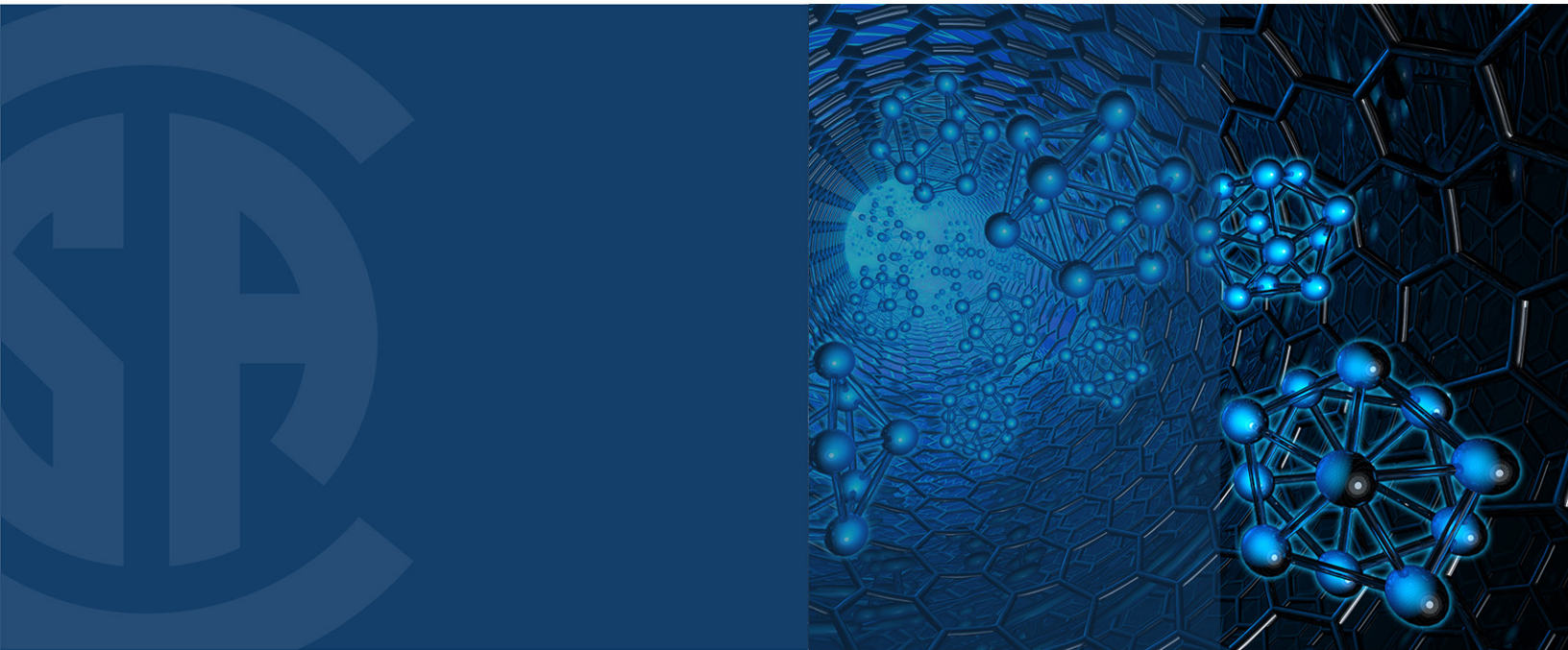


# **Accessible design for the built environment — Implementation handbook**



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<a href="#">Preface</a> Clauses <a href="#">4.3.5.3.1</a> , <a href="#">4.5.3</a> , <a href="#">4.5.6.2</a> , <a href="#">4.5.6.3</a> , <a href="#">5.1.1</a> , <a href="#">6.2.4.4</a> , <a href="#">6.3.1.2</a> , <a href="#">7.4.4.6.1</a> , and <a href="#">7.4.4.6.2</a> Tables <a href="#">2</a> and <a href="#">5</a> Figures <a href="#">11</a> , <a href="#">19</a> , <a href="#">33</a> , <a href="#">40</a> , <a href="#">42</a> , <a href="#">44</a> , <a href="#">45</a> , <a href="#">47</a> , and <a href="#">A.11</a>	Δ

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## △ Preface

This is the first edition of CSA B651HB, Accessible design for the built environment — Implementation handbook.

This Handbook was developed as a complementary guide to the fifth edition of CSA B651, Accessible design for the built environment, and contains explanatory, informative commentary on the requirements of the Standard. The Standard sets forth requirements for making buildings and other facilities accessible to persons with a range of physical, sensory, or cognitive disabilities, including but not limited to mobility impairments, reaching or manipulation disabilities, hearing impairments, and visual impairments. CSA B651 was developed by the Technical Committee on Accessible Design and the contents of the Standard have been reformatted into this Handbook.

This Handbook is structured as follows:

- Normative clauses are directly reproduced from the CSA B651 Standard. These are requirements that organizations might need to comply with in order to demonstrate conformance with the CSA B651 Standard.
- The informative guidance material to assist users in meeting the normative requirements is provided below the clauses in the text boxes.

The Technical Committee on Accessibility has also produced two related Standards, CSA B651.1, Accessible design for automated banking machines and CAN/CSA-B651.2, Accessible design for self-service interactive devices.

The Technical Committee has also developed other Standards, including

- CSA B480, Customer service standard for people with disabilities;
- CSA B659, Inclusive design for an aging population; and
- the ISO adoption, CAN/CSA-ISO IWA 18, Framework for integrated community-based life-long health and care services in aged societies.

- Δ This Handbook was prepared by the Technical Committee on Accessibility, under the jurisdiction of the Strategic Steering Committee on Health and Well-Being, and has been approved by the Technical Committee.

### **How to use this Handbook**

This Handbook is intended to be used in its entirety and contains both mandatory and informative requirements. This Handbook was developed to include commentary to help organizations and individuals understand how to apply the principles of universal design to achieve accessible environments that can be accessed, understood, and used to the greatest extent possible by all people regardless of their age, size, ability, or disability.

The Canadian Standard, CSA B651-18, Accessible design for the built environment, is the regulatory Standard and is available in English (and will be available in French) at <https://store.csagroup.org>.

# B651HB-18

## **Accessible design for the built environment — Implementation handbook**

### **0 Introduction**

This Standard contains requirements for making buildings and other facilities accessible to persons with a range of physical, sensory, or cognitive disabilities including but not limited to mobility impairments, reaching or manipulation disabilities, hearing impairments, visual impairments, etc. It was developed to fulfill an expressed need for a national technical standard that covers accessibility issues in many different types of buildings and environmental facilities, and can be referenced in whole or in part by a variety of adopting agencies or jurisdictions.

The technical requirements in this Standard cover design aspects of physical spaces and the elements within them to help ensure that they are accessible to people having different abilities and disabilities. The Standard does not specify the extent to which these requirements have to be applied, as this is the responsibility of the authorities having jurisdiction, whether federal, provincial/territorial, or municipal. The 2015 edition of the National Building Code of Canada (NBC) has referenced certain clauses of CSA B651 as providing an acceptable alternative to the accessible design requirements in the NBC. The Standard is also referenced in other regulations and guidelines. The user is advised to contact the local authority having jurisdiction in this field to determine to what extent this edition of the Standard is referenced.

The CSA Technical Committee that developed this Standard recognizes that it operates within a broader context of social and regulatory initiatives. The UN Convention on the Rights of Persons with Disabilities was adopted by the UN General Assembly in 2006 and ratified by Canada on March 11, 2010. This ground-breaking, legally binding UN Convention promotes, protects, and ensures that persons with disabilities

have the full and equal enjoyment of all human rights — a major step towards equalizing their opportunities and participation in society.

This Standard also supports the principles of universal design (UD) as it applies to the built environment, i.e., designing environments so that they can be accessed, understood, and used to the greatest extent possible by all people regardless of their age, size, ability, or disability.

**Commentary:**

At the Center for Universal Design (CUD) a group of architects, product designers, engineers, and environmental design researchers established seven principles of UD to provide guidance in the design of products and environments. The following are the principles of UD:

- 1) Equitable use. The design is useable by people with diverse abilities.
- 2) Flexibility in use — The design accommodates a wide range of individual preferences and abilities.
- 3) Simple and intuitive — Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.
- 4) Perceptible information — The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
- 5) Tolerance for error — The design minimizes hazards and the adverse consequences of accidental or unintended actions.
- 6) Low physical effort — The design can be used efficiently, comfortably, and with a minimum of fatigue. Doors that open automatically for people with a wide variety of physical characteristics demonstrate the application of this principle.
- 7) Size and space for approach and use — Appropriate size and space is provided for approach, reach, manipulation, and use, regardless of the user's body size, posture, or mobility.

# 1 Scope

## 1.1 Purpose

This Standard specifies technical requirements on how to make buildings and the exterior built environment accessible and safely usable by persons with physical, sensory, or cognitive disabilities.

### Commentary:

- 1) Temporary buildings and facilities provided for public use should also comply with the technical requirements of this Standard. Such temporary facilities can include teaching spaces, reviewing stands, exhibit areas, bleachers, first-aid facilities, pedestrian passageways around construction sites, as well as temporary accommodations such as shelters.
- 2) Where public access is permitted during construction, renovation, or maintenance of a facility or an exterior environment, the requirements of this Standard should be respected to provide safe and equitable use for everyone.
- 3) Some people with disabilities could have requirements beyond the levels addressed in this Standard.

## 1.2 Application

This Standard describes technical requirements that can be used in the design and construction of new facilities or exterior environments, or in modifications to existing facilities. This Standard does not address the application of the technical requirements. The extent to which these requirements have to be applied is the responsibility of other authorities having jurisdiction.

## 1.3 Dimensions

This Standard contains minimum requirements based on adult dimensions. Dimensions are given in SI (metric) units (typically in millimetres) and, where converted from foot/pound (imperial) units, have been rounded off with respect to critical dimensions. All dimensions in figures are given in

millimetres and are measured to the centreline, unless otherwise specified.

**Commentary:**

- 1) When designing for specific individuals, their particular abilities and preferences should be taken into account. For example, some people prefer to transfer to or from a wheeled mobility device towards their preferred side when using toilet facilities.
- 2) If a facility is primarily to serve children, dimensions and other provisions should be adjusted to make them suitable for children.

## 1.4 Commentary and figures

Commentary and figures are included for explanatory or illustrative purposes only and are not a mandatory part of the Standard. Figures are not to scale. If there is any difference between the text and figure (where provided), the text shall take precedence.

## 1.5 Annexes

Annexes [A](#) to [C](#) provide additional information on topics considered in the Standard. Annex [D](#) provides guidance for the design of outdoor trails and beach access routes. Annex [E](#) contains references for accessible outdoor recreational environments, to supplement the information and guidance provided in Annex [D](#).

## 1.6 Terminology

In this Standard, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the standard.

Commentary accompanying clauses do not include requirements or alternative requirements; the purpose of a commentary accompanying a clause is to separate from the text explanatory or informative material.