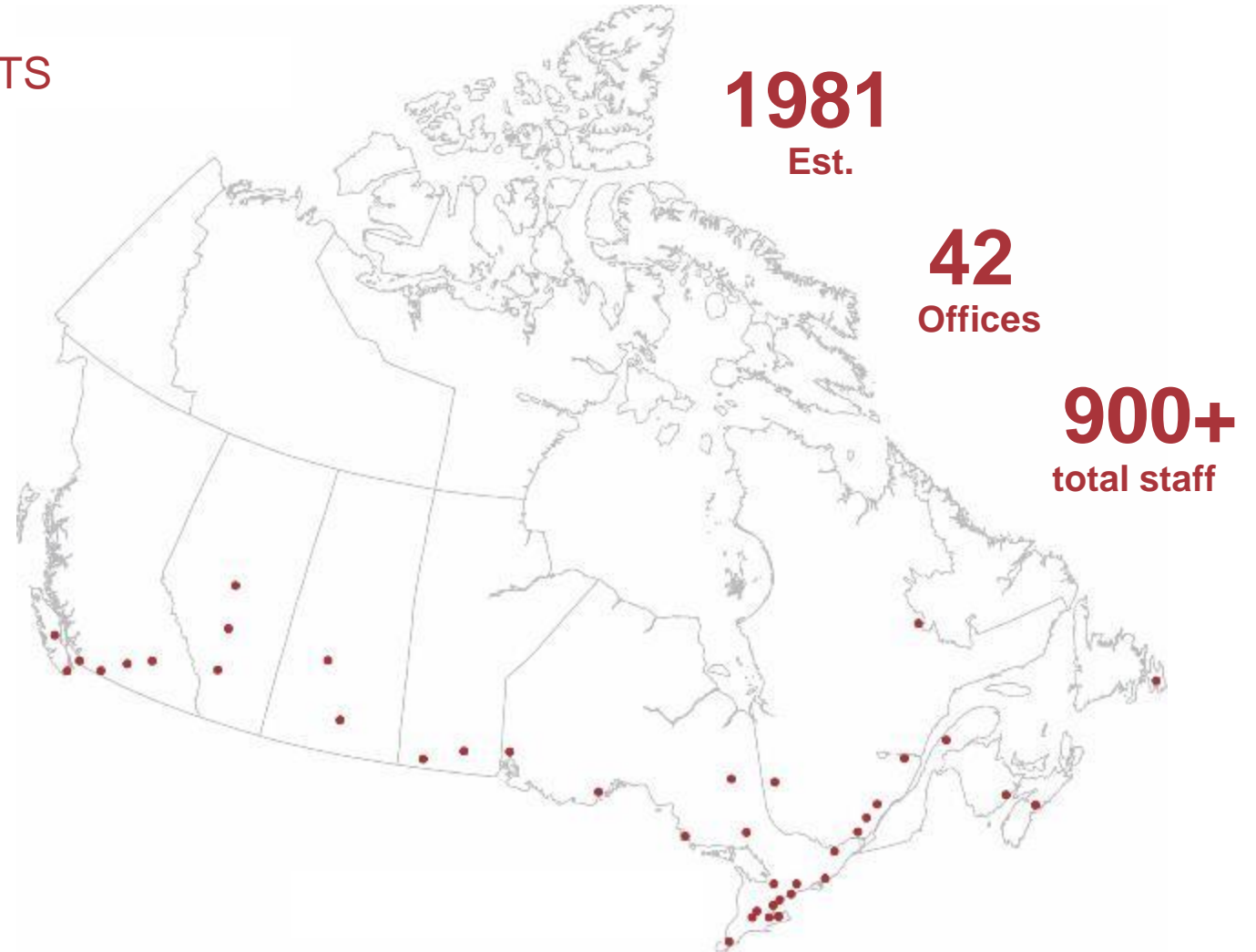
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# Background and Basics

# The NRC and the Model Codes



# The NRC and the Model Codes



The Canadian Commission on Building and Fire Codes (CCBFC), an independent committee of volunteers established by the National Research Council of Canada (NRC), is responsible for developing and updating Codes Canada publications. It oversees the work of eleven committees and several task groups involving as many as 300 members. The system is structured such that it is the members of the committees who establish the content of the model codes, based on input from the codes stakeholder community. Member expertise from industry, the regulatory community and general interest groups is balanced to ensure that all relevant sectors and geographical areas of the country are represented. These committees are administratively and technically supported by the NRC's Codes Canada.

# The Model Codes in Alberta



The Codes in Alberta are overseen by Municipal Affairs through the Alberta Safety Codes Council.

The Council is an independent regulatory body made up of industry stakeholders and staff. They were formed in 1993 by the introduction of the Safety Codes Act to deliver programs on behalf of the government of Alberta.



# The Model Codes in Alberta



The Building and Fire Codes in Alberta while based on the National Codes, are NOT exactly the same as the National Codes.

The Alberta Government has committed to “full” harmonization of the Codes, with the current plan to harmonize at the next Code cycle (anywhere from 2-5 years out).

The harmonization does not require Division C to be harmonized, so several aspects related to Alberta-specific solutions and guidance will remain in Division C post harmonization (but not all – more on that later).



# Can I Access the Codes for Free?



## Search

From [National Research Council Canada](#)

 Q Search

[Advanced search](#) [Search tips](#)

### 12 search results for “Alberta Edition”

[Subscribe to these results via Atom](#) [Export as CSV](#)

#### National Fire Code: Alberta 2019 Edition

[Safety Codes Council. Fire Sub-Council](#)

The National Fire Code of Canada 2015, together with the National Building Code of Canada 2015, the National Energy Code of Canada for Buildings 2017

### Filter your results

▼ Format

Text (12)

▼ Type

Standard or Specification

<https://nrc.canada.ca/en/certifications-evaluations-standards/codes-canada>

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2019

# National Building Code – Alberta Edition



National Research  
Council Canada

Conseil national de  
recherches Canada

Canada

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# Basic Structure of the Building Code



Division A - defines the scope of the NBC(AE) and presents the objectives that the Code addresses and the functions the building must perform to help to satisfy those objectives.

Division B - “acceptable solutions” refers to the technical provisions contained in the Code. It reflects the principle that building codes establish an acceptable level of risk or performance and underlines the fact that a code cannot describe all possible valid design and construction options. The term provokes the question “To whom are these solutions considered acceptable?” Acceptable solutions represent the minimum level of performance that will satisfy the NBC(AE)’s objectives

Division C – Administrative Provisions

# Basic Structure of the Building Code



While Div. B provides the minimum acceptable solutions, the Code also allows for the use of “alternative solutions” (issues as Variances in Alberta) – these must provide demonstrably equal or better solutions to those in the Code and must be approved prior to use.

The biggest difference between the Building Code and Fire Code is that the Building Code is a “code of the day” piece of legislation – if your building was built in 1976 and you haven’t done any modifications to it since, you only have to meet the Building Code requirements (with very rare exception) of 1976, not what they are today. The Fire Code is more related to ongoing maintenance of various life-safety systems, so changes there apply when the Code changes.

# So, What Triggers Meeting the Newest Code?



- a) the design of a new building,
- b) the construction of a new building,
- c) the occupancy of any building,
- d) the change in occupancy of any building,
- e) an alteration to any building,
- f) an addition to any building,
- g) the demolition of any building,
- h) the reconstruction of any building that has been damaged by fire, earthquake or other cause,

# So, What Triggers Meeting the Newest Code?



- i) the correction of an unsafe condition in or about any building or property,
- j) all parts of any building affected by a change in occupancy,
- k) the work necessary to ensure safety in parts of any building that i) remain after demolition, or ii) are affected by, but are not directly involved in, additions or alterations,
- l) the installation, replacement, or alteration of materials regulated by this Code,
- m) the installation, replacement, or alteration of equipment regulated by this Code,
- n) the work necessary to ensure safety in a relocated building during and after relocation, and
- o) safety during construction of a project, including protection of the public and neighbouring properties.

**Division A Compliance, Objectives and Functional Statements**

- Part 1 Compliance
- Part 2 Objectives
- Part 3 Functional Statements



**Division B Acceptable Solutions**

- Part 1 General
- Part 2 Reserved
- Part 3 Fire Protection, Occupant Safety and Accessibility
- Part 4 Structural Design
- Part 5 Environmental Separation
- Part 6 Heating, Ventilating and Air-conditioning
- Part 7 Plumbing Services and Health
- Part 8 Safety Measures at Construction and Demolition Sites
- Appendix C Climatic and Seismic Information
- Appendix D Fire-Performance Ratings

**Division C Administrative Provisions**

- Part 1 General
- Part 2 Administrative Provisions
- Appendix B Schedules of Professional Involvement

**Index**

**Volume 2**

**Division B Acceptable Solutions**

- Part 9 Housing and Small Buildings
- Part 10 Relocatable Industrial Accommodation
- Part 11 Exterior Acoustic Insulation

# What Building Am I?



- A1 – Assembly occupancies intended for the production and viewing of the performing arts
- A2 – Assembly occupancies not elsewhere classified in Group A
- A3 – Assembly occupancies of the arena type
- A4 – Assembly occupancies in which the occupants are gathered in the open air
- B1 – Detention occupancies in which persons are under restraint or are incapable of self-preservation because of security measures not under their control
- B2 – Treatment occupancies
- B3 – Care occupancies



# What Building Am I?



C – Residential occupancies

D – Business and personal services occupancies

E – Mercantile occupancies

F1 – High-hazard industrial occupancies

F2 – Medium-hazard industrial occupancies

F3 – Low-hazard industrial occupancies

# Why Does the Classification Matter?



# How Do I Know When It's Alberta Specific?



## 3.2.5.10. Hose Connections

- 1) Hose connections shall be located in *exits*, in accordance with NFPA 14, "Installation of Standpipe and Hose Systems."
- 2) Hose connections are not required within a *floor area*.
- 3) Hose connections shall be provided with sufficient clearance to permit the use of a standard fire department hose key.
- 4) Except as permitted by Sentence (5), 65 mm diam hose connections shall be installed in a standpipe system. |
- 5) Hose connections for 65 mm diam hose are not required in a *building* that is not more than 25 m high, measured between *grade* and the ceiling level of the top *storey* and in which an automatic sprinkler system is not installed. |

# So, What About All Those Referenced Standards?



Some are 😊, some are not 😞.

Many CSA Standards related to OHS are available for free viewing online, but many related to the Model Codes are not.

Thankfully, all NFPA standards are available for free viewing online.

The screenshot shows the CodeFinder website interface. At the top, there is a search bar with the text "SEARCH codes, agencies" and a location filter "IN countries, regions, etc.". To the right of the search bar, there are filters for "Country: Canada" and "Region: Alberta". The main content area displays a list of results for "United States of America & American Territories" (26,348 NFPA References), "Brazil" (11 NFPA References), "Canada" (837 NFPA References), "Alberta" (81 NFPA References), and "Alberta Municipal Affairs - Safety Services" (81 NFPA References). A map is visible on the right side of the interface.

# Use by the OHS Professional



Almost certainly, you have inherited a building that is already built; assuming that it had all the right permits, and there have been no alterations, modifications, or change of use, the building was built and passed to the Code of the Day.

However, where you want to be involved is when there are plans to changes, modifications, alterations, etc – anything that would involve aspects of the building that will need to meet new Code requirements.

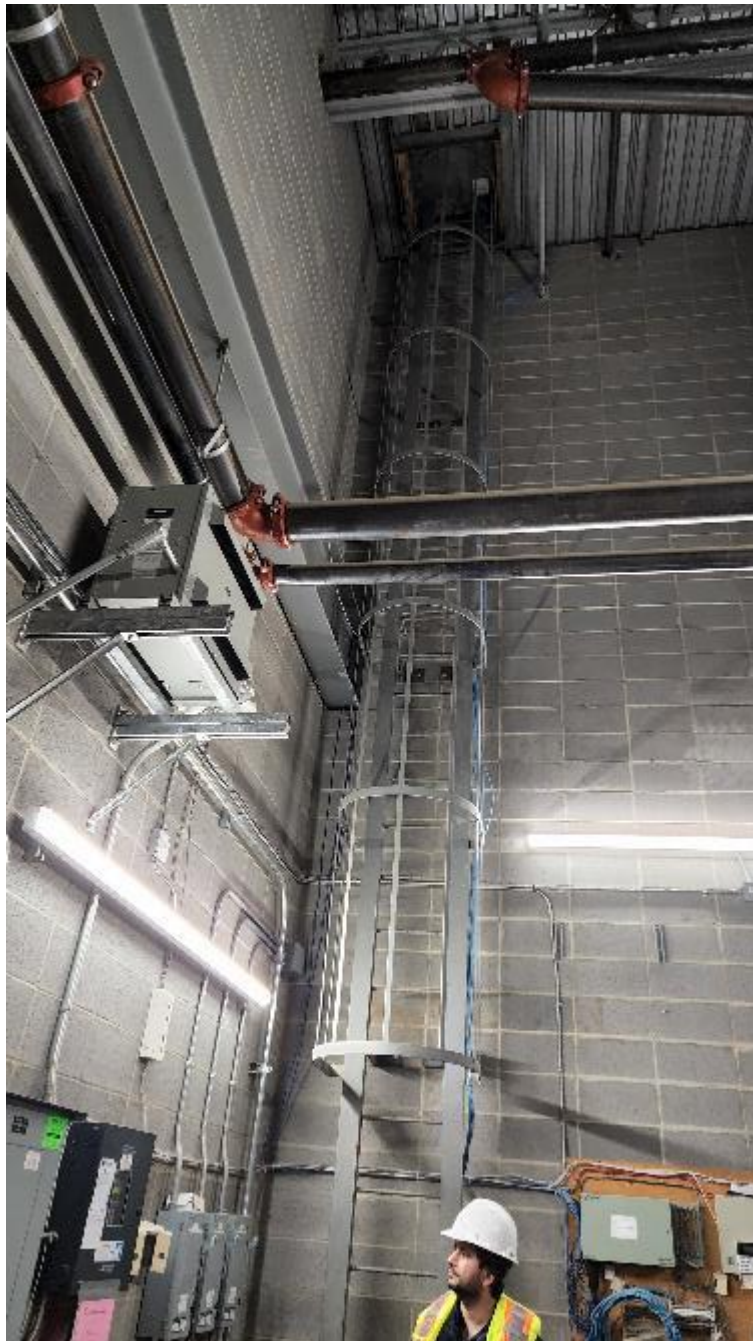
More common – changes, alterations, etc were made and permits were NOT applied for – that's when the jeopardy appears.

# Example Issues for the OHS Professional



So, it met the Building Code, that means it meets ALL other legislation as well, right?



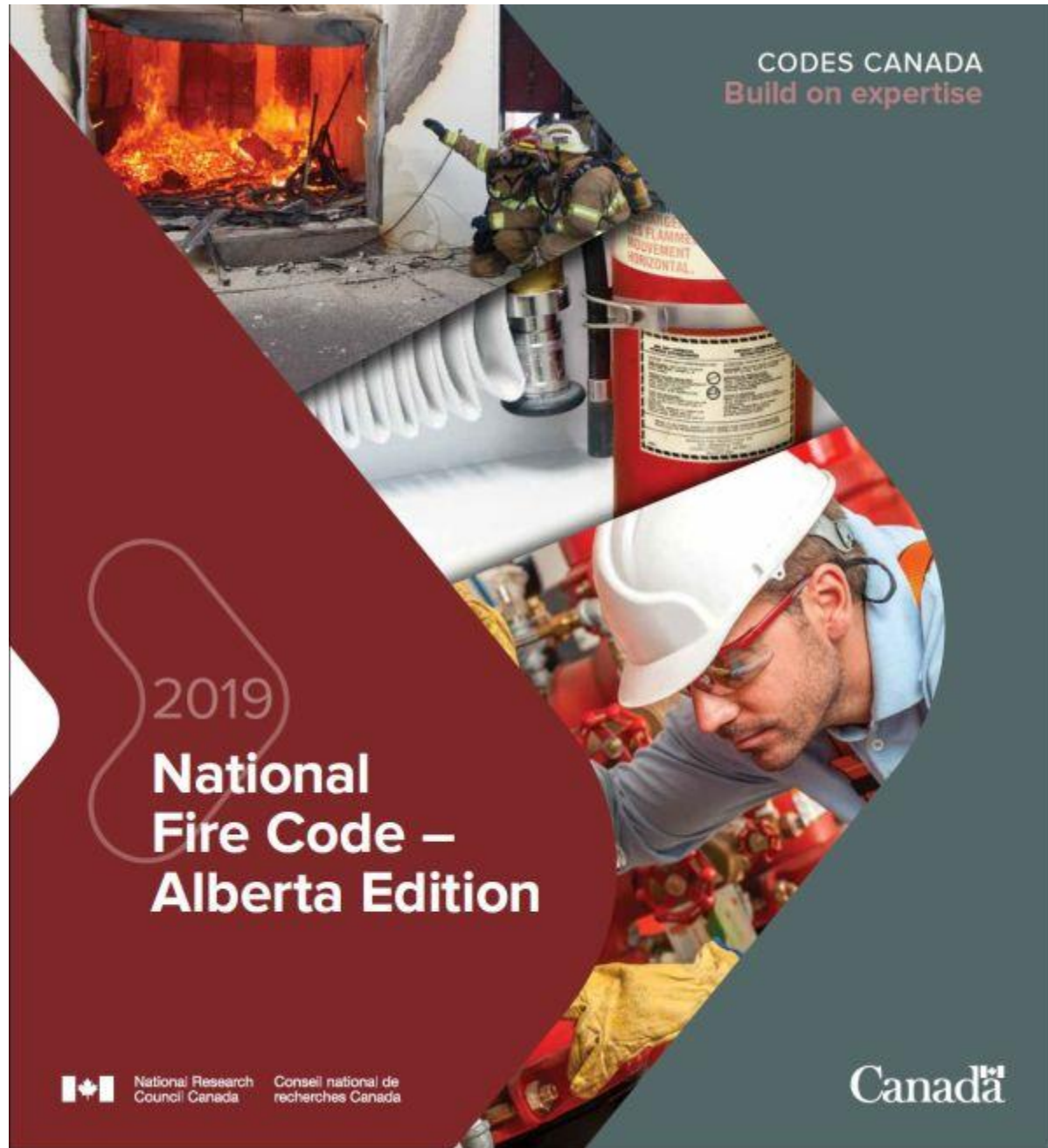


Roof access ladders for many of the newer warehouse structures exceed the OHS requirement of a max height of 30' without a landing





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# National Fire Code – Alberta Edition



National Research  
Council Canada

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recherches Canada

Canada

# Basic Structure of the Fire Code



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Division C – Administrative Provisions



**Division A      Compliance, Objectives and Functional Statements**

- Part 1            Compliance
- Part 2            Objectives
- Part 3            Functional Statements

**Division B      Acceptable Solutions**

- Part 1            General
- Part 2            Building and Occupant Fire Safety
- Part 3            Indoor and Outdoor Storage
- Part 4            Flammable and Combustible Liquids
- Part 5            Hazardous Processes and Operations
- Part 6            Fire Protection Equipment
- Part 7            Fire Emergency Systems in High Buildings

**Division C      Administrative Provisions**

- Part 1            General
- Part 2            Administrative Provisions

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# Basic Structure of the Fire Code



The overall system and structure of the Fire Code is identical to the Building Code.

The items that are Alberta specific are referenced the same way.

It is expected that buildings comply with both the NBC(AE) and the NFC(AE). The NBC(AE) generally applies at the time of construction and reconstruction while the NFC(AE) applies to the operation and maintenance of the fire-related features of buildings in use.

# Common Sections for the Safety Professional



While nearly all of the Fire Code has some application to the day to day Safety Professional, Parts 3, 4 and 5 are key.

Insert example from Part 3

# Common Items



While nearly all of the Fire Code has some application to the day to day Safety Professional, Parts 3, 4 and 5 are key.

Insert example from Part 3

# Shipping Containers



# Example Issues – Flammable Storage





# Items Store Around Electrical Panels



# Exits



# Storage in General



# Sprinkler and Alarm Inspections



It is a common misunderstanding that sprinkler and alarm systems only need inspections annually – the certification inspection is annual, but there are many components that need inspection monthly and some that need inspection daily.

Ex. All alarm systems need to have the power light checked daily and the function of the system monthly (but these inspections do not need to be done by certified technicians).

[www.nfpa.org](http://www.nfpa.org) has sample inspection forms available.

# Ensuring Qualifications



Company fined \$270K, president fined \$30K for Alberta Fire Code violations



# You Can Support Your Safety Codes Officer



There are numerous examples where OHS Code can actually support your safety codes officer – and it’s good to be on the good side 😊

The Building Code does not well define “thoroughfare” for emergency exits very well – whereas the OHS Code is performance based – the picture at the right was considered an acceptable thoroughfare (even in winter) under the Building Code as escape for a seniors home.



# Summary



- Building Code is “Code of the Day” unless modified or changed in use.
- Large sections of the Fire Code have OHS implications.
- Where there are variances between the Building and Fire Codes, the Fire Code wins.
- Where there are conflicts or variations between the Codes, the most restrictive applies.
- Easy to search – key aspect is to make sure you are in the right section, or that the section applies to your situation (what a daycare needs is not the same as an industrial site).
- If you are an OHS professional supporting an industrial operation, you need to know the Fire Code.

A photograph of a group of people in a meeting, with several hands raised in the air. A semi-transparent red banner is overlaid across the center of the image, containing the word "QUESTIONS?" in white, bold, uppercase letters. The background is slightly blurred, showing a dark blue wall with some bokeh light effects.

QUESTIONS?