

Cost of Adaptability and Accessibility Features – Existing Modest House

INTRODUCTION

As our population ages, there is a growing interest within the housing sector in how the housing stock can be adapted to Canadians’ changing needs so they can live and age at home.

Five home models were studied: a two-bedroom bungalow, a two-bedroom semi-detached house, a three-bedroom detached house, a three-bedroom townhouse and a two-bedroom apartment (condominium).

The costs of incorporating adaptability and accessibility features into the five existing home models were determined for five Canadian cities: Montréal, Toronto, Vancouver, Halifax and Winnipeg.

GLOSSARY

To understand the different accessibility concepts mentioned in this study, it is important to define the terms used.

ACCESSIBLE: An accessible home is one in which a person using a wheelchair can enter and move to the inside of each room on every floor and use all the facilities.

ADAPTABLE: An adaptable home is one that is wheelchair-accessible at the entrance level only, in which a person using a wheelchair or other mobility aid, or with the assistance of a caregiver, can move to the inside of each room, and where the architectural features of the building make it possible to add a lift at a later time to make other floors accessible, without requiring major renovations.

FINDINGS

Taking into consideration the different home models and the varying extent of the necessary modifications to incorporate the adaptability and accessibility features, the total costs of modifying existing homes to make them adaptable were as follows (see table 1):

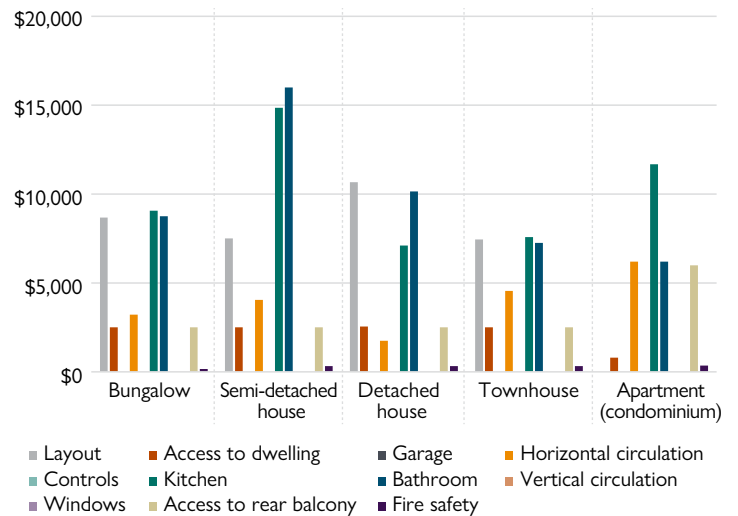
Table 1: Cost of converting a standard existing home into an adaptable home

	Montréal	Toronto	Vancouver	Halifax	Winnipeg
Bungalow	\$34,877	\$35,540	\$33,552	\$33,203	\$31,564
Semi-detached house	\$47,725	\$48,632	\$45,911	\$45,434	\$43,191
Detached house	\$35,045	\$35,711	\$33,713	\$33,363	\$31,716
Townhouse	\$32,144	\$32,755	\$30,923	\$30,601	\$29,090
Apartment (condominium)	\$31,235	\$32,422	\$30,985	\$30,548	\$29,361

Source: City of Montréal, RSMMeans (see full report for a detailed description of sources)*

The detailed costs for each of the adaptability features break down as follows (see table 2):

Table 2: Impact of adaptability features on the total cost of converting a standard existing home into an adaptable home



Source: City of Montréal, RSMMeans (see full report for a detailed description)

The following findings were identified:

- The adaptability features related to the layout, the kitchen and the bathroom were the ones that generated the most significant costs, generally between \$5,000 and \$10,000 per project.
- As well, for the layout of the detached house and the kitchen of the apartment (condominium), the costs exceeded \$10,000, and for the kitchen and the bathroom of the semi-detached house, the costs came close to or exceeded \$15,000.
- The features related to access to the dwelling, horizontal circulation and access to the rear balcony, for their part, generated costs below \$5,000, except in the case of the apartment (condominium) where horizontal circulation and access to the rear balcony, involved costs between \$5,000 and \$10,000.

Since it was necessary to start by making accessible plans in order to then determine the final configuration of the adaptable plans of existing homes, the costs of these accessible plans were assessed (see table 3):

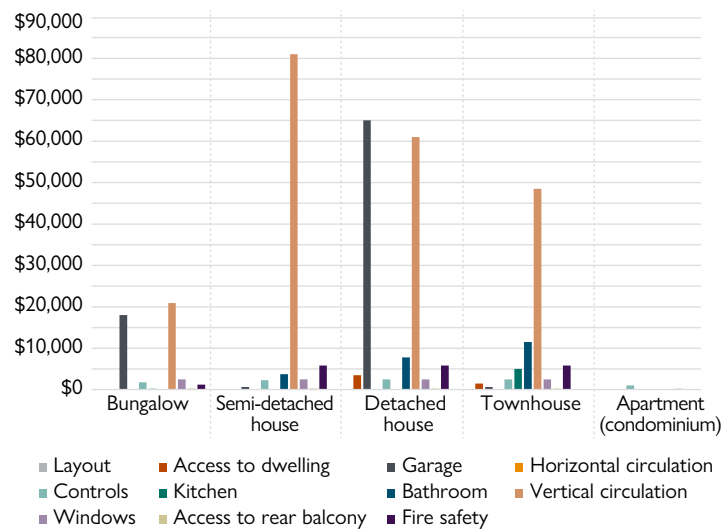
Table 3: Cost of converting an adaptable existing home into an accessible home

	Montréal	Toronto	Vancouver	Halifax	Winnipeg
Bungalow	\$45,010	\$45,865	\$43,300	\$42,850	\$40,734
Semi-detached house	\$96,460	\$98,293	\$92,795	\$91,830	\$87,296
Detached house	\$148,680	\$151,505	\$143,030	\$141,543	\$134,555
Townhouse	\$78,401	\$79,891	\$75,422	\$74,638	\$70,953
Apartment (condominium)	\$1,380	\$1,432	\$1,369	\$1,350	\$1,297

Source: City of Montréal, RSMMeans (see full report for a detailed description of sources)*

The detailed costs for each of the features break down as follows (see table 4):

Table 4: Impact of accessibility features on the total cost of converting an adaptable existing home into an accessible home



Source: City of Montréal, RSMMeans (see full report for a detailed description of sources)*

The following findings were identified:

- The accessibility features related to the garage and vertical circulation were the ones that generated the most significant costs.
- However, these features were not concerned in the case of the apartment (condominium).
- The varying costs for garage projects were consistent with the solutions, which differed considerably from one home to another.
- The cost for vertical circulation was lower for the bungalow, which has only two storeys.
- The semi-detached house stood out with a cost for vertical circulation of over \$80,000.
- The detached house stood out with costs for the features related to the garage and vertical circulation exceeding \$60,000, which generated the highest costs to make the home accessible.
- The townhouse stood out with costs in almost every category, including greater costs than the other housing types for the kitchen and the bathroom. These higher costs were because this home had two bathrooms upstairs and the standard model offered little potential for including an adaptable kitchen. The difference between including an adaptable kitchen and including an accessible one was therefore significant.

The research made it possible to compare the total costs that Canadian families would have to incur to make their home—whether new or existing—adaptable or accessible to wheelchair users (see tables 5, 6, 7, 8 and 9 in the full report*).

Based on these findings, the research hypothesis that it is more financially advantageous to include adaptability and accessibility features in a new home than in an existing one can be confirmed.

In addition to the demonstrated financial advantages, it also appeared that incorporating accessibility features right from the start of construction had functional benefits, as well. In fact, including accessibility features into existing homes resulted in decreased functionality for all housing types.

In a real-life environment, given the significant costs involved in making homes fully accessible, renovations to improve the performance of one or two spaces are probably more realistic for Canadian households with accessibility needs. The choice of the spaces or rooms will then depend on the specific needs of the occupants.

Table 5: Comparison of total costs of making new and existing homes accessible (Montréal)

	New Home			Existing Home			Difference	% Difference
	Adaptable Plan	Accessible Plan	Total	Adaptable Plan	Accessible Plan	Total		
Bungalow	\$14,816	\$18,505	\$33,321	\$58,797	\$16,740	\$75,537	\$42,216	227%
Semi-detached house	\$24,503	\$53,260	\$77,763	\$57,085	\$87,150	\$144,235	\$66,472	185%
Detached house	\$25,359	\$57,010	\$82,369	\$96,295	\$84,360	\$180,655	\$98,286	219%
Townhouse	\$15,617	\$36,210	\$51,827	\$100,515	\$21,300	\$121,815	\$69,988	235%
Apartment (condominium)	\$4,634	\$0	\$4,634	\$35,815	\$300	\$36,115	\$31,481	779%

Source: City of Montréal, RSMMeans (see full report for a detailed description of sources)*

IMPLICATIONS FOR THE HOUSING INDUSTRY

The findings concretely confirm that including adaptability features in new homes significantly reduces the potential cost of making the homes accessible, compared to making similar renovations to existing homes.

With our population aging and demand for adaptable and accessible housing on the rise, it is in the housing industry's best interest to adjust its offering accordingly.

Canadian families would then have the chance to enjoy living longer in better-performing and more functional homes, by spending significantly less than would be required to renovate their existing homes.

FURTHER READING

Full report – *Research Insight: Cost of Adaptability and Accessibility Features – Existing Modest Houses* (https://eppdscrmssa01.blob.core.windows.net/cmhcprodcontainer/sf/project/archive/research_4/cost_of_accessibility_features_fr.pdf)*

* The full report is available in French. A translation request form is included in the report should you require this document in English.

Project Manager:

Jorge Malisani
Researcher, Housing Needs
Canada Mortgage and Housing Corporation

Consultants:

Anna Kwon and Isabelle Cardinal
Architects - Société Logique



ALTERNATIVE TEXT AND DATA FOR FIGURES

Table 2: Impact of adaptability features on the total cost of converting a standard existing home into an adaptable home

	Layout	Access to dwelling	Garage	Horizontal circulation	Controls	Kitchen	Bathroom	Vertical circulation	Windows	Access to rear balcony	Fire safety
Bungalow	\$8,680	\$2,500	\$0	\$3,220	\$0	\$9,067	\$8,750	\$0	\$0	\$2,500	\$160
Semi-detached house	\$7,500	\$2,500	\$0	\$4,050	\$0	\$14,855	\$16,000	\$0	\$0	\$2,500	\$320
Detached house	\$10,670	\$2,555	\$0	\$1,750	\$0	\$7,100	\$10,150	\$0	\$0	\$2,500	\$320
Townhouse	\$7,450	\$2,500	\$0	\$4,550	\$0	\$7,574	\$7,250	\$0	\$0	\$2,500	\$320
Apartment (condominium)	N/A	\$805	N/A	\$6,200	\$0	\$11,680	\$6,200	N/A	\$0	\$6,000	\$350

Source: City of Montréal, RSMMeans (see full report for a detailed description of sources)*

Table 4: Impact of accessibility features on the total cost of converting an adaptable existing home into an accessible home

	Layout	Access to dwelling	Garage	Horizontal circulation	Controls	Kitchen	Bathroom	Vertical circulation	Windows	Access to rear balcony	Fire safety
Bungalow	\$0	\$0	\$18,000	\$0	\$1,800	\$200	\$0	\$20,950	\$2,500	\$300	\$1,260
Semi-detached house	\$0	\$0	\$700	\$0	\$2,340	\$0	\$3,760	\$81,000	\$2,500	\$300	\$5,860
Detached house	\$0	\$3,500	\$65,000	\$0	\$2,520	\$0	\$7,800	\$61,000	\$2,500	\$300	\$5,860
Townhouse	\$0	\$1,500	\$700	\$0	\$2,520	\$5,011	\$11,510	\$48,500	\$2,500	\$300	\$5,860
Apartment (condominium)	\$0	\$0	\$0	\$0	\$1,080	\$0	\$0	\$0	\$0	\$300	\$0

Source: City of Montréal, RSMMeans (see full report for a detailed description of sources)*