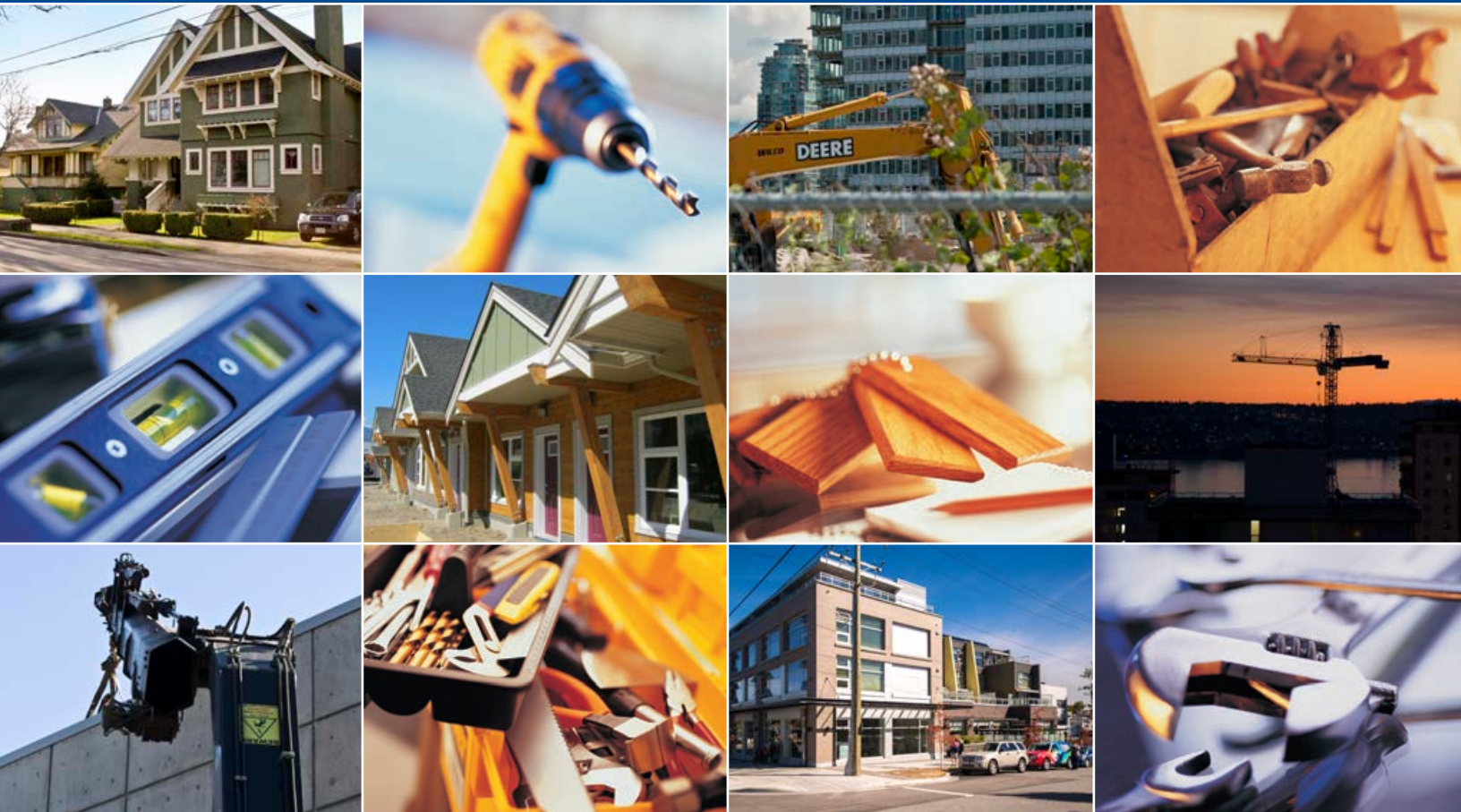




BUILDING ACT GUIDE SERIES: SECTION A1

# Understanding B.C.'s Building Regulatory System

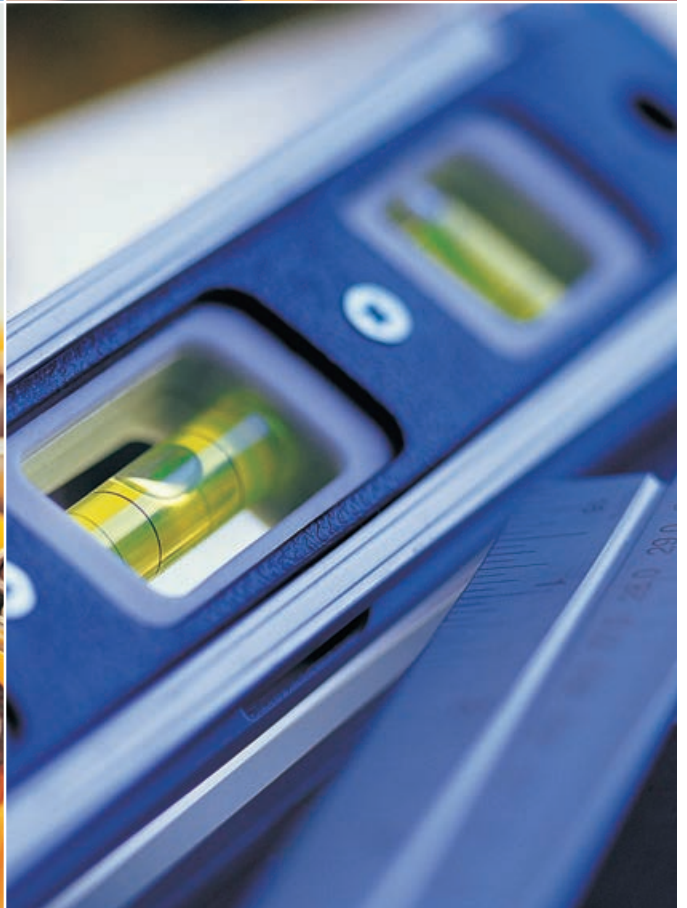
JUNE 2015



Office of Housing and Construction Standards

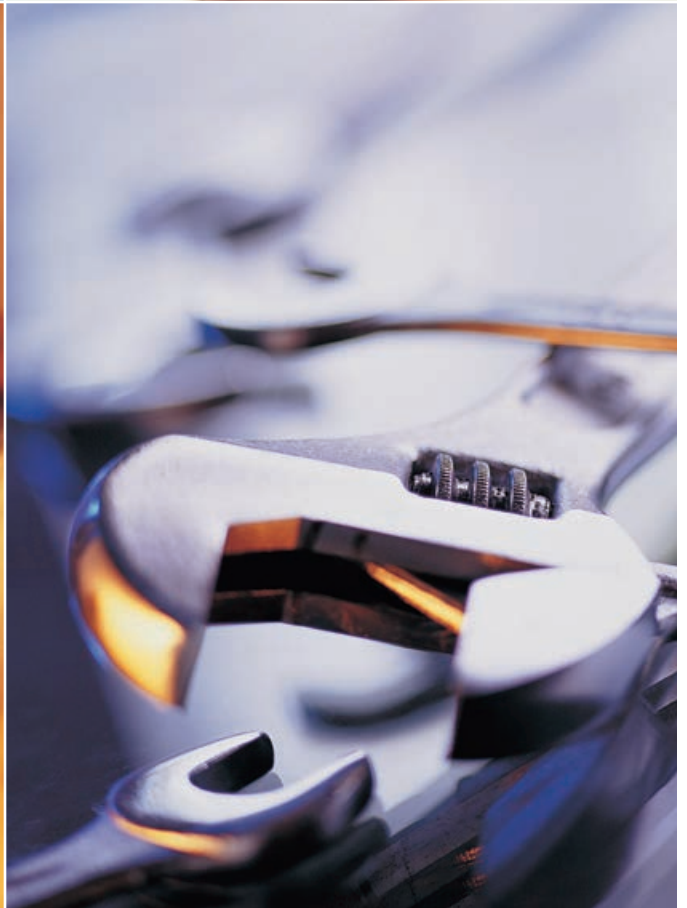
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# Introduction

This guide is for anyone who'd like a simple explanation of 'the rules' about how buildings get built in British Columbia. Learn more about:

- » Why we regulate building;
- » The British Columbia Building Code;
- » The role of local governments and building officials; and
- » Professional requirements in the construction industry.

We expect the buildings that we live and work in to be safe, healthy, well-built and affordable.

There are many different ways to construct buildings, and many different types of buildings, so we need a set of rules that govern how buildings get built. These rules are commonly called building requirements. The Province sets building requirements for several reasons:

- » So people have safe and healthy buildings to live and work in; and
- » To support best practices and create efficiencies in the building construction industry.

Setting building requirements requires balancing public health and safety concerns with social and economic interests. In fact, building requirements started as a way to reduce damage caused by fires that spread quickly through buildings. Today, our building requirements represent some of the most important safety measures in B.C.

Building requirements can be found in the BC Building Code and other provincial building regulations.

For example, under the BC Building Code, homes are required to have insulation and in colder climates the insulation requirements are higher.

## Who Does What?

Each level of government has a role in regulating building. In Canada, the federal *Constitution Act* gives the provincial and territorial governments responsibility for regulating building and construction.

In British Columbia, the *Building Act* gives the Province the authority to set the BC Building Code and other provincial building regulations. Setting regulations at a provincial level helps foster more consistent requirements throughout B.C.

*Q: What are building requirements?*

*A: Building requirements are technical requirements for the construction, alteration, repair and demolition of buildings. A building requirement can define the methods, materials, products, assemblies, dimensions or performance to be used when building.*

*Q: What are local authorities?*

*A: Local authorities are official bodies that may choose to administer and enforce provincial building regulations such as the BC Building Code. Local authorities are usually local governments, but they also include Treaty First Nations, Nisga'a Lisims Government and the University of British Columbia's Board of Governors.*

*Since most local authorities are local governments, this guide uses the term 'local government.'*

#### **DID YOU KNOW?**

*The BC Plumbing Code is actually part of the BC Building Code (Book 2). Users often consider them separate documents, but by law they are one.*

The Province gives local governments the ability to administer and enforce provincial building requirements, including the BC Building Code. Local governments also have powers of their own that govern related matters such as land use, property development or heritage conservation.

In a nutshell, the *Constitution Act* gives the Province responsibility to regulate building and construction, and the Province gives local governments limited authority to administer and enforce the BC Building Code.

## What's the BC Building Code?

The BC Building Code is a provincial building regulation. It applies to the construction of new residential, commercial, institutional and industrial buildings, and to alterations and additions to existing buildings. It also applies if the use of the building changes, such as from a house to an office.

The BC Building Code sets minimum standards for:

- » Health;
- » Safety;
- » Fire and structural protection;
- » Accessibility; and
- » Energy and water efficiency.

The BC Building Code is based on the model National Building Code and an updated Code is issued every five years.

The B.C. Building Code regulates building in two main categories: simple buildings and complex buildings, commonly called Part 9 and Part 3 buildings. In general, a single family home is a good example of a Part 9 building while a shopping mall is an example of a Part 3 building.

Building requirements for each type of building are based on the differences in their size and use. While there are no hard and fast rules about the types of buildings in each category, each has general characteristics.

MAIN TYPES OF BUILDINGS		
	Part 3 Buildings (Complex)	Part 9 Buildings (Simple)
Size	All buildings over three storeys in height or over 600 square metres in footprint. Some buildings three storeys or less in height or under 600 square metres in area that are of a specific use.	Most buildings three storeys and under in height and with a footprint of 600 square metres or less.
Description	Buildings intended for public gatherings, residential care, detention or high-hazard industrial activities. Some larger buildings intended for residential, commercial or medium-to-low hazard industrial activities.	Small buildings intended for residential, commercial or medium-to-low hazard industrial activities.
Examples	Shopping malls Office buildings Condos Apartment buildings Hospitals Care facilities Daycares Schools Churches Theatres Restaurants	Houses and duplexes Small apartment buildings Small commercial buildings with stores or offices Small industrial shops

Buildings that fulfil the requirements of the BC Building Code are said to 'comply with' or 'meet' the Building Code. Compliance is achieved in two ways:

- » By doing exactly what the Building Code says—or meeting the prescribed requirements; or
- » By proposing an alternative solution that performs as well as an acceptable solution.

An acceptable solution means doing exactly what the Building Code requirement says. An alternative solution means doing something different that achieves an equivalent result.

#### DID YOU KNOW?

*A building has to meet the BC Building Code in force when it's built. A building that's already built and in use doesn't have to be updated each time the Building Code changes unless it's being altered. Then, only the part being altered has to meet the current code. For example, an addition to an existing home has to meet the code in force when the addition is built, but the existing part of the home doesn't have to change.*

## DID YOU KNOW?

*The BC Building Code applies throughout the province, except in the City of Vancouver. Under the Vancouver Charter, the City of Vancouver has authority to adopt bylaws to regulate the design and construction of buildings. It does this through the Vancouver Building Bylaw. It's the only community in B.C. with this authority. All other jurisdictions use the BC Building Code.*

## Not a One-Size-Fits-All Model

Sometimes people think the BC Building Code is a 'one-size-fits-all' model — that a building built in one community must be built exactly the same way in another community. The BC Building Code is more flexible than that. There are three different features that give the BC Building Code flexibility:

1. Regional or site requirements;
2. Performance-based requirements; and
3. Alternative solutions.

### REGIONAL OR SITE REQUIREMENTS

BC Building Code requirements may differ depending on local variables like climate, geology and urban density. This means there may be different building requirements in different parts of the province. For example, variables such as urban density may require different code requirements even within the same community.

#### EXAMPLES OF REGIONAL OR SITE REQUIREMENTS

##### *Climate*

Requirements for rain-screen cladding, earthquake design, snow-load capacity, heating requirements and window and door standards differ depending on the climate zone in which the building is built.

For example, rain-screen cladding is required in the Lower Mainland, while buildings in Fort St John have higher requirements for snow-load capacity.

##### *Geology*

Radon is a naturally occurring soil gas that can be a health risk. Requirements for radon differ depending on the radon level in the area where a building is built.

The BC Building Code has two radon areas: areas where testing reveals radon levels could be high and radon venting pipes are needed (such as Castlegar and Prince George), and areas where radon levels are not known for having an elevated risk and radon venting pipes are not required.

##### *Urban Density*

Buildings can be built closer to each other depending on fire department response times, the use of sprinklers, and construction features of the building such as the type of siding used or the amount of window exposure it has.



## PERFORMANCE-BASED REQUIREMENTS

The requirements in the BC Building Code are designed to meet objectives. An example of an objective is limiting unacceptable risk of injury from fire.

Objective-based requirements can be either prescriptive or performance based. Prescriptive requirements mean you have to build exactly as the BC Building Code says. Performance-based requirements identify the level of performance you have to achieve when you build, but leave you free to decide how to meet it.

For example, the BC Building Code requires a radon vent pipe in most of the province. The code offers one approach for those who prefer knowing exactly how to install radon vent pipes, and a second approach that simply states the objective to be met when radon vent pipes are installed.

<b>EXAMPLES OF REQUIREMENTS IN THE BC BUILDING CODE FOR RADON</b>	
<i>Prescriptive Requirements: State what you have to do</i>	<i>Performance-based Requirements: Provide flexibility to decide yourself</i>
<p>A radon vent pipe must be extended to the outdoors and</p> <ol style="list-style-type: none"><li>1. Terminate:<ol style="list-style-type: none"><li>a. At least 1 m above and at least 3.5 m in any other direction from any air inlet, door or openable window;</li><li>b. At least 2 m above and at least 3.5 m in any other direction from a roof that supports an occupancy; and</li><li>c. At least 1.8 m from a property line.</li></ol></li><li>2. Be shielded from the weather in accordance with Sentence 6.2.3.12.(3).</li><li>3. Be protected from frost closure by insulating the pipe or by some other manner, if subject to frost closure, and prevent the accumulation of moisture in the pipe.</li></ol>	<p>A radon vent pipe must be extended to the outdoors and terminate outside the building in a manner that does not constitute a hazard.</p> <p>Note: The merits of a solution using this option would be measured against the prescriptive solution.</p>

## DID YOU KNOW?

*The term 'alternative solution' first appeared in the 2006 BC Building Code. Before that, alternative solutions were called 'equivalencies.'*

## DID YOU KNOW?

*The BC Fire Code is a regulation under the Fire Services Act. The Office of the Fire Commissioner is the key contact for fire departments throughout the province on the Fire Code and related issues.*

## ALTERNATIVE SOLUTIONS

The BC Building Code allows alternative solutions which are “alternative” ways to meet Building Code requirements. If the proposed alternative solution performs as well as the acceptable solution, then it can be used.

For example, the BC Building Code requires some buildings, like apartment buildings, to have fire separations to reduce the spread of fire. This means that some walls must have specific fire-resistant ratings. A designer might want to have glass walls when people exit an elevator into an underground parking garage — to make people feel safer because they can see where they’re going. However, because glass can shatter easily during a fire, it can only be used in limited amounts in fire separation walls — it can’t be used for the entire wall. The designer could propose using a dedicated fire sprinkler for the wall with the glass, and demonstrate that the fire sprinkler would keep the glass cool and intact in case of fire. The local building official could accept this alternative solution if they conclude it achieves the same objective as the acceptable solution.

Local governments decide whether to approve alternative solutions. Sometimes they rely on a registered professional — an architect or engineer — to verify if the alternative solution meets the BC Building Code.

### *The BC Fire Code*

The BC Fire Code is a companion document to the BC Building Code. Each deals with the safety of people in buildings in the event of a fire.

The Building Code generally applies at the time of construction or renovation. The Fire Code generally applies to the fire safety measures when a building is occupied. Buildings are expected to comply with both.

### *National Construction Codes*

To make sure building and fire codes are scientifically sound, nationally consistent and affordable to develop, the provinces and territories work with the National Research Council to develop National Construction Codes.

The National Construction Codes cover building, fire, plumbing and energy matters. They are designed with input from representatives from the construction sector and the public, and are published as model codes.

The National Construction Codes are regularly updated to:

- » Reflect new and improved technologies;
- » Address emerging health and safety issues; and
- » Meet the changing needs of the construction sector.

## ***B.C. Modifications of the National Construction Codes***

The Province adopts the National Construction Codes but with some changes specific to B.C.

<i>Examples of Differences</i>	<i>How the BC Building Code differs from the National Construction Codes</i>
Secondary suites	The BC Building Code had requirements for secondary suites before the model National Building Code did. Secondary suites were being built, so requirements were added to the BC Code for consistency in their construction. Provisions for secondary suites were first included in the 2010 model National Building Code, but they are formatted differently.
Residential mid-rise wood-frame construction	B.C. was the first province to allow wood-frame construction in residential buildings up to six storeys. The 2015 model National Building Code will permit six-storey wood-frame buildings for both residential and office use, with other commercial uses on the first two storeys.
Letters of Assurance	Letters of assurance were introduced in the 1992 BC Building Code. Letters of assurance are uniform, mandatory documents intended to clearly identify the responsibilities of key professionals in a building project. While they aren't required by the model National Building Code, many other provinces have since adopted similar requirements.

### **DID YOU KNOW?**

*The BC Codes are based on the National Construction Codes.*

*Most provinces and territories in Canada adopt some or all of the National Construction Codes — sometimes with modifications or additions — for use in their own jurisdictions.*

*MYTH: Every building must be inspected by a building official or it couldn't be built.*

*FACT: Local governments are empowered — but not obliged — to enforce the Building Code. Enforcement may or may not involve on-site monitoring of construction. The building owner is ultimately responsible for ensuring that construction work proceeds according to the requirements of the Building Code. This is the case for both new buildings under construction and existing buildings being altered, repaired or demolished.*

## What Do Local Governments Do?

The Province sets the BC Building Code, and local governments may choose to administer and enforce it, with limited authority. If they do administer and enforce the Code, they decide how and to what extent. Most local governments regulate building construction through bylaws. Typically, these bylaws address such matters as building and occupancy permits, fees and site inspections.

*MYTH: The Province sets 'all the rules' for building and construction.*

*FACT: Under the Building Act, only the Province can establish building requirements. However, local governments have authority over many related matters, including the administration of building and construction in their communities, such as:*

- » *Preparing official community plans;*
- » *Adopting zoning bylaws that govern land use;*
- » *Hearing rezoning applications, or applications for variances from zoning requirements;*
- » *Regulating development;*
- » *Enacting heritage conservation measures;*
- » *Setting design guidelines for neighbourhoods;*
- » *Determining development cost charges or community amenity contributions;*
- » *Issuing development and building permits;*
- » *Conducting building inspections; and*
- » *Issuing building occupancy permits.*

## What Do Building Officials Do?

Local governments hire building officials - sometimes referred to as building inspectors — to administer and enforce provincial building requirements.

Local building officials often review building plans and monitor construction for compliance. They make decisions on what the BC Building Code means and how it should be applied in their communities.

Before the *Building Act*, there were no minimum qualifications or continuing professional development requirements for building officials. Under the act, building officials have to meet mandatory qualification requirements to practice, and work within the scope of their qualifications. Local governments must only hire building officials who meet the qualifications.

A building official can be qualified to one of three levels. Each level represents greater complexity in building construction and greater expertise on the part of the building official:

- » **Level 1:** One- and two-family dwellings regulated under Part 9 of the BC Building Code.
- » **Level 2:** Other buildings regulated under Part 9 of the BC Building Code, including some small commercial buildings.
- » **Level 3:** Larger or more complex buildings regulated under Part 3 of the BC Building Code such as hospitals, schools and high-rise condo buildings.

## Who Settles Building Code Disputes?

Sometimes, disputes arise between construction professionals and building officials over the interpretation of the BC Building Code. These disputes are typically about what the Building Code means or how it should be applied. Usually, the construction professional and the building official can come to an agreement. If they can't reach an agreement, the Building Code Appeal Board is available to resolve disputes.

## Professional Requirements

To protect public safety, many professions involved with the design and construction of buildings are regulated.

Architects and engineers hired for a complex building project must approve plans submitted with the building permit application, to confirm the plans substantially comply with the BC Building Code.

Under the provincial *Architects Act*, only people registered with and certified to practice by the Architectural Institute of B.C. are authorized to practice architecture in B.C. Similarly, under the *Engineers and Geoscientists Act*, only people who are members of and licensed to practice by the Association of Professional Engineers and Geoscientists of B.C. are authorized to practice engineering.

### DID YOU KNOW?

*The Building Code Appeal Board is an independent body that helps resolve disputes between someone constructing or renovating a building and the local government enforcing the BC Building Code. Board decisions are final and binding, meaning they can't be challenged in court.*

## DID YOU KNOW?

*Owner builders can get an exemption from the warranty insurance and licensing requirements that apply to residential builders. An owner builder is a person authorized by the Homeowner Protection Office to build a new home for their personal use.*

Designer and builders design houses and small buildings to meet Building Code requirements for what are referred to as Part 9 buildings in the Building Code. Engineers and sometimes architects may also be involved in Part 9 buildings.

Residential builders who build or manage the construction of new homes and residential buildings must be licensed under the *Homeowner Protection Act* and may use the designation “Licensed Residential Builder.” In 2015, the Province introduced minimum qualifications for licensed residential builders, including demonstrating proficiency in seven areas related to the construction industry and continuing education.

## How are Consumers Protected?

New homebuyers should have confidence that their home is safe and their investment is protected.

The Homeowner Protection Office provides consumer protection by legally requiring home warranty insurance and licensing residential builders. In fact, local governments can't issue a building permit for a new home unless the applicant provides proof the new home will be covered by home warranty insurance and was built by a licensed builder.

## For More Information

This guide provides just a snapshot of B.C.'s building regulatory system. You can find more information from these and other websites:

**BUILDING AND SAFETY STANDARDS BRANCH**

*Office of Housing and Construction Standards*

[www.gov.bc.ca/buildingcodes](http://www.gov.bc.ca/buildingcodes)

**HOMEOWNER PROTECTION OFFICE**

[www.hpo.bc.ca](http://www.hpo.bc.ca)

**ARCHITECTURAL INSTITUTE OF BC**

[www.aibc.ca](http://www.aibc.ca)

**ASSOCIATION OF PROFESSIONAL ENGINEERS AND  
GEOSCIENTISTS OF B.C.**

[www.apeg.bc.ca](http://www.apeg.bc.ca)

**BC BUILDING CODE**

[www.bccodes.ca](http://www.bccodes.ca)

**BUILDING OFFICIALS' ASSOCIATION OF B.C.**

[www.boabc.org](http://www.boabc.org)

**CANADIAN CODES CENTRE**

[www.nrc-cnrc.gc.ca/eng/solutions/advisory/codes\\_centre\\_index.html](http://www.nrc-cnrc.gc.ca/eng/solutions/advisory/codes_centre_index.html)

**OFFICE OF THE FIRE COMMISSIONER**

[www.embc.gov.bc.ca/ofc/](http://www.embc.gov.bc.ca/ofc/)

**UNION OF BC MUNICIPALITIES**

*Local Government Fact Sheets*

[www.ubcm.ca/EN/main/services/publications/fact\\_sheets.html](http://www.ubcm.ca/EN/main/services/publications/fact_sheets.html)

FOR MORE INFORMATION PLEASE VISIT:  
[WWW.GOV.BC.CA/BUILDINGCODES](http://WWW.GOV.BC.CA/BUILDINGCODES)  
[WWW.GOV.BC.CA/BUILDINGACT](http://WWW.GOV.BC.CA/BUILDINGACT)



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