



Debunk the Myths about Universal Design

BUILDEX Vancouver Conference 2017

Today's Talk

- Changing demographics - what does this mean for housing
- Debunk the top three myths about universal design
- Related CMHC research and resources



Profile of the Senior Population (Aged 65+), BC

Living Arrangement

93% In private households



Source: Statistics Canada 2011
National Household Survey
CMHC calculation

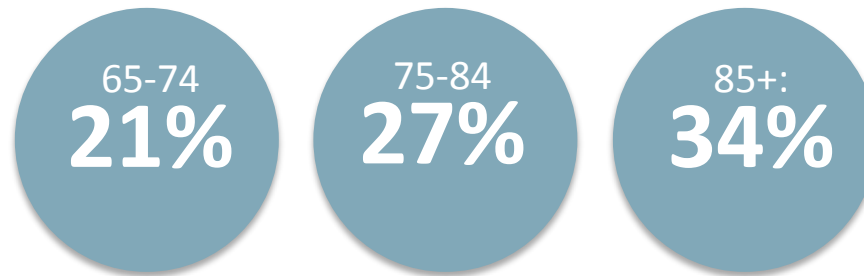
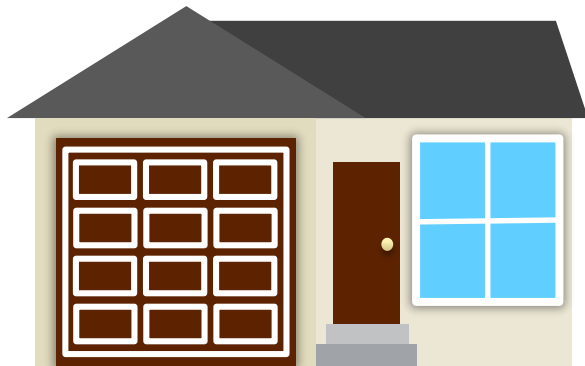
Profile of the Senior Population (Aged 65+), BC

Housing Tenure and Condominium Status

80%

of senior-led households
own their homes

25% are
part of a
condominium



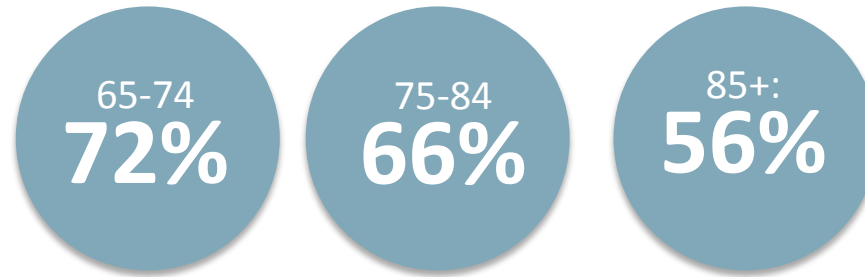
Source: Statistics Canada 2011 National Household Survey
CMHC calculation



Profile of the Senior Population (Aged 65+), BC

Structure Type

68% of senior-led households live in ground-oriented houses



Source: Statistics Canada 2011 National Household Survey
CMHC calculation

Profile of the Senior Population (Aged 65+), BC

Activity Limitations

53% of seniors have some forms of activity limitations
(vs. 22% of all ages)

Age Range	Total with Activity Limitations
65-74	43%
75-84	61%
85+	80%

Source: Statistics Canada 2011
National Household Survey
CMHC calculation



Activity Limitations, General Population, BC

Household that has at least one person with activity limitations:

38%



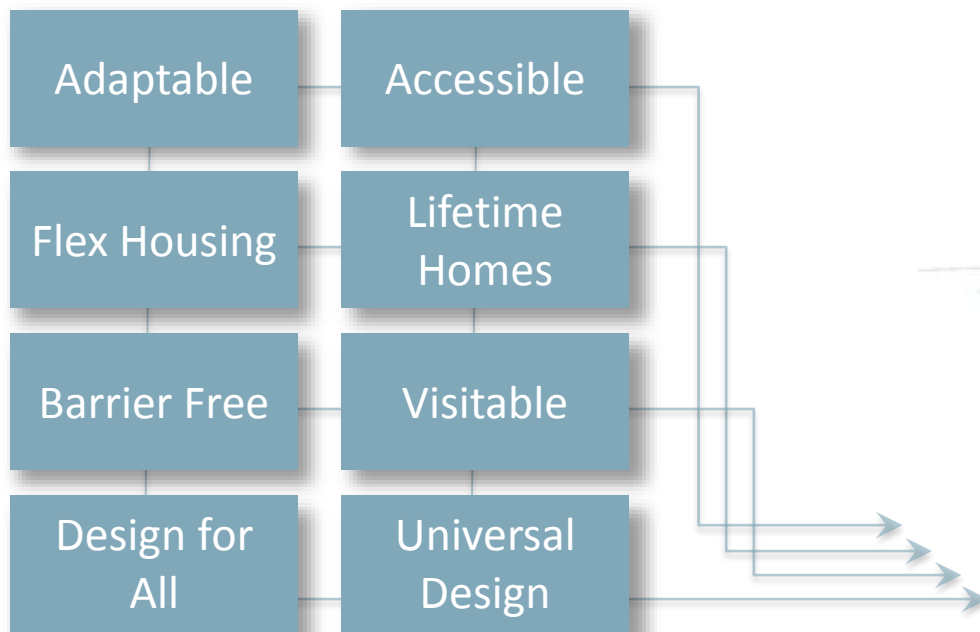
Household that has at least one senior:

27%



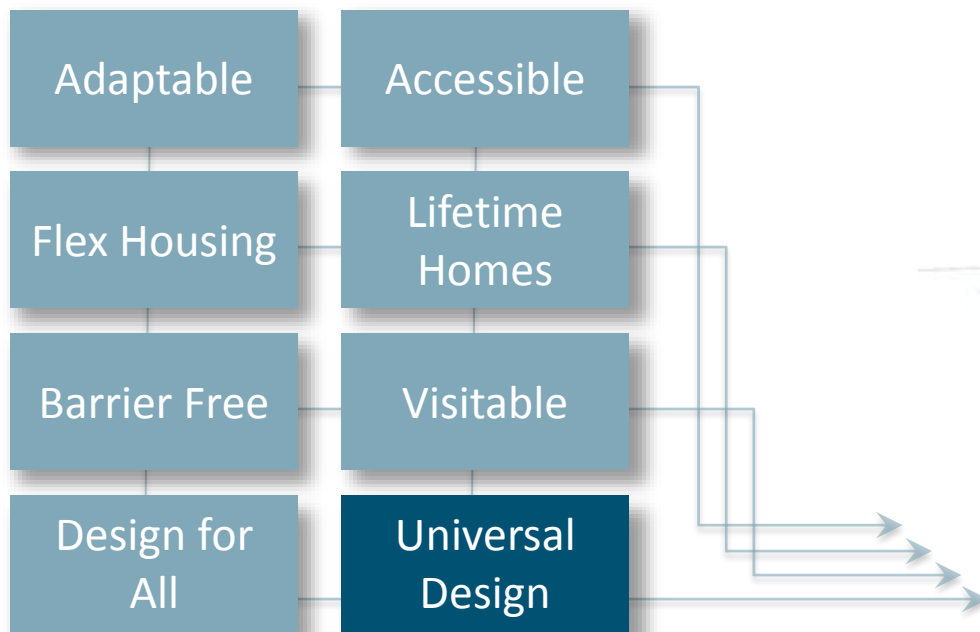
Source: Statistics Canada 2011 National Household Survey

Accessible and Adaptable Design for Divers Needs



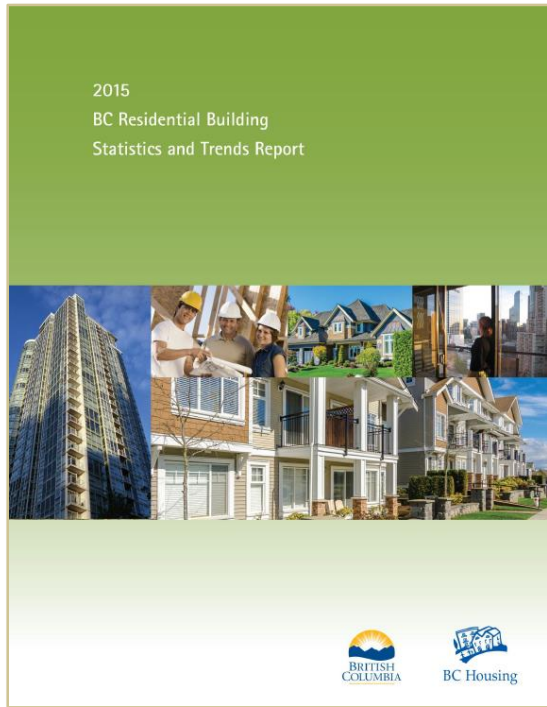
Minor differences
(specific measurements,
residential vs. community
focus) but all share
the same goal

Accessible and Adaptable Design for Diverse Needs



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Universal Design Adoption in BC



- 33% of BC builders anticipated to build homes with UD features in the next two years
- Lower Mainland builders most likely to incorporate UD (35%)
- Higher willingness to implement UD among high-rise builders and builders with 11-19 years experience

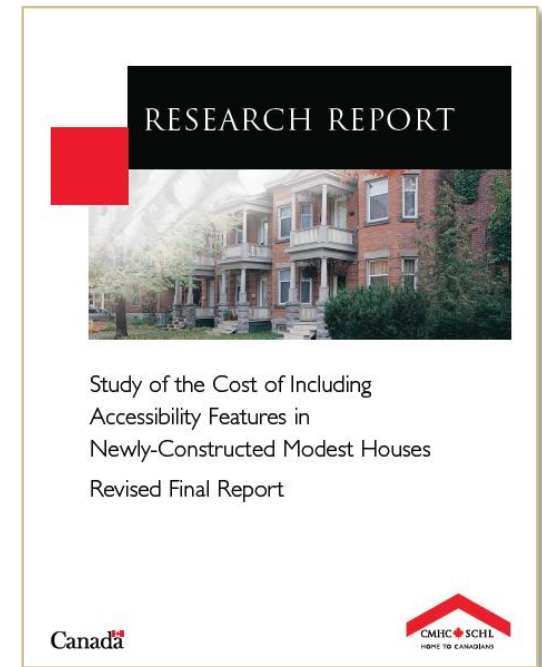
Myth about Universal Design 1 - Cost



- The cost is significant to add accessibility features
- Housing affordability is worsened because of the additional cost

CMHC Research on Incremental Costs

- **New** construction of **typical, modest** houses with **basic accessibility** features
- 60 universal design features identified
- 5 benchmark home types
- Studied costs for Vancouver, Winnipeg, Toronto, Montreal and Halifax



National Incremental Increase to Constructions

	Montréal		Toronto		Vancouver		Halifax		Winnipeg	
Bungalow	\$13,469.00	6%	\$13,287.52	6%	\$11,630.12	6%	\$12,135.57	4%	\$11,893.13	6%
Semi-detached house	\$22,275.00	12%	\$21,981.07	12%	\$19,735.45	11%	\$20,069.78	12%	\$19,668.83	12%
Detached house	\$23,054.00	10%	\$22,545.10	10%	\$19,529.22	9%	\$20,771.65	10%	\$20,356.68	10%
Townhouse	\$14,197.00	7%	\$13,608.38	7%	\$10,863.82	6%	\$12,791.50	7%	\$12,541.93	7%
Apartment	\$4,213.00	n/a	\$3,943.17	n/a	\$3,747.64	n/a	\$2,801.21	n/a	\$3,720.08	n/a

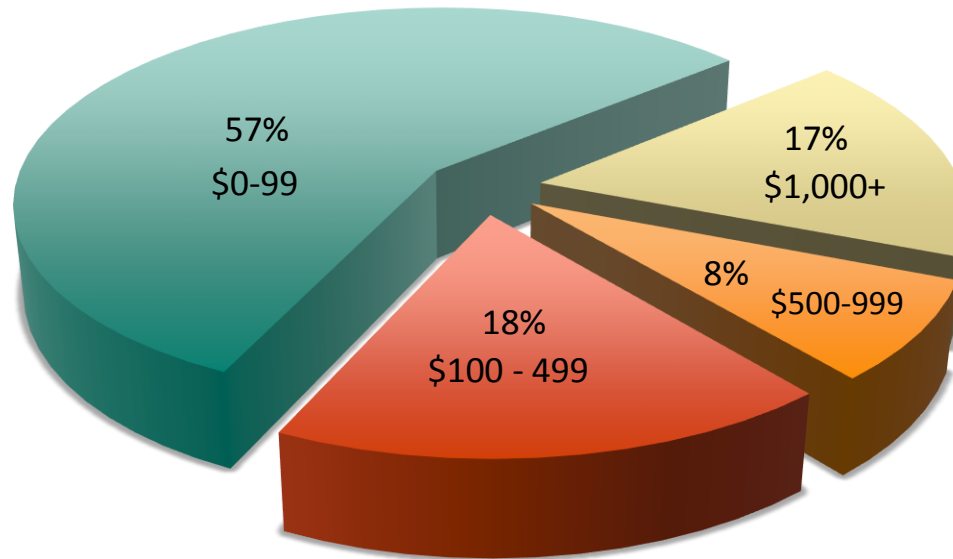
Incremental Cost – City of Vancouver

	Standard Construction Cost ¹ (Estimated)	Cost Differential
Bungalow	\$202,155	6%
Semi-Detached	\$173,821	11%
Single-Detached	\$210,350	9%
Townhouse	\$189,348	6%

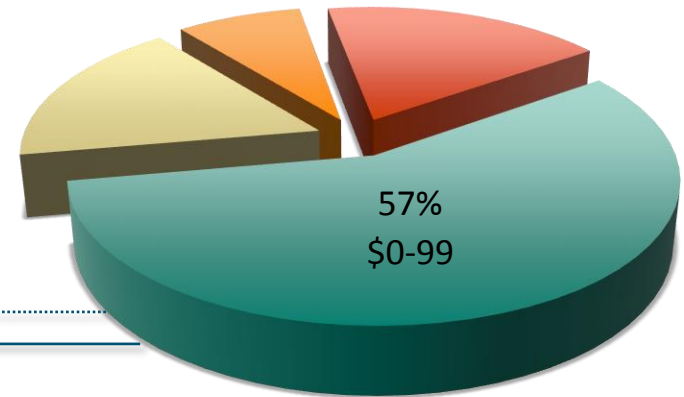
¹Estimated construction costs are for a modest home in City of Vancouver.

Accessible/Adaptable Features in New Modest Homes

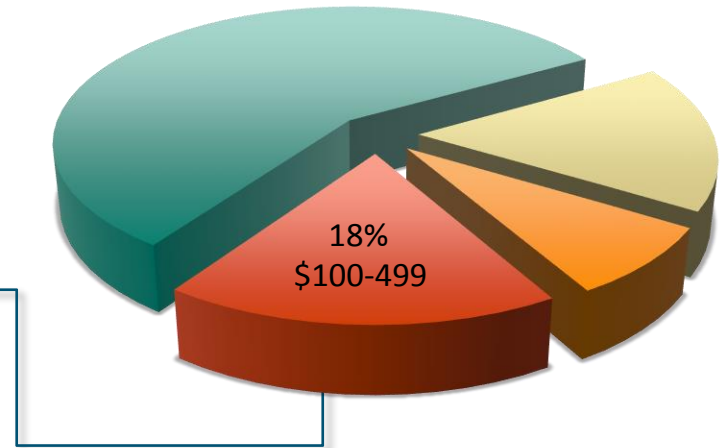
Cost of Individual Accessibility Features



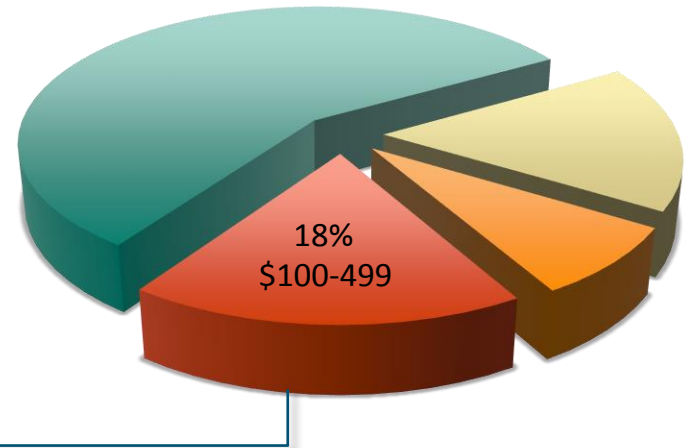
Accessible/Adaptable Features in New Modest Homes



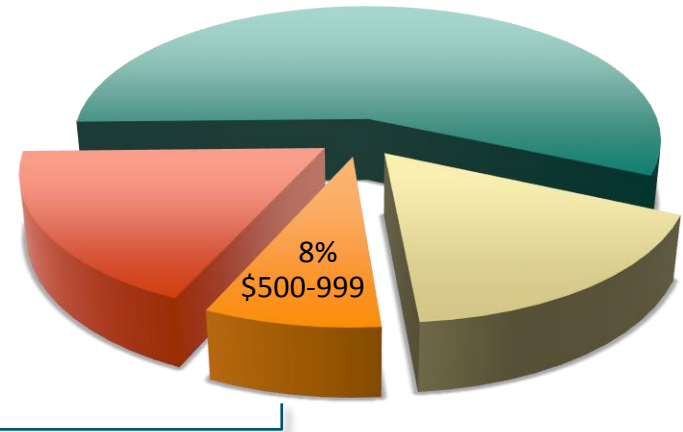
Accessible/Adaptable Features in New Modest Homes



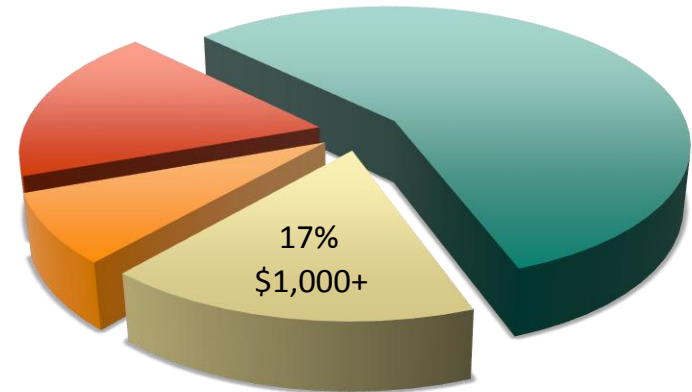
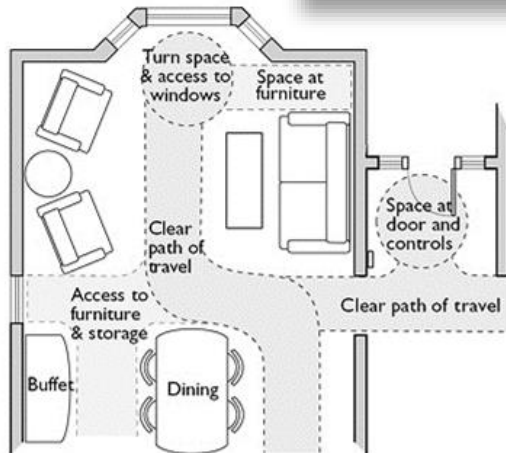
Accessible/Adaptable Features in New Modest Homes



Accessible/Adaptable Features in New Modest Homes



Accessible/Adaptable Features in New Modest Homes



Visitability

- An economical approach to universal design
- Three basic access features:
 - no-step entry
 - wider doors and doorways on the main floor
 - at least a half-bath on the main floor



Photos by Ron Wickman and CMHC

Myth 2 - Size



- Homes have to be much larger to accommodate accessibility features

Space Implications

Increase in area required to accommodate accessibility features

	Increase in Living Area	Increase in Garage Area
Bungalow	0	8%
Semi-Detached	7%	8%
Single-Detached	5%	8%
Townhouse	2%	2%
Apartment	0	N/A

General Space Planning Considerations

- Open planning
- Location of rooms
- Continuous accessible paths of travel
- Evacuation

When the space is small

- Confine accessible paths to the most important locations
- Consider alternative options

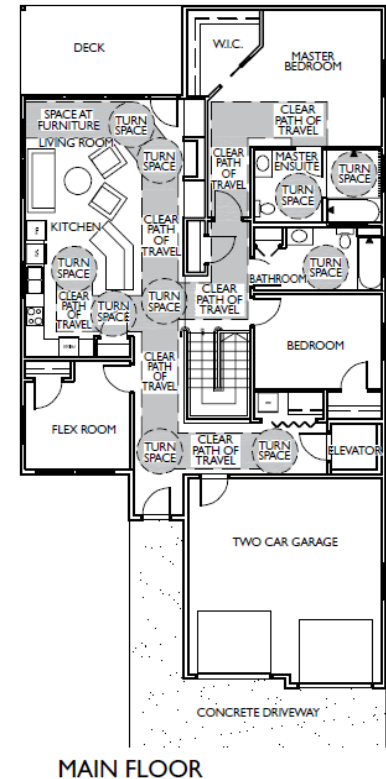
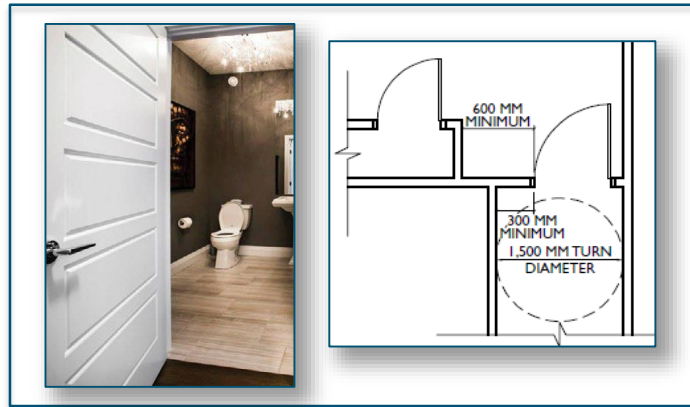


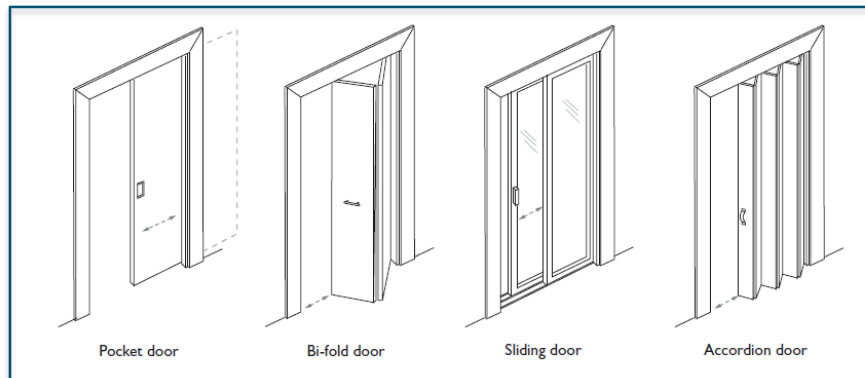
Diagram by Ron Wickman Architect

Example: Doors



Hinged door and clear space

Offset hinge



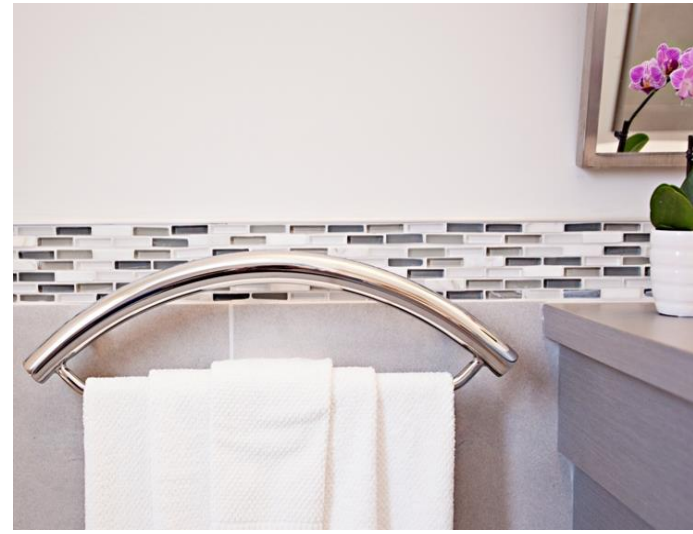
Other common door types

Myth 3 - Stigma



- Accessibility features create an institutional look
- Houses with accessibility features have reduced resale value

Support Bars can be Stylish



Pre-wiring and Pre-plumbing to Future-proof the House

- Stacked closets designed to allow future installation of an elevator

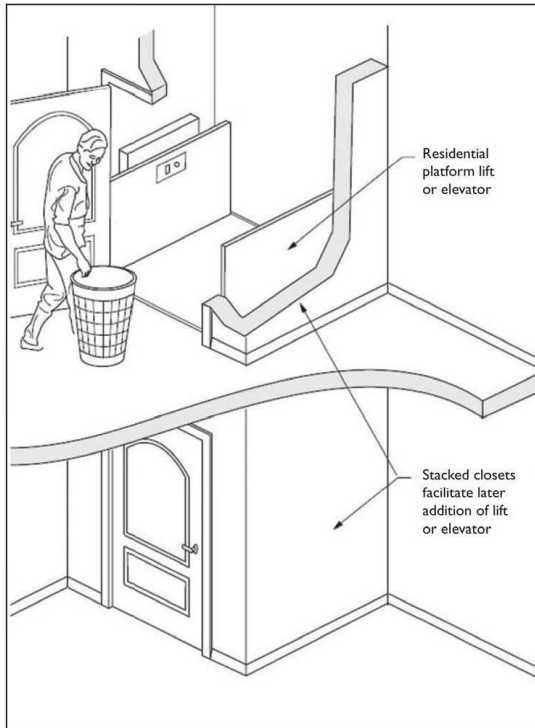
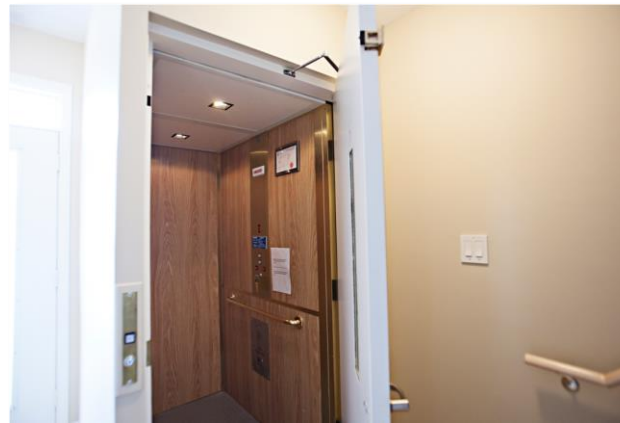


Diagram by DesignAble Environments Inc.



Resources for Accessible and Adaptable Homes

cmhc.ca/accessibleandadaptablehomes

The screenshot shows the CMHC website's 'Accessible and Adaptable Homes' page. At the top, the CMHC logo is on the left, and the text 'CANADA MORTGAGE AND HOUSING CORPORATION' is on the right. A search bar is located in the top right corner. Below the header, a blue navigation bar contains the text 'Business / Government / Housing Organizations'. The main content area is titled 'Accessible and Adaptable Homes' and includes a paragraph: 'Accessible and adaptable housing enables people of all ages and abilities to stay in their community as long as possible.' Below this, there are three columns, each with a blue circular icon containing a white house symbol. The first column is titled 'Aging in Place' and describes the ability to live in the same home or community safely, independently, and comfortably as one ages. The second column is titled 'Accessible Homes' and describes accessible housing as construction or modification of housing to enable independent living. The third column is titled 'Adaptable Homes' and describes an approach to housing design where homes can be modified to meet the changing needs of residents. At the bottom of the page, there is a large banner image showing a woman in a wheelchair sitting on a porch, with a play button icon overlaid on the image. The banner text reads 'CANADA MORTGAGE AND HOUSING CORPORATION Accessible Housing by Design'. On the left side of the page, there is a sidebar with a list of links: 'Mortgage Loan Insurance', 'Housing Market Information', 'Affordable Housing in Canada', 'Accessible and Adaptable Homes' (highlighted), 'Housing Affordability by Design', 'Research Highlights', 'Mortgage-Backed Securities', 'Investments', 'Canadian Registered Covered Bonds', 'Publications & Reports', 'Events Calendar', 'CMHC Events Register Online!', 'Housing Market Information Portal', 'Housing Research E-newsletter', 'Research Highlights RSS Feeds', and 'Canadian Housing Observer 2014'.

CANADA MORTGAGE AND HOUSING CORPORATION

Type your search here... **search**

Business / Government / Housing Organizations ▾

› Mortgage Loan Insurance
› Housing Market Information
› Affordable Housing in Canada
› **Accessible and Adaptable Homes**
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■ Publications & Reports
■ Events Calendar
■ CMHC Events Register Online!
■ Housing Market Information Portal

✉ Housing Research E-newsletter
📡 Research Highlights RSS Feeds
📅 Canadian Housing Observer 2014

Accessible and Adaptable Homes

Accessible and adaptable housing enables people of all ages and abilities to stay in their community as long as possible.

Aging in Place

The ability to live in the same home or community safely, independently, and comfortably, as you age.

Accessible Homes

Accessible housing refers to the construction or modification of housing to enable independent living.

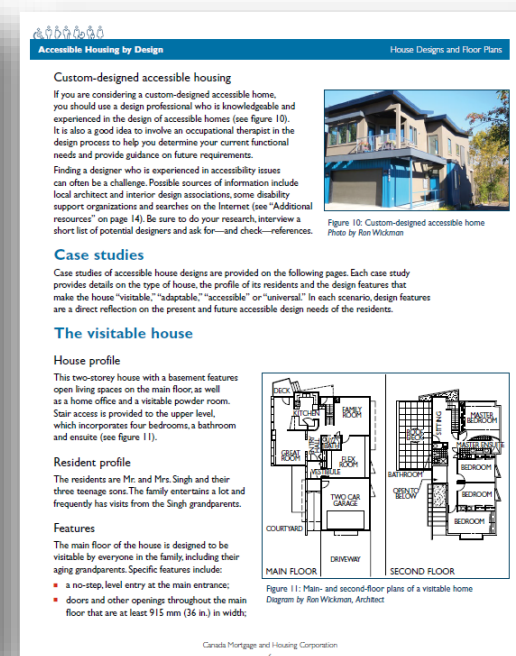
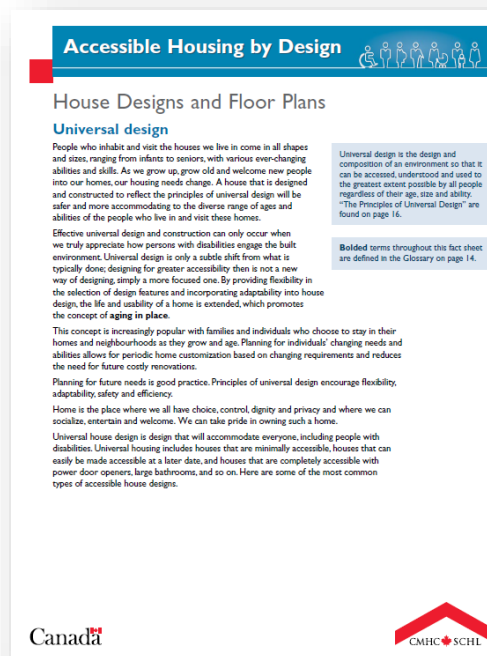
Adaptable Homes

An approach to housing design in which homes can be modified to meet the changing needs of residents.

CANADA MORTGAGE AND HOUSING CORPORATION
Accessible Housing by Design

Accessible Housing by Design Series

- House Designs and Floor Plans
- Living Spaces
- Bathrooms
- Kitchens
- Appliances
- Fire Safety in the Home
- Lifts and Residential Elevators
- Residential Hoists and Ceiling Lifts
- Home Automation
- Exterior Spaces
- Ramps
- Visitability



Final Thoughts

- Everyone benefits from a universally designed home
- Design a home for many possible arrangements
- Focus on long-term cost-effectiveness
- Optimize community design opportunities



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Thank You