

A green textured glove is shown holding a green leaf. The leaf has a white sign cutout with the letters 'FO' and some small circular markers. The background is a mix of green textures and a white area at the bottom.

ADA
White Paper
Series for
Accessible
Signage in
North America,
Europe and
Australia

International Accessibility Standards:

UNITED STATES

Summary

The 2010 Standard for Accessible Design (SAD) became the American standard in March 2010, with all state and local codes having to be in compliance by March 2011. This civil rights legislation from the Justice Department is an update of the 1991 Americans with Disabilities Act Guidelines (ADAAG). The current standards are based on codes developed by the American National Standards Institute and the International Building Code and currently all are harmonized to be consistent with one another in most places. States and localities integrate the SAD into their own building codes which are enforced by local code officials or fire marshals. Some states including California have moved well beyond the national code with specific sign and enforcement requirements.

The 2010 guideline have three specific signage related areas: Section 216 which focuses on scope, section 703.2-703.4 which focuses on signs for the blind, and 703.5-703.7 which focuses on the needs of the visually impaired. The separation between the needs of the blind and those of the visually impaired is the leading innovation of the new standards.

2010 Standard for Accessible Design (SAD)

Scope

- Tactile signs for the blind include all permanent identification signs (Rooms that cannot be changed in a 7 day period). For rooms with changing uses alphanumeric addresses can be used.
- Visual sign guidelines are required on all identification and wayfinding sign guidelines but are not required on directories, information signs, menu boards or maps. (This requirement is also for tactile signs)

Braille

- Grade 2 Braille is required on all signs with specific requirement for Braille spacing. California has more stringent requirements and this Braille is often used nationwide.
- Braille must be underneath tactile letters on the sign a minimum of 3/8" away from any raised surface.
- Braille dots must be domed or rounded and with a height between .025" and .037".

Tactile Characters

- Raised characters must be a minimum of 1/32" in height with a distance of a minimum 1/16" from the base of the characters and 1/8" from the top of the characters.
- Tactile characters must be a minimum of 3/8" from any tactile surface.
- Only upper case characters can be used.
- Characters must be sans serif with a stroke width where the uppercase letter "O" is 55 percent minimum and 110 percent maximum of the height of the uppercase letter "I". Characters cannot be italic, oblique, script, or highly decorative.
- Characters must have a width-to-height ratio between 3:5 and 1:1 and a stroke width-to-height ratio between 1:5 and 1:10.

- All tactile characters as well as the sign itself must be rounded or edged.
- Raised characters cannot be less than 5/8" minimum and 2" maximum.

Sign Height and Location

- Signs should be installed on the wall adjacent to the latch side of the door. Where there is no wall space to the latch side of the door, including at double opening doors, signs should be sited on the nearest adjacent wall. Signs must be 2" from the door jamb with 18" clear floor space from the center of the sign.
- Signs cannot protrude more than 3" from the wall.
- Signs must be mounted a minimum of 48" off the ground to the bottom of the lowest raised letters and 60" to the top of the top raised letters.
- Signs protruding more than 3" must be a minimum of 80" in height.

Visual Characters

- Characters and numbers on signs need to be sized according to the viewing distance and height above ground with a minimum 2" high for viewing conditions and additional character sized based on height and distance.
- Visual letters can be serif or san serif and upper case or upper/lower case.
- Visual characters must be a minimum of 40" off the floor surface.

Color Contrast

- All signs must have a light background on a dark surface or a dark background on a light surface.
- All sign characters must have a matte or a low gloss finish.

Dual Signs

- Signs with both visual and tactile information are allowed. If both information is included tactile characters can be a minimum 1/2" and all characters and Braille can have no contrast.
- On dual signs visual characters can be any height above 40" but tactile characters must follow the 48-60" height standard referenced above.

Symbols and Pictograms

- The international symbol of accessibility must be used to mark accessible areas.
- Symbols must be within a 6" field with text descriptors below.
- Symbols do not have to be tactile.

Design Recommendations

- All states must be in compliance with the SAD but states and localities can add additional requirements.
- Permanent locations are often interpreted as places that are unable to change functions quickly like bathrooms, cafeterias, and auditorium rooms.
- The USACCESS Board is an organization that provides code interpretation and education on behalf of the justice department.
- Dual signs are allowed but not easily understood by code officials which may require greater education and interpretation.
- Character heights on visual signs beyond the minimum requirements are at the discretion and analysis of the designer based on the guidelines provided.
- Different methodologies are used for rounding or doming Braille.
- There is not contrast requirement for signs but a minimum LRV of 60% is recommended.
- Make sure to use the international symbol of accessibility with few changes in design.
- Additional innovations including tactile maps and detectable surface wayfinding are allowed but not included in the code.

International Accessibility Standards:

California Title 24

Summary

California's Title 24 is part of the California Code of Regulations (CCR) consisting of 28 sections and released by the Department of the State Architect (DSA). Title 24 covers the California Building Standards code. Signage regulations are located in multiple areas, but mainly in 1117B.5 Signs and identification. Additional areas of note include but are not limited to 1011.3 for tactile exit signage and 1022.8 for tactile floor identification signs in stairways. The most recent addition of the code was in 2010 and became effective January 1 2011. Because of the 2010 Standard for Accessible Design (SAD) released concurrently at the national level the current Title 24 matches many of the national standards while providing unique requirements. Designers working in California must match Title 24 requirements.

Title 24 is enforced by Certified Access Specialists sanctioned by the state to verify that accessibility standards have been met, particularly in regards to Braille and tactile character standards. Enforcement officials use a document titled Checklist 17 that covers signage criteria that need to be met in buildings including identification, wayfinding, egress, and areas of refuge. Enforcement must be met for both building occupancy and the addition or alteration of existing buildings.

California Title 24

Scope

- Like the national code Title 24 requires tactile signs for all permanent identification signs, and in addition there are additional requirements related to egress signs.
- Visual sign guidelines are required on all identification and wayfinding signs.
- Specific standards are included for the use of the International Symbol of Accessibility to identify accessible paths. International symbols are not required in mechanical areas or spaces that already have accessible entrances and exits established.

Braille

- Grade 2 Braille is required on all signs with specific requirement for Braille spacing. California has more stringent requirements than the national ADA with a separation of 2/10" between dot cells. California building inspectors often use a template to test for California Braille.
- Braille must be underneath tactile letters on the sign a minimum of 3/8" away from any raised surface, but a maximum of 1/2" from raised characters.
- Braille dots must be domed or rounded and be a minimum 1/40" off of the surface.

Tactile Characters.

- Tactile characters must be a minimum of 3/8" from any tactile surface.
- Only upper case characters can be used.
- Similar to the national ADA characters must be san serif with a stroke width where the uppercase letter "O" is 55 percent minimum and 110 percent maximum of the height of the uppercase letter "I".
- Similar to the national ADA characters must have a width-to-height ratio between 3:5 and 1:1 and a stroke width-to-height ratio between 1:5 and 1:10.
- Raised characters cannot be less than 5/8" minimum and 2" maximum.

Sign Height and Location

- Signs should be installed on the wall adjacent to the latch side of the door. Where there is no wall space to the latch side of the door, including at double opening doors, signs should be sited on the nearest adjacent wall. Tactile Exit signs should be mounted on the approach side as one exits the space.
- Signs cannot protrude more than 3" from the wall. All signs must be edged or rounded with a minimum 1/8" radius.
- Sign heights are mounted 60" above floor level to the center of the sign. This contrasts with the national ADA where the mounting height is based on a range between the bottom and top of the raised text.

Visual Characters

- Similar to the national standards characters and numbers on signs need to be sized according to the viewing distance and height above ground with a minimum 2" high for viewing conditions base on the letter I and additional character heights sized based on sign height and distance.
- Visual letters can be upper case or upper/lower case but unlike the national ADA there is in mention of the use of serif type.

Color Contrast

- All signs must have a light background on a dark surface or a dark background on a light surface with a non-glare finish. This matches the national ADA.

Dual Signs

- An ambiguous area of the code. Dual signs are not specifically called out like the national code. There are not special accommodations for raised text when legible type is used and vice versa.

Restroom Signs

- Men's restroom signs must be represented by a triangle 1/4" thick with 12" long edges and must contrast with the background door. The triangle edges must be rounded or chamfered with a minimum 1/8" radius.
- Women's restroom signs must be represented by a 1/4" thick 12" diameter circle and must contrast with the background door.
- Unisex restrooms must be represented by a 1/4" thick triangle transimposed on a 1/4" circle. The triangle must contrast with the circle which in turn must contrast with the background door.
- The national ADA requires that all restroom signs must have additional raised letters and Braille. If the doors swing out and additional tactile sign must be included adjacent to the door.

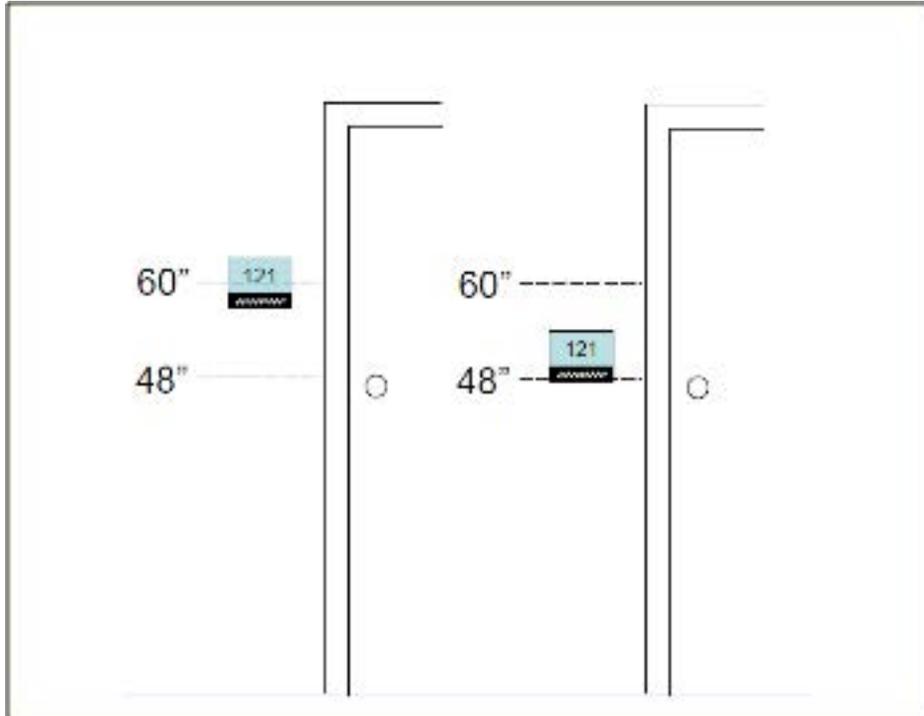
Symbols and Pictograms

- The international symbol of accessibility must be used to mark accessible areas. The symbol specified should consist of a white figure on a blue background and be equal to Color No. 15090 in Federal Standard 595B.
- Symbols must be within a 6" field with text descriptors below following the ADA, even on restroom signs.
- Symbols do not have to be tactile.
- For publicly funded buildings a cleaner air symbol is required in accessible spaces for people impacted by airborne chemicals

Design Recommendations

- California must be compliant with all national codes. If the state code does not include a specific issue, default to the national code.
- Inspection is required for major modifications to signs. Consult with a code inspector on guidance for when inspection is needed.
- Dual signs are not called out in the code. Consult with the office of the state architect for guidance before using dual signs.
- Character heights on visual signs beyond the minimum requirements are at the discretion and analysis of the designer based on the guidelines provided.

- Code inspectors in California are particularly on the lookout for mistakes in Braille spacing or doming as well as tactile character standards. Make sure all signs are inspected and meet all the standards before installation.
- There are no contrast requirement for signs but a minimum LRV of 60% is recommended.
- Make sure to use the international symbol of accessibility with the exact shape and color specified in the code.
- Review all areas of Title 24 related to signage. They are spread out throughout the code document.



Sign height and location



Sign details

International Accessibility Standards: **CANADA**

Summary

Canada does not have a single consistent national standard for accessible signs. The country has a Canadian Disability Act which requires that public spaces be made accessible, but the provinces, localities, and agencies are allowed to design their own codes and guidelines. Many groups in Canada build their own code off of the guidelines established by the Canadian Standards Association, a non-profit membership organization charged with establishing standards that can be employed by different groups in the country. The Canadian Standards Association's guideline is CAN/CSA B-651 95 Barrier-Free Design. Currently the following codes and guidelines are built off of the CSA's work.

Ontarian's with Disabilities Act: Currently in the process of developing a guidelines that can be incorporated into municipal codes. In the meantime municipalities can develop their own sign codes.

Canadian National Institute for the Blind: This group establishes additional language and best practices that can be incorporated into codes.

Federal Identity Program Guidelines 4.3B Tactile Signage: Sign System and Installation Guide: This set of standards for federal buildings is based on the CSA Barrier Free Design Guidelines and is used for federal buildings.

International Codes: A number of municipalities based their sign codes off of more detailed information found in the International Building Code (Which the ADA is in part based off of).

Canadian Transportation Agency: The agency has adopted its own set of guidelines for transportation facilities.

Highlights from the CSA Barrier-Free Design Guidelines Adapted for the Ontarians with Disability Act(In Progress) and Federal Identity Program

Note that individual agencies and municipalities can alter the guideline. These general guidelines are being noted because they are the most commonly used in Canada. Be sure to identify the specific code be used in a specific project.

Scope

- Tactile sign guidelines are applicable for regulatory, warning , and permanent room identification signs. Visual guidelines are applicable to orientation and informational signs. This approach is similar to the American's with Disabilities Act guidelines.

Braille

- Grade 1 Braille is used in Canada, a form of Braille that complies with the Unified Braille Code, a form of Braille where all letters and numbers are given a Braille equivalent. This form of Braille is not used on signs in the United States and is the primary difference between the two guidelines. Grade 1 Braille also meets the multi-lingual standards in Canada.

Visual Characters

- Visual character guidelines are closely aligned with the International Building Code including color contrast, letter heights for minimum viewing distances as well as specific ratios for stroke width and width to height ratios.

Tactile Characters

- Upper/lower case tactile letters are allowed as opposed to the upper case only requirement in the United States.
- Characters are between 16-50 mm (0.6-2 in) high.
- All characters whether they are visual or tactile should have minimum width to height ratios of 3:5 to 1:1. They must have a minimum stroke width ration of 1:5 to 1:10.
- All tactile characters as well as the sign itself should be smoothly edged.

Sign Height and Location

- Sign heights are recommended at 1500mm (59 inches) off the ground surface.
- If at all possible the sign should be placed on the latch side with a clear area of a minimum 75 mm (3 inches) from the door frame. The sign should be a minimum of 140 mm (app. 6 inches) from the adjacent wall surface.

Contrast and Lighting

- There are no color contrast recommendations but a minimum lighting level of 200lx is required.

Symbols

- All symbols should meet international standards and be within a minimum 150mm (6 inch) field. Corresponding text and Braille must be below the symbol.

Multi-lingual Standards

- Though not in the CSA or the Ontarians with Disabilities Act federal program signs are required to be in English and French including all tactile information and Braille. There are a number of sign systems with template approaches to multi-lingual accessibility signs.

Design Recommendations

- Unlike other countries including the United States, England, and Australia; Canada has not developed one consistent national guideline for individual provinces or specific facilities. It is important to know the pertinent guideline for the municipality, province, or building type.
- Government signs fall under the Federal Identity Guidelines which mandate the use of multi-lingual signs as well as other specific approaches to sign development. Multi-lingual requirements may also be applicable in other provincial or local codes.
- Use only metric units when working with Canadian codes. English equivalents are only approximate and will not be approved by code officials.
- Be sure to measure the lighting level when developing the sign program.
- Grade 1 Braille takes up a significant amount of space on a sign can potentially limit the amount of information that can be used.
- The Canadian code guidelines are moving towards harmonization with the International Building Code. Where the Barrier Free Access Act is in effect and there is no local code it may be possible to substitute the International Building Code.

International Accessibility Standards:

UNITED KINGDOM

Summary

The Disability Discrimination Act of 1995 (DDA) is an Act of the Parliament of the United Kingdom which which has now been repealed and replaced by the Equality Act 2010(EA) in most of the UK except for Northern Ireland. This act consolidate the DDA with the Disability Equality Duty(DDE) which requires public agencies to promote opportunities for the disabled. The DDA and later EA required that by October 2004 all “reasonable adjustments” must be made to ensure that building are accessible. Included in these improvements are signs. The EA is civil rights legislation where legal and civil actions can be enforced against institutions not in compliance. There are two sections in the EA that focuses on signs:

- Auxillary Aids or Services that make it easier to utilize services like tactile maps or larger print
- Overcoming barriers like hard to read or use signs

Like the ADA. The EA is meant to respond to the needs of the blind and visually impaired. The EA is partially prescriptive but also offers recommendations for creating more accessible environments through maps and tactile surfaces. The prescriptive elements of the EA are located in the Regulatory Code title BS8300.

Equality Act of 2010

Scope

- The EA focuses on permanent identification signs for tactile letters and Braille and wayfinding /identification signs for legible letter heights and color contrast.
- The EA also provides advice on tactile maps, audible signs and directional signs.

Braille

- In the UK Grade 1 or Grade 2 Braille can be used. Grade 1 is a form of Braille that complies with the Unified Braille Code, a form of Braille where all letters and numbers are given a Braille equivalent. For more complex signs with lengthier text, Grade 2 Braille, which uses a shorthand approach for words, can be used.
- In the UK a raised leader is used at the beginning of the first line of Braille either when the Braille is in a single line or multiple lines.

Visual Characters

- Characters and numbers on signs need to be sized according to the viewing distance and height above ground from which they are to be read, but there is no formal calculation.

Tactile Characters

- Letters and numbers must be raised 0.75mm.
- Upper case or upper/lower case tactile letters can be used on signs.
- Signs must be sans serif or simple serif type and raised characters should be a minimum 16mm in height, but not more than 50mm.
- Tactile letters and numbers on signs should have a width-to-height ratio between 3:5 and 1:1 and a stroke-width-to-height ratio between 1:5 and 1:10.

- All tactile characters as well as the sign itself are encouraged to be rounded or edged.

Sign Height and Location

- Signs should be installed on the wall adjacent to the latch side of the door. Where there is no wall space or a latch side of the door, including at double opening doors, signs should be sited on the nearest adjacent to the wall.
- Mounting height should be 1525mm above floor level to the center of the sign. The chosen location for sign should allow a person to approach within 75mm of the sign without encountering protruding objects standing within the swing range of a door.

Color Contrast

- All signs must have a light background on a dark surface or a dark background on a light surface.
- All sign characters must have a matte or a low gloss finish.

Symbols and Pictograms

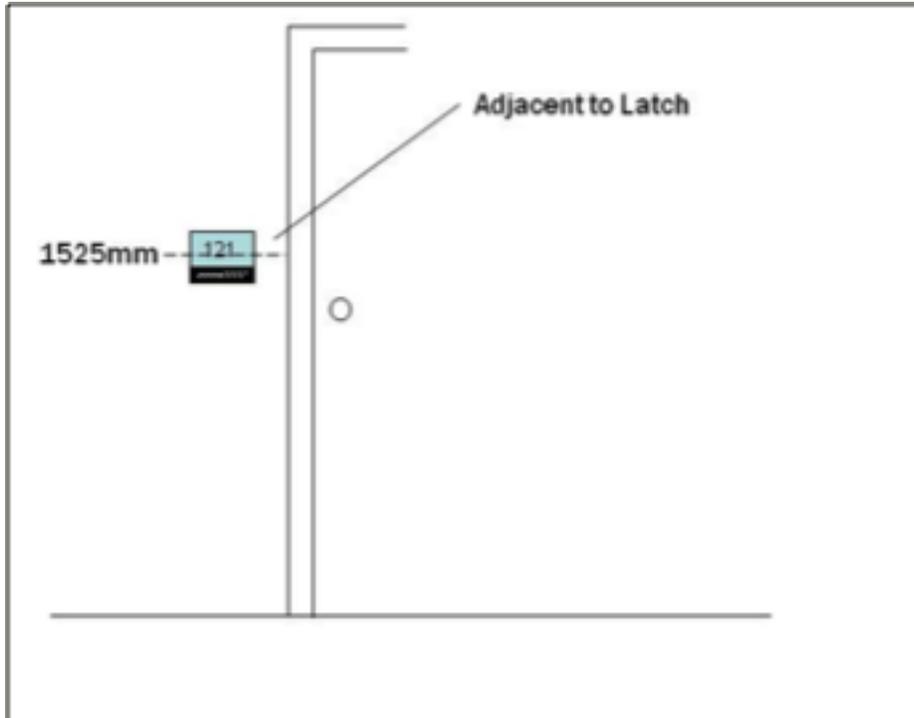
- The use of pictograms is highly encouraged with tactile pictograms used where appropriate
- The international symbol of accessibility must be used to mark accessible areas.
- Equivalent text is required below or to the right of all pictograms.
- Pictograms should be accompanied by the equivalent text description positioned directly below or alongside the pictogram. The border of the pictogram should be a minimum height of 150mm.

Miscellaneous

- The EA encourages the use of accessible innovations like tactile maps and detectable surfaces. Many of these innovations are developed or encouraged by the Royal National Institute of the Blind (RNIB).
- On directional signs the EA encourages arrows be placed with the same direction being grouped together.

Design Recommendations

- The code of the UK is similar to many international codes, but deviates in significant ways from the current American's with Disabilities Act. Be sure to identify these changes and similarities if developing a multi-national sign system.
- Organizations like the RNIB can provide recommendations and best practices for accessible environments systems including maps, detectable surfaces, and talking signs.
- It is advisable to have a wayfinding professional develop a complete audit of the building's accessibility before beginning a program. The RNIB has staff that conducts audits, and they are conducted by other professional groups as well.
- Use only metric units when working with UK codes. English equivalents are only approximate.
- Grade 1 Braille takes up a significant amount of space on a sign can potentially limit the amount of information that can be used. In the UK it can be substituted for Grade 2 Braille.
- Make sure to use the international symbol of accessibility with few changes in design.



Sign height and location

A diagram of a rectangular sign with rounded corners. The sign contains the text 'Room 221' in a large, bold, sans-serif font. Below the text is a Braille representation of 'Room 221'. To the right of the sign is a list of specifications:

- Left justified rule
- Upper case or upper/lower case text
- Grade 1 or Grade 2 Braille
- Sign must contrast with its background or have a contrasting border
- Rounded edges
- San Serif or Simple Serif thin stroke width

Sign details

International Accessibility Standards:

AUSTRALIA

Summary

Australia has a well established code structure at the national level that include disability standards. The country enacted an Access to Premise Standards for their Disability Discrimination Act in 1992. These standards, developed into formal language by Standards Australia, a non-profit standards development organization (Documented as AS14281.1) is integrated into the national Building Code for Australia and located in section D3.6 (Last updated in 2009). Braille standards are developed by the Australian Braille Authority. The national building code is enforced by local code officials.

The National Building Code Accessibility Guideline Summary

Scope

- The requirements of the national building code are limited to the identification of accessible facilities, services, and features.

Braille

- Grade 1 Braille is used in Australia, a form of Braille that complies with the Unified Braille Code, a form of Braille where all letters and numbers are given a Braille equivalent. This form of Braille is used throughout the world but is different from the Grade 2 standard found in the United States.
- Braille must be domed, left justified to raised text, and be 8mm below the tactile characters (5/16 inches), not including descenders.
- When multiple lines of Braille are used a semicircular text locator must be used aligned with the first line of text. Where an arrow is used on a tactile sign, a small arrow the height of the Braille must be included alongside the Braille.

Tactile Characters.

- Upper/lower case tactile letters are required as opposed to the upper case only requirement in the United States. Lower case tactile letters are mandated to have a height of no less than 50% of the upper case letters.
- Upper case tactile characters must have a height of between 15-55mm (app. 9/16-2 1/16 inch). These characters must have a stroke with a stroke width of between 2-7mm (app. 1/16-1/4 inch). Only fonts with consistent stroke thickness (San Serif) must be used)
- Characters must be a minimum of 17.5mm (11/16 inch in height) per meter of viewing distance. Most viewing distances are 1-2 meters for signs.
- Text must have a minimum character spacing of 2mm (1/16 inch) and a minimum word spacing of 10 mm (3/8 inch)
- All tactile characters as well as the sign itself must have rounded edges.

Sign Height and Location

- Sign heights and character heights off the ground surface are mandates. For sign heights the sign should be between 1200-1600 mm (app. 47-63 inches) while signs with a single line of characters should be between 1250-1350 mm (app. 49-53 inches). In some cases sign including high traffic areas signs can be placed slightly above the heights outlined.
- If at all possible the sign should be placed on the latch side of the door between 50-300 mm (2-6 inches) from the door moulding. If this is not possible the sign can be placed on the latch side of the door or the door itself.

Luminance (Contrast)

- Australia has a formal contrast requirement for both signs and characters of 30% minimum luminance ratio (Similar to light reflectance value). A sign must contrast with the wall behind it, as well as the sign and the characters on the sign. If the sign does not sufficiently contrast with its background a minimum 5mm(3/16 inch) contrasting border must be put on the sign.
- The codes also mandate minimum lighting levels to ensure adequate contrast. This includes monitoring lighting levels in all public areas during open hours.
- All sign characters must have a matte or a low gloss finish.

Symbols

- The international symbol of accessibility must be used in a strictly mandated approach. It must be a white character on a blue background (B21 Ultramarine or similar) and the character must be facing the direction of traffic. For identification signs the symbol must be facing to the right.

Restroom Signs

- Restroom signs must include both raised and visual symbols of accessibility, male and female symbols, text characters and Braille.
- Signs for unisex accessible restrooms must include the letters RH or LH to indicate a left-hand or right-hand side transfer onto the WC pan. The minimum font size is required to be 20mm(15/16 inch)

Restroom Signs

- Men's restroom signs must be represented by a triangle ¼" thick with 12" long edges and must contrast with the background door. The triangle edges must be rounded or chamfered with a minimum 1/8" radius.
- Women's restroom signs must be represented by a ¼" thick 12" diameter circle and must contrast with the background door.
- Unisex restrooms must be represented by a ¼" thick triangle transimposed on a ¼" circle. The triangle must contrast with the circle which in turn must contrast with the background door.
- The national ADA requires that all restroom signs must have additional raised letters and Braille. If the doors swing out and additional tactile sign must be included adjacent to the door.

Design Recommendations

- The code of Australia is similar to many international codes, but deviates in significant ways from the American's with Disabilities Act. Be sure to identify these changes and similarities if developing a multi-national sign system.
- Use only metric units when working with Australian codes. English equivalents are only approximate and will not be approved by code officials.
- Be sure to measure the lighting level when developing the sign program.
- Grade 1 Braille takes up a significant amount of space on a sign can potentially limit the amount of information that can be used.
- Make sure to note the difference between character distances and sign distances. Both metrics are used in the code.



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