VANCOUVER HERITAGE FOUNDATION

Heritage Energy Retrofit Grant Program
Criteria for Storm Window Grant

Vancouver Heritage Foundation has partnered with the City of Vancouver to offer grant funds for the purchase and installation of storm windows, an effective approach to improving the energy performance of traditional windows.

The following information on wood storm windows has been adapted from the Provincial Heritage Branch of British Columbia's specifications for wood storm windows in heritage homes. In cases where other forms of storm windows are required (original metal and/or casement windows for example) please contact VHF to discuss suitable approaches for storm windows. For interior storm window options, please contact VHF.

Why a Wood Storm Window?

A traditionally-made wood storm window is a removable wood window that is mounted outside or inside of the existing windows, typically double hung windows, of a house to improve their energy efficiency and life-expectancy. It is a tried and tested traditional solution and serves as a seasonal (or sometimes permanent) retrofit for existing windows.

Wood storms are found throughout British Columbia and are gaining in popularity as a way of improving thermal efficiency in traditionally-constructed wood homes and heritage homes while retaining their special character. Wood storm windows are also very compatible with traditional wood-frame house construction exhibiting similar good physical characteristics of thermal performance and moisture transfer.

Other Benefits:
In addition to lowering heating bills, traditionally-made wood storm windows help to protect windows during inclement weather, reduce long-term maintenance costs, and prevent draughts to significantly improve the thermal comfort of the occupants. As a wood product, they are maintainable, often by an owner with basic skills, and may be repaired in a cost effective way when they need maintenance. Storm windows can also incorporate coatings to reduce the greenhouse effect that can cause summer overheating.

Energy Efficient Heritage Homes

Heritage homes constitute approximately half of the officially recognized historic places in Canada. Improving the energy efficiency of these valuable community assets requires a sensitive approach if they are to continue to contribute to the special character of the built environment. In recognition of this contribution, the Heritage Energy Retrofit Grant program offers assistance with storm windows for heritage and pre- 1940 homes. Homes do not need to be on the Heritage Register to qualify for this storm window grant.

For more information about all of VHF's granting programs, visit us online:
http://www.vancouverheritagefoundation.org/get-a-grant/

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Thank you to our project partners: City of Vancouver Sustainability Group and Water Engineering Department.

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Design and Performance Criteria for Wood Storm Windows

Heritage Energy Retrofit Grants are available for traditionally-constructed wood storm windows. To be eligible for a grant, a wood storm window must meet the following criteria.

1. Constructed from solid kiln-dried or well seasoned Douglas Fir or an equivalent durable exterior-use wood, jointed with through-mortise and tenon joinery for longevity;

2. Primed and undercoated prior to glazing and painted after glazing, glazing secured with putty;

3. Fitted with opening hardware that permits use for ventilation (and egress where required) even when in position;

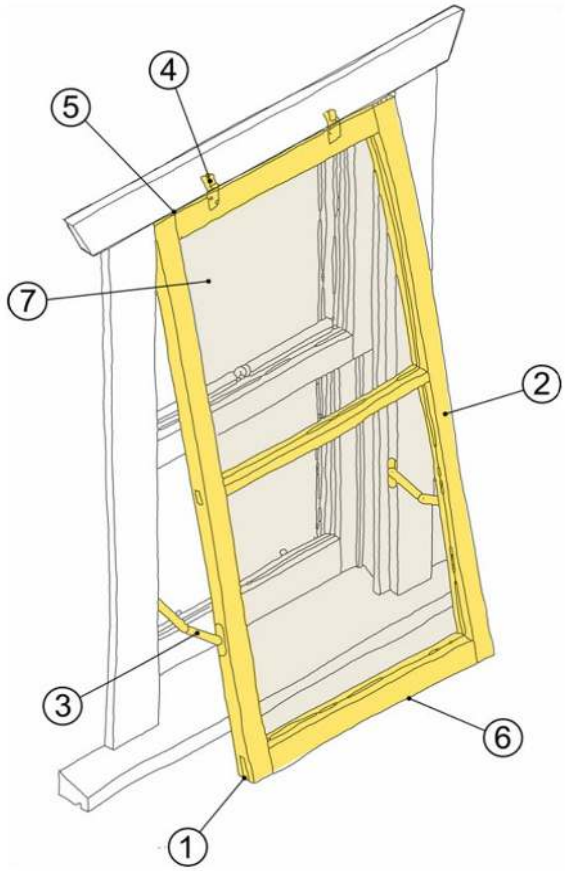
4. Attached using storm hangers permitting easy removal and storage in the summer and for ease of access to the existing window beneath;

5. Manufactured to allow moisture to escape to prevent condensation and rot;

6. Installed with bottom rail slope similar to that of the existing window sill;

7. To obtain the highest efficiency from the installation of a wood storm, windows may be single glazed, laminate glazed or thermally glazed;

8. The existing window over which the storm is being affixed should be well-maintained, in good decorative order, operable, tight fitting and, where appropriate retrofitted with durable draught exclusion such as sprung-bronze weather stripping.



9. Manufacturer must state "Storm windows meet construction criteria for VHF Heritage Energy Retrofit Storm Window Grant" on invoice to verify they meet the above requirements.

Technical Information

Installation of a wood storm window decreases the rate that the window assembly transmits heat to the outside and cold to the inside of a home. The following ranges of thermal transmittance for wood windows have been calculated by the American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE).

- A single-glazed wood window achieves a U value in the range 4.99W/m²°K to 5.62W/m²°K.
- A single-glazed wood storm window affixed over an existing single glazed wood window achieves a U value in the range of 2.49W/m²°K to 2.78W/m²°K. (Source: ASHRAE 1977 Fundamentals)

Thank you to the Provincial Heritage Branch, Ministry of Forests, Lands and Natural Resource Operations for the use of the diagram, and for permitting VHF to adapt this document from Branch specifications for the construction of heritage-appropriate storm windows.

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** For homes with different heritage windows, such as metal or casement windows and for information about interior storm window options, please contact VHF to discuss heritage appropriate storm window solutions.*