Building Code Consultation Paper

Accessible Built Environment

December 2012 – March 2013

Ontario

Contents

Introduction

Ontario's Building Code establishes the minimum standards for the construction of the buildings in which we all live, work and play every day. By providing clear and consistent standards, Ontario's Building Code facilitates the work of builders and developers and helps keep Ontarians safe while allowing for the advancement of the government's key priorities. One of those key priorities is an accessible Ontario.

Barrier-free design requirements have been part of Ontario's Building Code since 1975. As part of achieving Ontario's goal of an accessible Ontario by 2025, Ontario is working to create a Building Code that demonstrates leadership in barrier-free design and is responsive to the needs and concerns of all its stakeholders.

Ensuring the Building Code works for all Ontarians requires the close collaboration of many stakeholders. The Ministry of Municipal Affairs and Housing is responsible for administering the Building Code. Municipalities, health units and conservation authorities are responsible for enforcement of the provisions of the Code in their communities. Meanwhile, builders, designers and manufacturers all have a role in assuring that buildings are constructed in compliance with the Code's requirements.

That is why Ontario is looking for your views on potential changes to the barrier-free design requirements in the Building Code. Your participation in this public consultation is important.

About the consultation

A new edition of the Building Code is generally made every five years following the publication of the model National Building Code. The Ontario government has recently released the new 2012 edition of the Building Code, which will begin to come into force on January 1, 2014. It is expected that any potential changes to barrier-free requirements will be made through an interim amendment to the 2012 Building Code.

This consultation is designed to generate input from a broad range of stakeholders and the public, including the building and design sectors, community organizations and people with disabilities, municipalities, and the broader public sector. Your feedback on these potential changes will help shape new requirements for barrier-free design in the Building Code.

The consultation focuses on potential updates and changes to current Code requirements in a number of key areas, including:

- Renovations
- Barrier-free path of travel (common access and circulation)
- Vertical access (elevators)
- Visitable suites in multi-unit residential buildings

- Adaptable design and construction
- Visual fire alarms
- Washrooms
- Use of educational materials and resources

These topics are outlined in detail in the Key Areas of the Consultation section of this document.

How to use this consultation paper

This consultation paper describes Ontario's Building Code and the Code development process, the Accessibility for Ontarians with Disabilities Act (AODA) and the Final Proposed Accessible Built Environment Standard. It provides a plain language description of potential changes to the requirements currently included in the Code. It also provides information on how to participate in the public consultations.

Technical details of the potential changes to the Building Code are provided online in a PDF format. This technical documentation is provided for Code practitioners and technical experts interested in reviewing the potential changes to the Building Code in detail.

About the Accessibility for Ontarians with Disabilities Act

The Accessibility for Ontarians with Disabilities Act, 2005 (AODA) became law on June 13, 2005. The purpose of the AODA is to benefit all Ontarians by developing, implementing and enforcing accessibility standards. The goal is to achieve accessibility for Ontarians with disabilities with respect to goods, services, facilities, accommodation, employment, buildings, structures and premises by January 1, 2025.

The legislation prescribes mechanisms for the development of accessibility standards. Upon introducing the legislation, the government committed to establishing accessibility standards in five key areas of daily living. Regulated standards for accessible customer service, information and communication, employment and transportation are now in place. The built environment, including buildings and public spaces, is the fifth standard remaining to fulfil the government's 2005 commitment.

The Ministry of Community and Social Services (MCSS) is responsible for development and enforcement of accessibility standards under the AODA through the Accessibility Directorate of Ontario (ADO). The Ministry of Municipal Affairs and Housing (MMAH), through the Building and Development Branch (BDB) is the primary partner ministry for the built environment.

The Accessible Built Environment Final Proposed Standard

The Minister of Community and Social Services appointed an Accessible Built Environment Standards Development Committee in 2007 to develop a final proposed standard. The committee was made up of individuals with disabilities or representatives of organizations for persons with disabilities (50 per cent) and representatives of obligated organizations (such as architects, designers, builders, municipalities, and public sector organizations). The committee's task was to:

- Develop an initial proposed standard for public review and comment;
- Consider comments received during a public review and make any changes the committee considered advisable; and,
- Submit a final proposed standard to the Minister of Community and Social Services for consideration.

The committee submitted its Final Proposed Accessible Built Environment Standard to the Minister of Community and Social Services in July 2010. The Government may accept in full, in part, or with modifications, the recommendations of the Final Proposed Standard.

The built environment

The scope of the Final Proposed Standard included public and private sector buildings, and public spaces such as parks, recreational trails and play spaces. MCSS is responsible for considering the public spaces recommendations for regulation under the Integrated Accessibility Standard Regulation, while MMAH is responsible for considering the building recommendations as potential amendments to the Building Code.

This dual approach ensures that construction requirements remain consolidated in the Building Code, in keeping with the government's commitment to streamline regulatory requirements where possible. Continuing to regulate barrier-free requirements through the Building Code also ensures that requirements are enforced locally through the building permit process.

Requirements for public spaces are currently under development. A draft regulation was posted for public review last summer 2012. For more information on potential standards for public spaces, please contact www.ontario.ca/AccessOn or the ServiceOntario AODA Contact Centre at 1-866-515-2025.

About Ontario's Building Code

Ontario's Building Code is authorized by the Building Code Act, 1992. The Act is the legislative framework governing the construction, renovation, change of use and demolition of buildings in Ontario. The Building Code is a regulation authorized by the Act, and sets out detailed administrative and technical requirements.

Ontario's Building Code has been in effect since 1975. Prior to the enactment of the first provincial Building Code Act in 1974, individual municipalities were responsible for developing their own building codes, resulting in a fragmented and potential confusing regulatory environment. The introduction of the provincial Building Code addressed this problem by providing for uniform construction standards across Ontario.

The 2006 edition of the Building Code represented a departure from past editions in that it was written in an "objective-based" format that sets out the rationale underlying the technical provisions of the Code. These provisions relate to: health and safety (including fire protection, structural sufficiency and sanitation), barrier-free accessibility, energy and water conservation and environmental integrity, and conservation of buildings.

The objective-based format is intended to encourage innovation in building materials, systems, and designs, and to provide greater flexibility to the industry in meeting the objectives and requirements of the Building Code. This format has continued in the newly released 2012 Building Code.

The Building Code has included basic accessibility requirements since its development in 1975. Since that time, buildings intended for public access have been built with accessibility features such as ramps and wider doors. Accessibility requirements have been enhanced with each new edition of the Building Code. Accessibility requirements related to renovations were introduced in 1997.

The 2006 Building Code included numerous changes to the Code's barrier-free accessibility requirements including:

- Enhanced requirements for power door operator controls;
- Increased widths for barrier-free paths of travel and ramps in a barrier-free path of travel; and,
- Requirements that at least 10 per cent of suites (to a maximum of 20) in a hotel or motel meet minimum barrier-free requirements including the requirement for visual fire alarms.

In November 2012, Ontario released the new 2012 edition of the Building Code. The new Building Code ensures that Ontario's construction regulations remain consistent with other provinces and territories, substantially improves energy-

efficiency requirements, and makes Ontario one of the leading jurisdictions in North America for water conservation. The new Code regulations largely take effect in January of 2014, providing time until then for industry to understand the new requirements and for technical training materials to be developed.

It is proposed that any enhancements to accessibility requirements will be made as an amendment to the 2012 Building Code, following the public consultation and technical review process outlined here.

Ontario's new 2012 Building Code, as well as the 2006 Building Code edition, is available at www.ontario.ca/e-laws.

ServiceOntario publishes the Building Code Compendium, which contains the Code, MMAH supplementary standards referenced in the Code, appendix notes, and other documentation. The new 2012 Building Code Compendium will be available in summer of 2013. The compendium and other Code products can be ordered through the ServiceOntario at www.ontario.ca/publications.

Code development in Ontario

Changes to Ontario's Building Code are in response to:

- Government priorities;
- Changes in other jurisdictions;
- Proposals from the public and stakeholders; and,
- Changing technology and industry standards.

New editions of the Building Code and significant interim amendments are considered changes to the current Building Code. Most changes undergo a review that consists of a public consultation on potential Code changes followed by evaluation by one or more Building Code Technical Advisory Committees.

The Building Code development process is designed to specifically examine potential Building Code changes. Public consultation and review by Technical Advisory Committees ensure that the building industry and building officials have an opportunity to contribute their extensive knowledge and practical experience. A key part of ensuring that potential Code changes deliver on the intent of the Standard Development Committee recommendations is making sure that they are technically feasible and enforceable by building officials.

As Code changes are developed and reviewed by Technical Advisory Committee members and government, a number of factors are considered. These include:

- Technical feasibility of the potential changes;
- Alignment with Building Code objectives (including barrier-free accessibility) and broader government priorities;
- Cost implications;
- Impact on design flexibility;

- Capacity of industry to implement the changes; and,
- The ability of municipalities and other local authorities to enforce any new requirements.

With all new editions or amendments to the Code, the government seeks to develop a balanced package of changes that will enhance existing requirements, support the economy and Ontario's building industry, and maintain Ontario's position as a leader within Canada.

Recommendations submitted by Technical Advisory Committees are considered by the Ministry to develop potential Code changes for review by Cabinet; the Building Code is a regulation made by the Lieutenant Governor in Council. Code changes take effect on a date specified in the regulation. A transition period is generally provided for changes which have significant stakeholder impacts.

Analysis and Development of Potential Changes

Since the submission of the Accessible Built Environment Final Proposed Standard, the Ministry of Municipal Affairs and Housing has undertaken considerable policy and technical analysis of the recommendations as they pertain to the Building Code. Based on this analysis, the package of potential changes described in this consultation paper would enhance accessibility requirements within the scope of the Building Code, while meeting the intent of the Final Proposed Standard.

Costing information

A number of recommendations were analyzed in order to understand their potential impact on construction costs in Ontario. Recommendations included in cost analysis were those that added to the building area, or increased the size, types and number of fixtures in the buildings. The costing analysis compared four generic building prototypes including 11 different occupancies against the same buildings with enhanced accessibility features. It also looked at cost differences between locating the buildings in Southern Ontario (Greater Toronto Area) versus Northern Ontario (Sudbury).

This exercise identified the incremental costs of individual elements and any cost increases associated with the potential changes, the application of those elements to the building design and then adjusted the cost increase over the entire building.

In general, the cost variance between the generic buildings and modified buildings for each prototype were relatively small. The cost increases for each building prototype were:

- Office building 0.59 per cent
- Apartment building 0.88 per cent
- College residence 1.99 per cent
- Community school/recreation centre 1.05 per cent

Providing a transition period before Code changes come into effect would help ensure that industry will be able to anticipate and budget for any additional costs. Greater opportunities for people with disabilities and Ontario's aging population to access retail, employment, and residential spaces may also create economic benefits.

General approach

Ministry analysis has outlined a general approach to potential changes to the Building Code. The general approach has been informed by the following principles and information:

1. Building Code scope, application and non-building elements

The Building Code would continue to be the key regulatory vehicle for the implementation of accessibility requirements related to the construction, renovation, and change of use of buildings. Recommendations related to non-building design elements (e.g., millwork, finish materials, fixtures and non-building equipment, colours and furniture) and the maintenance and operations of buildings would not be incorporated into the Building Code. Barrier-free retrofits of existing buildings, where no renovations are planned, would not be required.

2. Timelines

Changes to the Building Code would be phased in to allow the building and design industry to plan for and adjust to new requirements. This approach is consistent with past practice and Ontario's goal of building a streamlined and focused regulatory environment.

3. Interjurisdictional and academic research

Accessibility requirements set out in Ontario's Building Code are generally consistent with or exceed requirements in other jurisdictions, including the rest of Canada, the United States, the United Kingdom, and Australia. Potential changes included in this consultation would maintain Ontario's position as a leader in Canada and be generally consistent with or other leading jurisdictions worldwide.

A recent research project commissioned by the United States Access Board has identified measures that may result in new changes to the Americans with Disabilities Act Standards ("Anthropometry of Wheeled Mobility Project," 2010). This research has informed the development of the potential changes described in this paper.

4. Wheeled mobility devices

The Building Code would continue to contain provisions to accommodate a person using a manual wheelchair. The current requirement is consistent with recommendations for the design of public spaces as well as the current Americans with Disabilities Act guidelines. Based on research, it has been determined that the width required to accommodate manual wheelchairs (which have a wider wheel base than other wheeled mobility devices) is generally sufficient to accommodate individuals using electric wheelchairs and scooters, although the smaller turning space provided may not allow a 90-degree turn by users of electric wheelchairs and scooters (for example, the user may have to make a T-turn).

The Ministry of Health and Long-Term Care indicates that funding for manual wheelchairs is significantly more in demand than funding for power wheelchairs and scooters, based on aggregate statistics from 2004-2010. Statistics Canada data from the 2006 Participation and Activity Limitation Survey similarly indicates much higher use of manual wheelchairs among Canadians with mobility limitations, as compared to use of electric wheelchairs and scooters.

Consultation Process

Public consultation is open until **March 1, 2013**.

Your participation is important and encouraged, given that consultations and subsequent feedback will help guide the development of updated barrier-free requirements in Ontario's Building Code.

Following the consultation, the technical changes and all comments received from the public will be reviewed by Building Code Technical Advisory Committees. The Technical Advisory Committees are comprised of broad, balanced and independent representatives of stakeholder organizations. Members of the committees are selected based on their leadership and technical expertise in building design and construction. The Technical Advisory Committee for barrier-free design includes members of organizations that represent people with disabilities.

Based on their technical analysis, the Technical Advisory Committees will then provide recommendations to the Ministry of Municipal Affairs and Housing. The committees' recommendations will carefully consider factors such as the technical feasibility of potential Code changes, alignment with Code objectives, cost implications, public safety, impact on design flexibility, capacity of industry to implement and the ability to enforce.

Recommendations submitted by the Technical Advisory Committees will be considered by the Government in developing proposed changes to the Building Code.

Accessible formats

All consultation materials are available online in accessible formats. The consultation paper is also available in Braille or large print formats.

For a hard copy of the consultation paper in Braille or large print, please contact:

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Key Areas of the Consultation

1. Renovation

Final Proposed Standard Recommendation

The Final Proposed Standard recommended that barrier-free requirements apply to a broader range of renovations with limited exemptions (such as for certain areas not normally occupied on a daily basis, or where renovation is technically infeasible, structurally impractical, or would create "hardship"). The Final Proposed Standard also recommended an exemption where barrier-free requirements adversely affect the natural, cultural, or heritage value of a protected facility or environment.

The Final Proposed Standard also recommended that parts of buildings that provide access to renovated suites should be made accessible (via a barrier-free path of travel) or by developing a plan for accessibility.

Current Building Code Requirements

Barrier-free design requirements apply to existing buildings only when "extensive renovations" are undertaken based on a number of criteria. Moreover, requirements apply only to the area (i.e. "suite") undergoing renovation, not to the entire building. Barrier-free design requirements do not apply to "basic renovations" (e.g., removing a non-load-bearing wall).

Extensive renovations must meet barrier-free design requirements if:

1. The interior walls or floors within the suite are substantially removed;
2. New interior walls or floors are installed;
3. The suite is larger than 300 m^2; and
4. The suite is located on a floor area where the existing difference in elevation between the adjacent ground level and the floor level is not more than 200 mm or, on a floor accessible by an elevator.

The approach in Ontario's Building Code is consistent with requirements in other jurisdictions (Canadian model National Building Code, United States, Australia, and United Kingdom).

Potential Changes to the Building Code

- Extensive renovations in suites larger than 300 m^2 and located on an accessible floor level would continue to be subject to full barrier-free design requirements set out in the Building Code.
- For all extensive renovations in smaller suites or that are not located on a fully accessible floor level (for example, located on the ground floor but with several steps at the entrance way, or located on a higher storey in a building without barrier-free access to all storeys), a number of barrier-free upgrades to the suite would be required, such as:
  - Wider clear door widths (minimum 860 mm clear space);
  - Lever door handles;
  - Visual cues for glass doors; and
  - Provision of an "ambulatory accessible stall" to be provided in cases where a barrier-free stall or washroom is not provided. These stalls can accommodate certain kinds of assistive devices used by people with disabilities (e.g. individuals with limited balance or who walk with a cane or walker). These stalls are slightly larger than standard washroom stalls and are equipped with parallel grab bars, a barrier-free water closet, widened clear door widths, and door latches. However, they do not include turning space required for individuals using wheelchairs.

Rationale and Considerations

- Barriers in existing buildings are a significant and ongoing concern for Ontarians with disabilities. Where feasible, using renovation work undertaken by the building owner as an opportunity to eliminate these barriers would be a significant improvement to accessibility across Ontario.
- The potential changes meet the intent of the Standard Development Committee, in proposing that all extensive renovations include certain accessibility upgrades.
- The potential changes would enhance accessibility requirements for all extensive renovations, taking a staged approach to increasing accessibility in existing building stock. The maintenance and renovation of existing building stock supports protection of the environment, conservation of resources, the preservation of architectural heritage, and municipal planning and density requirements.
- Many small businesses are located in older or infill buildings along mainstreets with a small number of entrance steps. Where providing a ramp for full barrier-free access into the building is not technically feasible (due to potentially significant structural work), enhanced barrier-free features within the building could still be provided, affording greater opportunities for all Ontarians to access small retail and employment spaces.

2. Barrier-Free Path of Travel (Common Access and Circulation)

Final Proposed Standard Recommendation

The Final Proposed Standard included a number of recommendations intended to enhance barrier-free access and circulation. A number of these recommendations are already included in or exceeded by the current Building Code, or addressed in the proposed regulation on exterior public spaces. Other recommendations proposed enhanced measures to facilitate barrier-free access and circulation throughout buildings. These addressed building entrances, ramps, stairs, doors and doorways, and floor surfaces, among others.

Current Building Code Requirements

The Building Code requires a barrier-free path of travel throughout most occupancies and building types. In addition, the Building Code sets a number of requirements related to common access and circulation, including minimum provisions to accommodate a person using a typical manual wheelchair or other manual mobility assistance devices (such as walkers or canes). These include requirements related to building entrances, minimum doorway and corridor widths, ramp dimensions, passing and rest spaces, and turning spaces.

Exterior walks connected to a building are addressed by the Code. The Code sets minimum requirements for exterior barrier-free paths of travel as well as setting requirements for curb ramps.

Requirements in Ontario are consistent with or exceed standards in other jurisdictions, including requirements set out in the Americans with Disabilities Act.

Potential Changes to the Building Code

- Update and enhance Building Code requirements, such as:
  - Requiring a minimum clear width of 860 mm for doorways;
  - Reducing ramp slopes to a maximum slope of 1 in 15; and
  - Requiring power door operator rough-ins for all doors throughout the barrier-free path of travel.
- Allow T-shaped turning spaces as an additional design option.
- Update curb ramp requirements (where the curb ramp is directly related to a building) and set prescriptive requirements for Tactile Walking Surface Indicators, based on new guidelines and best practices in use by other jurisdictions. (Proposed Building Code requirements would not apply to requirements addressed by the proposed Design of Public Spaces regulation developed by the Accessibility Directorate of Ontario.)
- Require a barrier-free path of travel to roof spaces where public amenities are provided (such as a rooftop garden or pool area).

Rationale and Considerations

- The potential changes are consistent with the intent of the Standard Development Committee, by enhancing requirements for barrier-free circulation within buildings, and broadening their application.
- US Access Board research conducted in 2010 recommended minimum dimensions necessary to accommodate 95 per cent of manual wheelchair users. Based on this research, updated dimensions are proposed in this consultation. The potential changes would accommodate a higher proportion of power wheelchair users as well.
- Roof areas are increasingly being used to provide amenities such as rooftop gardens, bars, and barbeques. Making these roof areas accessible would allow persons with disabilities to enjoy these amenities.
- Providing rough-ins for power door operators would reduce the potential costs of installation if they are needed at a later date, and would support the needs of Ontario's aging population.

3. Vertical Access (Elevators)

Final Proposed Standard Recommendation

The Final Proposed Standard recommended an accessible route to all floors, and indicated that elevators are a preferred means of travel. The Final Proposed Standard recommended that escalators not be included as an acceptable option for accessible routes. The recommendations also included design requirements for elevators, other platform lifts, moving walks, ramps and elevator lobbies.

Current Building Code Requirements

The Building Code requires at least one firefighter elevator in buildings that are 18 metres (approximately six storeys) or higher. Elevators are also required in certain care and treatment occupancies with sleeping rooms for residents and patients (e.g., nursing homes and hospitals).

A barrier-free path of travel is required throughout the entrance storey of a building and within all normally occupied floor areas where that floor is served by an elevating device or ramp with the exception of certain service areas (e.g., elevator machine rooms). Elevators that are part of a barrier-free path of travel must meet the requirements of the Canadian Standards Association Standard B44 Appendix E, "Safety Code for Elevators and Escalators".

Elevator design is regulated by the Technical Standards and Safety Authority, administered by the Ministry of Consumer Services. Specific requirements for elevator design are not addressed in the Building Code.

Potential Changes to the Building Code

Require a barrier-free path of travel between storeys in a broader range of buildings and occupancies:

- Group A, Division 1 (assembly – performing arts) – all buildings
- Group A, Division 2 (miscellaneous assembly) – all buildings, with specified exemptions for restaurants, bowling alleys, licensed beverage establishments, and childcare facilities
- Group A, Division 3 (assembly – arena) – all buildings
- Group A, Division 4 (assembly – open air) – not required
- Group B, all divisions (detention, care and treatment, care) – all buildings
- Group C (residential) – buildings 3 storeys and above or 600 meters squared and above
- Group D (business, personal services) - buildings 3 storeys and above or 600 meters squared and above
- Group E (mercantile) – all buildings
- Group F, all divisions (industrial) – not required

In addition, escalators are proposed to be removed from the list of barrier-free design options for access between storeys.

Rationale and Considerations

- The potential change is consistent with the intent of the Standard Development Committee to require elevators in a greater number of buildings.
- The potential approach will ensure that Ontario is consistent with or leads requirements in other jurisdictions (the United States and Australia, for example, require an accessible route through buildings 3 storeys or more).
- The potential approach enhances accessibility in buildings, while mitigating the cost, space impact, and design complexity of installing elevators in small buildings.
- Exemptions would generally address occupancies where equivalent amenities are provided on both storeys. Requirements for childcare facilities are set by the Day Nurseries Act.

4. Visitable Suites in Multi-Unit Residential Buildings

Final Proposed Standard Recommendation

The Final Proposed Standard recommended that, for Group C (residential) major occupancy apartment buildings, 100 per cent of suites shall be visitable (i.e., designed to limit barriers to visitors with disabilities), and higher standards set for visitability.

Current Building Code Requirements

The Building Code requires that no fewer than 10 per cent of residential apartment building suites (for both rental and condo ownership buildings) have a barrier-free path of travel through the suite entrance door to the doorway of at least one bathroom. Although minimum room areas are specified, the Building Code does not require rooms to be barrier-free, i.e., it does not specify turning space requirements within apartments.

The Building Code requires a barrier-free entrance and path of travel throughout common areas of an apartment building. It does not require power-door operators at the main entrance of an apartment building.

Requirements in Ontario are consistent with, and in some cases exceed, requirements in other jurisdictions. For example, the Americans with Disabilities Act requires five per cent of units, and not less than one, to be accessible.

Potential Changes to the Building Code

Increase the current Building Code requirement for suites with barrier-free features in residential apartment buildings to 15 per cent of suites, as well as enhancing the barrier-free features within those suites and increasing the choice of those suites within a building.

Potential changes to barrier-free requirements include:

- Not less than 15 per cent of residential suites must include the following barrier-free features:
  - A barrier-free path of travel from the suite entrance door through: (a) a barrier-free doorway through at least one bedroom at the same level, and (b) a barrier-free doorway through at least one bathroom, having a clear floor space with 1.5 m^2 turning diameter or a T-shaped turning space.
  - Clear door opening and minimum width of 860 mm through to kitchen.
  - Suite must be level throughout the main floor.
  - A shower or bathtub must be provided in the bathroom on the barrier-free path of travel.
- Suites with barrier-free features must be dispersed throughout the building to provide choice.
- Suites with barrier-free features must proportionately reflect the variety of suite sizes and types provided in the building (e.g., one-bedroom, two-bedroom, and three-bedroom units).
- Suite entrance doors in all residential apartment buildings must include rough-ins for power door operators, to facilitate installation if needed at a later date.
- Building entrance and entry vestibule doors must be equipped with power-door operators in all Group C (residential) occupancies (such as apartment buildings, hotels, and dormitories).

Rationale and Considerations

- The potential change is consistent with the intent of the Standard Development Committee to enhance the accessibility of Ontario's apartments for a broad range of disabilities.
  - According to 2006 Statistics Canada data, 2.93 million of Canadian adults (11.5 per cent) reported some limitations due to a mobility disability. This includes all reported mobility disabilities, classified as mild, moderate, severe, or very severe.
  - In addition, 2006 data indicated that, 277,550 (or roughly 9.5 per cent of those reporting disabilities) Canadians used manual or electric wheelchairs or scooters as a mobility aid.
  - A requirement for 15 per cent of suites to be visitable reflects statistical information on Canadian population characteristics.
- The Final Proposed Standard recommendation refers to the accessibility of apartment suites for visitors with disabilities. Enhancing the barrier-free features within these suites would allow persons with disabilities to use the major amenities of the suite without undertaking substantial renovation.
- Requiring a higher number of accessible suites would likely increase the overall cost of buildings (see anticipated cost impacts on page 8) and reduce the number of suites permitted on a property.
- Providing rough-ins for power door operators would reduce the potential costs of installation if they are needed at a later date, and supports the needs of Ontario's aging population.

5. Adaptable Design and Construction

Final Proposed Standard Recommendation

The Final Proposed Standard recommended that, for Group C (residential) major occupancy apartment buildings, 50 per cent of suites shall be adaptable (i.e., designed in a way to facilitate future barrier-free renovations as needed).

Current Building Code Requirements

The Code does not currently address general requirements for adaptable construction. In all dwelling units, main bathrooms are required to be reinforced so as to allow for the future installation of grab bars adjacent to the water closet and shower or bathtub.

Potential Changes to the Building Code

- Promote adaptable construction in Ontario homes, by requiring that kitchen walls have sufficient loading capacity to support cupboards and counters at a range of heights, including in single-family houses.
- Current industry practices support broader adaptability through open-concept design.

- Design guidelines and educational materials addressing adaptable construction may be appropriate to include in educational and resource material addressing barrier-free housing design.

Rationale and Considerations

- Ensuring that dwellings include more easily adaptable kitchens and bathrooms would support "aging-in-place" and the needs of an aging population. The Ontario Seniors' Secretariat has indicated that the number of seniors aged 65 and over is projected to more than double from 1.9 million in 2011 to 4.2 million in 2036 (23.6 per cent of the population).

6. Visual Fire Alarms

Final Proposed Standard Recommendation

The Final Proposed Standard recommended that all emergency alarms should have an auditory and visual mode in multi-unit residential buildings including student residences. It also recommended visual fire alarms in all universal toilet rooms as well as in all public spaces and guest rooms of hotels and motels.

Current Building Code Requirements

The Building Code requires that visual fire alarms must be installed (in addition to audible fire alarms) in:

- A building or portions of buildings intended for use primarily by persons with hearing impairment;
- Public corridors serving buildings with assembly, care, business and personal services, and commercial occupancies (including arenas, theatres, churches, hospitals, nursing homes, office buildings and retail establishments);
- Assembly occupancies such as arenas, theatres, and churches must also have visual fire alarms in their auditorium area and anywhere else the public might congregate; and,
- At least 10 per cent of hotel and motel suites.

Visual fire alarms are not required in private homes, classrooms or small care occupancies (i.e., 10 or fewer people or six or fewer people requiring assistance).

Potential Changes to the Building Code

- Require that all hardwired smoke alarms include a visual component, including in single-family houses. This would include at least one hardwired smoke alarm on every level, as well as one hardwired smoke alarm in every sleeping room.

- Require that all residential apartment building suites include rough-ins for visual fire alarms.

Rationale and Considerations

- Health Canada states that approximately 10 per cent of Canadians have a significant hearing problem. This potential change would enhance the safety and security of individuals with auditory impairments.
- While smoke alarms with a visual component are relatively low in cost (an approximate additional $10), the cost of equipping a building or dwelling unit with visual fire alarms is more expensive (approximately $500 to $1,000).
- This potential change would support "aging-in-place," as buildings outfitted with visual fire safety devices help to address the needs of an aging population, in which the prevalence of hearing impairments is increasing. The Ontario Seniors' Secretariat has indicated that the number of seniors aged 65 and over is projected to more than double from 1.9 million in 2011 to 4.2 million in 2036 (23.6 per cent of the population).
- The potential change would bring Ontario standards higher than those in other jurisdictions. Currently, requirements in Ontario are generally consistent with those set out in the Americans with Disabilities Act.

7. Washrooms

Final Proposed Standard Recommendation

The Final Proposed Standard included a number of recommendations intended to enhance the accessibility of barrier-free washrooms, showers, and bathtubs in publicly accessible buildings. These addressed the recommended number of barrier-free washrooms per building, as well as proposed changes to clear floor space within washrooms, stall sizes and door widths, grab bars, washroom accessories, and emergency call switches. The Final Proposed Standard also recommended increasing the minimum required number of universal toilet rooms per building and requiring an adult change table in each universal toilet room.

Current Building Code Requirements

The Building Code requires barrier-free washrooms to be provided in public areas of buildings where barrier-free requirements apply (i.e., exempting houses, high hazard industrial buildings, and buildings not intended for daily or full-time occupancy such as pumphouses and substations). These washrooms must be situated on a barrier-free path of travel and are subject to a number of requirements addressing turning space, doorway widths, grab bars, counter heights, and signage, among others. The Building Code also sets requirements related to showers and bathtubs. One universal toilet room per building is required, with a clear turning space with a minimum diameter.

Requirements in Ontario's Code are consistent with those in other jurisdictions.

Potential Changes to the Building Code

- Update and enhance current Building Code requirements, such as:
  - Amending mounting height and location requirements for washroom accessories such as towel dispensers and hand dryers;
  - Adding fold-down grab bar design options to allow for transfer space on both sides of the water closet;
  - Removing the option to provide a diagonal rather than L-shaped grab bar;
  - Specifications for accessible urinals; and,
  - Requiring a minimum clear floor area of 1.5 m^2 within washroom stalls for turning space.
- Require power door operators to be installed at entrances to all barrier-free washrooms, including washrooms where a barrier-free stall is provided.
- Allow T-shaped turning spaces as an additional design option for washroom clear turning space dimensions.
- Require at least one universal toilet room in all buildings, and, for multi-storey buildings, at least one for every three floors.
- Require space to be provided for an adult change table in all universal toilet rooms.

Rationale and Considerations

- The potential approach is consistent with the intent of the Standard Development Committee, while mitigating space and cost concerns in washroom design.
- Adult change tables facilitate privacy for persons with disabilities requiring assisted care. Providing space for adult change tables to be provided in universal toilet rooms would ensure that property owners and managers have the flexibility to provide needed facilities while balancing security, maintenance, and cost concerns.

8. Use of Guidelines and Resource Materials

Final Proposed Standard Recommendation

The Final Proposed Standard made recommendations for non-building design elements such as tonal contrast (e.g., tonal contrast of at least 70 per cent between doors and the surrounding environment), colour (e.g., colour and texture to distinguish hallways and pathways), glare (e.g., shower floors to have a non-glare surface), noise (e.g., common-use work areas to be free of unnecessary background noise) and furniture placement (e.g., transient lodging guest rooms to have sufficient space around furniture).

Current Building Code Requirements

Non-building design elements are not part of the Building Code. Certain types of buildings that have additional conditions beyond the Building Code tend to be addressed by requirements outlined by the jurisdiction of interest (e.g., Ministry of the Attorney General guidelines for courtrooms and Ministry of Health and Long Term Care standards for hospitals).

Ontario's Building Code Compendium includes explanatory Appendix Notes intended to provide examples and information on technical requirements. These include Appendix Notes on requirements for barrier-free design, which provide information on where requirements may apply and provide illustrated diagrams of design items such as doorway clearances, access aisles in parking areas, and shower and washroom clearances.

Potential Changes to the Building Code

Alternative mechanisms such as design guidelines should be considered for certain Final Proposed Standard recommendations that fall outside the scope of the Building Code and are not otherwise addressed by existing guidelines. These guidelines would include best practices, be non-regulatory and support industry.

New and updated non-regulatory Appendix Notes on barrier-free design requirements are also proposed. For example, the current Appendix Note that provides information on the general accessibility requirements in the Code is proposed to be amended to provide a broadened understanding of accessibility, beyond accommodations intended for the use of wheeled mobility devices. In addition, illustrated diagrams of new design concepts such as T-shaped turning spaces and ambulatory washroom stalls are proposed.

Rationale and Considerations

- The Building Code comprises the minimum standards for the construction, renovation, and change of use of buildings. Its scope covers basic, day-to-day barrier-free construction requirements (e.g., barrier-free entry into buildings, barrier-free access throughout buildings and barrier-free access into publicly accessible washrooms).
- Non-building elements fall outside the scope of the Building Code. They can also be more difficult to enforce since their installation or alteration does not require a building permit.
- Appendix Notes and other explanatory material are valuable to building officials and the design industry and are frequently consulted through the building permit process.

9. Other Technical and Administrative Changes

A number of recommendations included in the Final Proposed Standard are also under consideration as part of this public consultation, but do not fit within the categories described above. These recommendations tend to address specific spaces such as pools, theatres, and parking garages.

Potential Changes to Barrier-Free Access for Pools, Spas, and Locker Rooms

- Requiring barrier-free access into and out of public pools and spas, through a ramp or pool lift. Options for transfer walls and pool stairs, in addition to a ramp or lift, would be provided.
- Requiring tactile surface indicators around the pool edge.
- Requiring a barrier-free path of travel from the entrance to the pool area and change facilities.
- Requiring barrier-free washrooms to be provided in the change area.

Potential Changes to Access Aisles and Clearances Within Parking Garages

- Currently, the Code requires that entrance for vehicles to and from parking garages, and specifically to accessible parking spaces, have a minimum of 2100 mm vertical clearance. The potential change described here would also require that a minimum of 2500 mm vertical clearance is provided to and from accessible van parking spaces in parking garages.
- For passenger loading zones, an access aisle with minimum dimensions of two metres wide and seven metres long would be required.

Potential Changes to Amended Requirements for Accessibility Seating Spaces

- Expanded dimensions for seating spaces, so that they are a minimum of 900 mm wide, and 2200 mm long when accessed from a side approach or 1370 mm long when accessed from the front or rear.
- Requiring accessible spaces to be dispersed throughout the seating area, to provide a choice of viewing location and a clear view of the event taking place.
- Requiring the theatre to be provided with storage for mobility devices.
- Requiring seats to be provided with at least one adjacent companion seat.

Technical and Administrative Clarifications

Other Code changes for consultation reflect a review of current requirements and feedback from Building Code users. A number of technical clarifications and new definitions are proposed to provide greater clarity to designers and building officials. Examples include clarifying requirements for guards at landings, clarifying

where a sloped floor must be designed as a ramp, and clarifying requirements for barrier-free showers where a group of showers is provided.

Other Technical Matters

In addition to potential changes to barrier-free design requirements, a small number of other technical items are included in this public consultation. These address new standards proposed to be referenced in Ontario's Building Code.

Emissions Standards for Wood-Burning Appliances

Residential wood-burning appliances can contribute to air pollution and generate smoke harmful to human health. This consultation includes a potential amendment to the Building Code referencing a standard developed by the Canadian Standards Association limiting particulate matter emissions from wood-burning appliances. This potential change would advance Ontario's commitment to environmental protection and air quality.

Industry Standards for Exterior Insulation and Finish Systems

Exterior Insulation and Finish Systems (EIFS) are multi-layered exterior wall systems that are used on both commercial buildings and homes. They promote energy efficiency and offer design flexibility. This public consultation includes a potential amendment to the Building Code referencing a set of new industry standards for these systems. Referencing these standards, developed by the Underwriters Laboratories of Canada (ULC), would standardize the requirements for these systems, provide clarity to the existing applicable provisions of the Code, and simplify approvals for the use of these systems in Ontario municipalities.

Updated Standards for Heating, Cooling, and Ventilation Design

Two of the standards for heating, cooling, and ventilation systems currently referenced in Ontario's Building Code are out-of-date. Referencing new, updated editions of these standards in the Code would help to ensure that heating and cooling equipment for houses is sized based on contemporary calculation methods, saving energy and money, and enable effective ventilation system designs that achieve acceptable indoor air quality in large buildings.

Comment Submission

We look forward to your feedback regarding the potential changes included in this consultation. Your active involvement helps ensure that potential Code changes are fully informed, are technically and economically feasible, and enforceable. Comments are also appreciated on the timing of the potential changes. As was the case with the 2006 Building Code, it is possible to phase in Code changes over the lifespan of the next Code cycle.

Steps to submission

Review this consultation paper, or the technical descriptions posted online.

- You can provide feedback by completing the online or downloadable PDF comment forms.
- If you are commenting on specific areas of potential change, please complete an additional form for each potential change for which you want to provide input. General comments on the potential changes described here may also be submitted through the comment form and will be shared with the Technical Advisory Committee.
- Submit by fax, mail, or email.

You are encouraged to submit additional material in a manner that best allows you to express your views on the potential Building Code amendments.

The Ministry of Municipal Affairs and Housing must receive your response to this consultation by **March 1, 2013.**

If you do not support a potential change, or would support the change with modifications, please include an explanation of the rationale for your concerns to help the Ministry and the Technical Advisory Committee understand your views.

Please remember to include the following on each form:

- your name
- your mailing address
- whether you are responding on behalf of yourself or an organization

Completed Comment Forms and supporting documents may be submitted to the Ministry of Municipal Affairs and Housing using the online comment form. You may also email, fax or mail completed forms to:

Email: elisheva.bouskila-fox@ontario.ca

Tel: 416-585-6515

TTY: 416-585-6991 or 1-866-220-2290

Fax: 416-585-7455
Subject Line: Accessible Built Environment Consultation

Mail:
Accessible Built Environment Consultation
c/o Building and Development Branch
Ministry of Municipal Affairs and Housing
777 Bay Street – 2nd Floor
Toronto, ON
M5G 2E5

Please use the above contact information if you have any questions on the consultation process.

Personal information provided in responses to Building Code consultations is collected under the authority of section 4 of the Ministry of Municipal Affairs and Housing Act and subsection 38(2) of the Freedom of Information and Protection of Privacy Act for consultative purposes and for contacting you should we need to clarify your response. Responses to consultations (minus addresses, where provided) may be shared with provincial and national building and fire code development committees. Questions about the collection of personal information may be addressed to James Ross, Policy Coordinator, at the address noted above.

Ministry of Municipal Affairs and Housing

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