

An Introduction for Homeowners

The 2014 Vancouver Building By-Law

One and Two Family Homes

Heritage

Character

VANCOUVER
HERITAGE
FOUNDATION



WHY THIS GUIDE

The 2014 Vancouver Building By-Law was launched in 2014 and came into effect on January 1st, 2015. Vancouver Heritage Foundation has prepared this guide in collaboration with City of Vancouver staff to assist homeowners in understanding and following the By-Law requirements. Even if you are familiar with the 2007 By-Law, there are substantial changes that you will need to be aware of.

Retaining heritage and other older homes is important to the sustainability, economy and culture of the city. Vancouver Heritage Foundation is dedicated to supporting heritage conservation and encouraging the rehabilitation and reuse of buildings. VHF hopes that this guide will make the By-Law requirements clearer, avoiding unnecessary waste and cost. While By-Law requirements need to be met, it is usually possible to do this while still retaining the historic features and fabric of the home.



This document has been prepared to provide an introduction to the 2014 Vancouver Building By-Law requirements and is intended for guidance only. It has been prepared with the input and assistance of City of Vancouver staff. However, the By-Law, official bulletins and the decisions of City of Vancouver staff can take precedence over any statements in this document. It is recommended that options are explored in discussion with City of Vancouver staff, and that qualified professionals are consulted and engaged on construction projects. Appropriate approvals should always be obtained.

GLOSSARY OF TERMS

By-Law The 2014 Vancouver Building By-Law, often referred to as the building code.

Character House A house that is considered to have heritage character merit by City of Vancouver staff, but is not listed on the Vancouver Heritage Register.

Heritage House A house that is listed on the Vancouver Heritage Register.

REFERENCE DOCUMENTS

2014 Vancouver Building By-Law, City of Vancouver.

Conservation of Heritage Buildings and Compliance with Vancouver's Building By-Law (VBBL). Bulletin 2014-07-BU, City of Vancouver.

Front cover photo credit: *Houses on Union Street*. Martin Knowles Photo/Media

TABLE OF CONTENTS

Section One **Introduction and Overview** 4

 Who this guide is for

 Overview: Projects involving existing homes

Section Two **How the By-Law affects your home** 6

 Existing Homes

 Heritage Houses and the By-Law

 Character Houses

Section Three **Requirements when doing work** 8

 What has to be done

 What may be required

Section Four **Types of projects** 10

 Repairs and restoration work

 Building an addition

 Adding a secondary suite

 Moving or lifting a house

 Change of Use

Section Five **Further Resources** 13

 Help with energy efficiency

 VHF resources



photo credit: Martin Knowles Photo/Media

SECTION ONE

INTRODUCTION AND OVERVIEW

If you are making changes to your home you may need to consider the requirements of the Vancouver Building By-Law. The By-Law, often referred to as the building code, sets out the minimum standards required for any new construction in the city of Vancouver. It also applies to existing buildings when work is being done, including rehabilitation of a building, building an addition, changing the use of a building or adding a secondary suite. The By-Law requirements aim to ensure that buildings are safe, efficient and usable for residents for the long-term, addressing health and safety, access, fire and structural aspects, as well as energy and water efficiency.

WHO THIS GUIDE IS FOR

This introduction to the 2014 Vancouver Building By-Law is intended particularly for owners of heritage or character homes who are planning alterations.

This guide will be useful in planning a wide variety of projects, large or small, that involve retaining an existing one or two family home:

- Restoration work
- Additions, reconfiguring the layout or adding a secondary suite
- The renovation or rehabilitation of a home that will remain in residential use

If the intention is to strata-title the home, there are different requirements. Other building types and uses are also subject to different regulations and are not addressed in this guide.



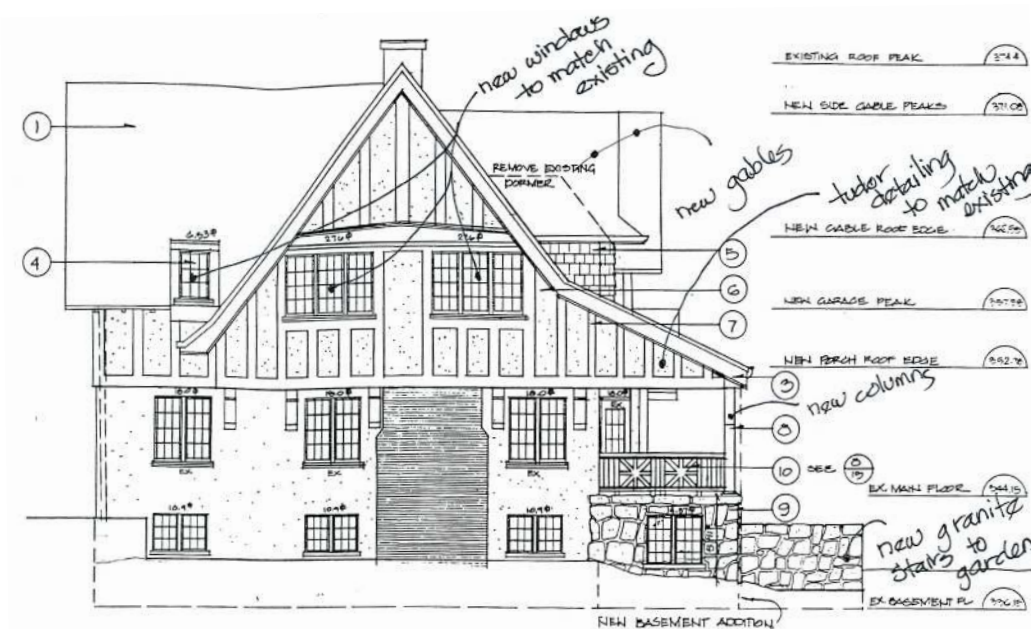
This guide is relevant for one and two family character and heritage homes including Mid-Century Modern, such as this 1947 home, which is listed on the Vancouver Heritage Register, as well as other older homes.

Photo credit: Andre Rowland

OVERVIEW: PROJECTS INVOLVING EXISTING HOMES

Previous versions of the By-Law included some specific provisions for heritage buildings which continue in the 2014 By-Law. A December 2014 bulletin expanded this to character homes and has added some further flexibility, particularly regarding energy efficiency and custom windows. Additionally, when dealing with heritage elements of a home, there is an established process for a registered professional on the project, either an accredited architect or engineer, to propose alternate solutions for discussion with City staff.

In general, new work, such as an addition, will need to meet new construction requirements. However, the existing part of the building does not have the same requirements. Historic homes were built under different guidelines and do not need to be altered to conform fully to current new construction regulations.



Historic homes can be successfully restored and updated. Planning that considers how heritage elements will be retained and restored is essential.

When planning a project for an older home, VHF recommends working with qualified professionals and tradespeople who have knowledge and experience of historic construction, and who are sensitive to how it can best be retained. This can make a significant difference to the end result in terms of cost, performance and historic character, as well as the smooth running of the project.

VHF maintains lists of professionals and trades and can help connect you with the right people. For more on finding qualified and experienced people visit **Section 5**.

SECTION TWO

HOW THE BY-LAW AFFECTS YOUR HOME

EXISTING HOMES

If making alterations, there are three main aspects that you will need to consider in order to comply with the By-Law:

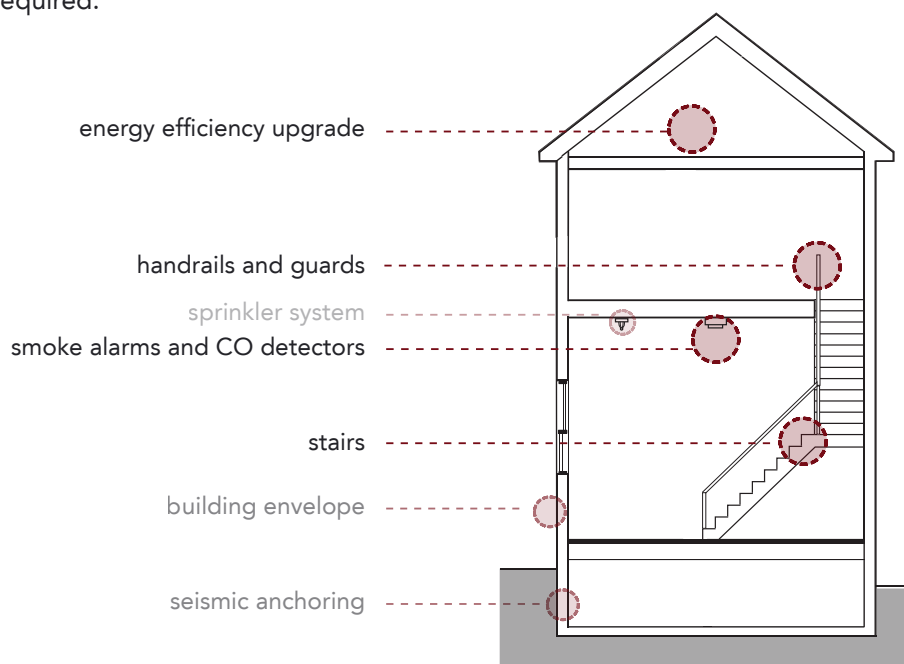
- Address any safety issues with stairs, handrails and guards*
- Install smoke alarms and carbon monoxide detectors
- Make some energy efficiency upgrades

For larger projects, there may be additional requirements. If the project includes significant structural alteration such as building an addition or adding a floor to a home, you will need to consider seismic upgrades. Where a large proportion of the cladding on a building face is being repaired or replaced, building envelope upgrading may be needed for that wall. For major projects, or if units are added, you may need to install a sprinkler system. More information on each of these areas is offered on the following pages.

If you are choosing to do only certain upgrades voluntarily, such as installing sprinklers, improving exits or accessibility, seismic upgrades, energy efficiency, building envelope repairs, other upgrading, other than the correction of any safety issues, is not required.



Above: Addressing hazardous stair elements such as missing treads and handrails is a typical requirement under the By-Law. See Section Three for more on stairs.



typical requirement



may be a requirement



requirement in major project only

* If any other elements of the home are unsafe, they will also need to be addressed. See page 8 for guidance on addressing unsafe conditions.

HERITAGE HOUSES AND THE BY-LAW

If a home is on the Vancouver Heritage Register, it can take advantage of the options available for heritage buildings in the By-Law and related bulletin. These aim to avoid unnecessary removal of heritage fabric and features, both exterior and interior.

A Statement of Significance is a useful starting point for planning any work to a heritage house. This document is typically researched and written by a heritage professional or consultant. It identifies the heritage values of the home and the important elements that should be retained during any changes made to the building or site. It can help you safeguard the special features of your home.

Windows are often a distinctive and important feature of a heritage house. Where the original windows still exist, these can be retained. If replacements are required for deteriorated windows, these can be made to match the historic ones with traditional materials and be approved for performance by a registered professional on the project.

Efforts to improve energy efficiency should be made – heritage houses are not excluded from this. However, the By-Law does not require intrusive measures such as removing interior or exterior finishes to accomplish this.

[Click here to read the Bulletin about heritage and character buildings](#)



A Heritage House: As the home above is listed on the Vancouver Heritage Register, there are different options for how it may meet By-Law requirements while avoiding unnecessary loss of heritage fabric and character.



A Character House: Many homes in Vancouver are not on the Vancouver Heritage Register, but may still be recognized by the City as having heritage character. These homes may also take advantage of alternative methods for meeting By-Law requirements.

photo credit: Martin Knowles Photo/Media

CHARACTER HOUSES

A house that is not on the Vancouver Heritage Register but that has many original character features may also be able to take advantage of the additional flexibility available to heritage houses. This is a new opportunity for the many character houses in the city and aims to encourage retention of these homes.

As with listed heritage homes, it is recommended that a plan which identifies the character elements of the home is created before planning work.

SECTION THREE

REQUIREMENTS WHEN DOING WORK

ENERGY EFFICIENCY

If you are investing in your home to make alterations, it makes sense to improve energy efficiency for comfort, as well as financial and environmental benefits. This can usually be done non-intrusively, without opening up walls or replacing windows. Actions that can make a significant difference include:

- Improving insulation in attics and foundation walls.
- Reducing air leakage through open gaps around doors and windows.
- Installing storm windows to reduce heat loss and outside noise.



Existing windows do not need to be replaced.

WHAT HAS TO BE DONE WHEN DOING WORK

If you are making alterations to a house, some upgrades are required by the By-Law.

Existing Stairs, Guards and Handrails

Unsafe conditions will need to be addressed. This would include broken treads or missing guards, etc. There is no other requirement to rebuild these elements to the standards for new construction unless they are being fully replaced or relocated as part of the planned work. There may be exceptions, for example if an attic space is being converted to living space or there is other added floor area served by the stair, an existing stairway may need to be upgraded to provide suitable access.

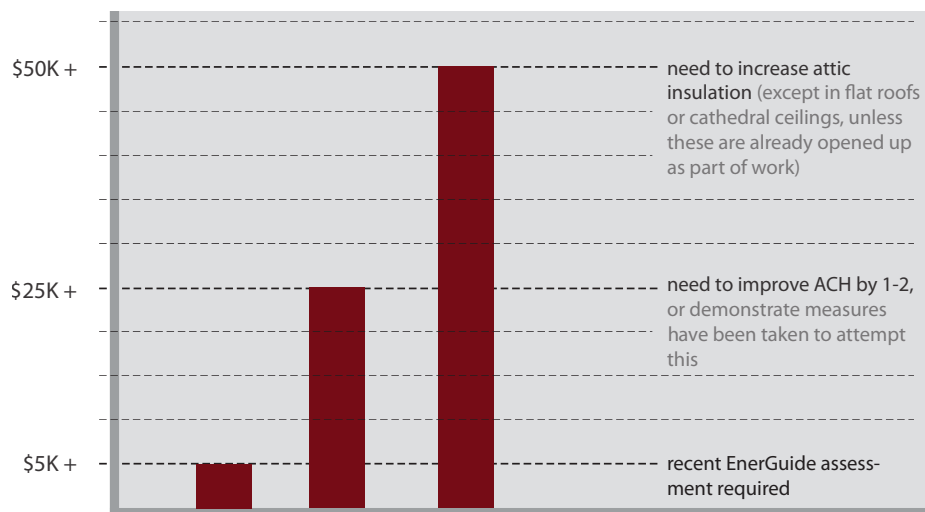
Alarms

Smoke alarms and carbon monoxide detectors must be installed. These are to be hard-wired and interconnected.

Energy Efficiency Improvements

Depending on the size of the project, various energy improvements are required.

- For a project with a value of \$5,000 or more, a recent EnerGuide home evaluation is required, completed within the last four years.
- For a project with a value of \$25,000 or more, air sealing measures are required to improve the Air Changes per Hour (ACH) by 1 or 2, unless the ACH is already less than 5.
- For a project with a value of \$50,000 or more, attic insulation will need to be improved. However, this does not apply to flat roofs or cathedral ceilings unless they are already being opened up as part of the work, whether from the interior or exterior.



Cumulative energy efficiency upgrades as required by project cost

See Section 5 for help with Energy Efficiency Upgrades

WHAT MAY BE REQUIRED

In addition to items outlined on Page 8, there are some upgrades you may need to consider. These requirements in the By-Law depend on the size of the project or the type of work being done.

Seismic Upgrading

Most older homes in Vancouver are wood frame construction sitting on a concrete foundation. If this junction of frame and foundation is being exposed as part of the work, the two need to be anchored together to secure the frame to the foundation.

For larger projects where the interior is being altered to create a more open floor plan, or when an addition is proposed, a structural assessment by an engineer will be required and structural upgrades may be needed.

Further Energy Efficiency Improvements

If a new boiler or furnace is being installed and the project value is over \$5,000, the annual fuel utilization efficiency (AFUE) of the new unit must be at least 90%.

If the work involves opening up a flat roof or cathedral ceiling, either from the interior, or for reroofing, the insulation value may need to be increased.

Exterior Walls

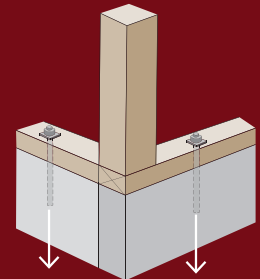
The exterior cladding system of a wall may need to be updated if most (usually more than 60% of the wall surface) of the existing cladding is being replaced. This may not be necessary for a heritage or character house where the original cladding can be an important historic element.

Adding a Sprinkler System

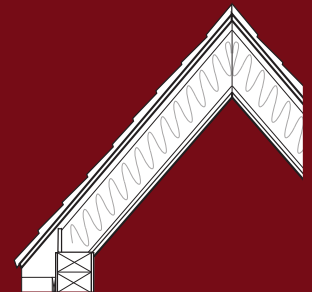
For major projects, the installation of a sprinkler system is likely to be required if the overall value of the project is more than 50% of the replacement value of the existing house. It may be required with other options available in the By-Law such as when proposing alternate compliance solutions.



Building Face Repair: Much of the siding on this historic house was in need of either repair or replacement prior to painting, but overall remained intact.



Many historic homes are built with a wood frame resting on a foundation. Seismic anchoring involves bolting the frame down to the foundation.



If opening up a cathedral ceiling (those with sloping sides that meet along a central ridge), insulation value may have to be increased.

SECTION FOUR

TYPES OF PROJECTS

EXCEPTIONS

If voluntary work is done and limited to smoke alarms, sprinklers, exits, accessibility, seismic, energy efficiency or building envelope repair, this does not trigger other code requirements other than the correction of unsafe conditions.

These upgrades can generally be carried out without having to do others.

Different types of projects have some different requirements and considerations. The most common types are looked at below.

REPAIRS AND RESTORATION WORK

On character and heritage homes, when there is a need to replace historic elements due to deterioration, these can be replicated in their original form, or a compatible form, and may not have to be made to new construction By-Law requirements. This can be important for achieving heritage restoration goals or maintaining the historic character of the home. This can apply to windows, doors and other exterior features such as siding.

It should be noted that restoration work must not create something that is unsafe or reduce the performance of the building. For example, a deteriorated or inefficient double-glazed unit could be replaced with a custom wood window with a double-glazed unit, but probably not with single glazing.



Above: The original windows of this character home had been replaced with aluminum frame windows. In restoring the home, the owner chose to install new, custom wood frame windows that fit with the home's heritage character.

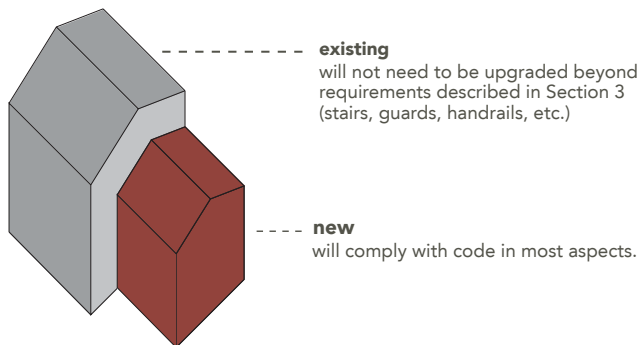
BUILDING AN ADDITION

Building an addition onto an existing home can be a positive way to keep the house in use and update it for modern living. Overall, the house is still considered to be an 'existing building' for the By-Law purposes. The new construction will need to meet most aspects of the By-Law, however the original part of the building will not need to be upgraded beyond the requirements outlined in Section Three.

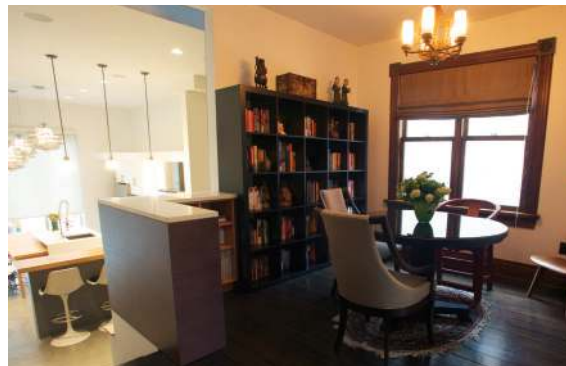
The requirements of new construction for providing adaptable housing, including adaptable bathrooms, lever door handles and wider doorways are not intended to apply to a project of this type if these are not already in place in the original house. The house does not need to be retrofitted to provide this.

Examples:

- In the original part of the house, existing traditional door knobs can be retained. In the addition, a consistent style can also be used. The addition is not limited to lever-style door handles.
- In the original part of the house, existing door widths can remain, and can be consistent, if desirable, in the new part also.
- Original windows can be retained. However, windows in the addition will usually need to comply as for new construction.



Example: Building an Addition



This Strathcona home was added onto at the rear, more than doubling its floor area. The existing house was able to retain many historic features without rebuilding them to current new construction requirements.



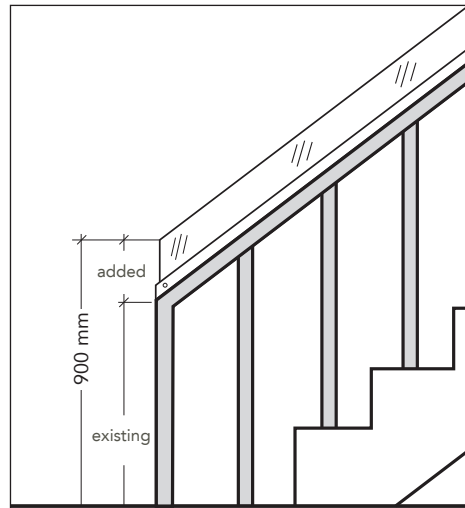
CHANGE OF USE (INCLUDING CHANGING TO STRATA)

If the use of the house is going to be different than the current one family or two family home, other upgrades will likely be required. This includes changing it to multiple units with strata title. A higher level of upgrade will aim to make it more similar to a new building in many aspects.

If the intent is to strata-title the property, this should be established at the beginning of the project.

ADDING A SECONDARY SUITE

When adding a secondary suite in an existing home, there are specific requirements for the suite itself which are laid out in the By-Law. However, there are some requirements that affect the rest of the house. Smoke alarms will need to be installed. The existing stairs can be retained but at least one handrail will need to meet the new construction standard. Existing guards throughout the house will need to be at least 900mm high – this can often be achieved by adding height sympathetically rather than replacing them.



MOVING OR LIFTING A HOUSE

It may be necessary to lift a house to build new foundations, to increase the ceiling height for a suite, or to reposition it on its lot. A house might even be moved to a new lot to save it from demolition. In all these cases, the requirements set out on pages 8 and 9 would apply. Given the scope of work to move or lift a house these upgrades are cost effective.



The scope of projects on existing homes varies considerably, from updating a kitchen or restoring a porch to additions and whole-house renovations. This guide aims to provide a clear introduction to the aspects of the 2014 Vancouver Building By-Law that you will need to consider when planning a project. But you will need more information and expert advice so below are some resources that may be helpful.

The 2014 Vancouver Building By-Law is available for purchase from the Queen's Printer. Copies may also be available at branches of the Vancouver Public Library in the future.

- [2014 Vancouver Building By-Law](#)
- [Bulletin: Heritage Buildings and the VBL](#)

The online version of this guide will be updated if further bulletins are issued.

HELP WITH ENERGY EFFICIENCY

Energy efficiency requirements are new in the 2014 By-Law. The starting point is an EnerGuide home evaluation. This is performed by a certified energy advisor who assesses the energy performance of your home and provides a rating and a report.

For the energy efficiency upgrades required in the By-Law, you may be able to access rebates to help with the cost of improving insulation, reducing air leakage, and installing a new high-efficiency boiler or furnace. Information on current rebate programs available to City of Vancouver homeowners is available from BC Hydro and Fortis BC.

VANCOUVER HERITAGE FOUNDATION RESOURCES

VHF supports homeowners and professionals in maintaining and restoring heritage buildings by providing information resources, educational programs and grants. Explore the VHF website and contact VHF staff if we can assist. Some resources you may find helpful include:

- **Trades and Professionals:** VHF can help connect you to professionals and tradespeople who have experience working with historic buildings and restoration techniques.
- **Case Studies:** VHF has researched ten different case studies on projects involving Vancouver buildings including homes. While not specific to the 2014 By-Law, these studies can provide ideas for how older buildings can be successfully updated.
- **Grants:** VHF offers four different grants to help with the costs for adding a home to the Heritage Register, planning conservation of historic elements, restoration work, and painting in historic colours.

[Vancouver Heritage Foundation](#)



VANCOUVER
HERITAGE
FOUNDATION

A publication of Vancouver Heritage Foundation, 2015.
Prepared in partnership with City of Vancouver.

Vancouver Heritage Foundation
City of Vancouver Heritage Planning Group
City of Vancouver Sustainability Group



Vancouver Heritage Foundation is a registered charity supporting the conservation of heritage buildings and structures in recognition of their contribution to the city's economy, sustainability and culture.

For more information about Vancouver Heritage Foundation please visit our website www.vancouverheritagefoundation.org

Like us on Facebook



Follow us on Twitter

