Inter-American Development Bank

Goodbye Barriers!

A Guide to Design More Accessible Spaces

José Luís Borau Jordán
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Infrastructure and Energy Sector

Social Sector

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Social Infrastructure

Goodbye Barriers!

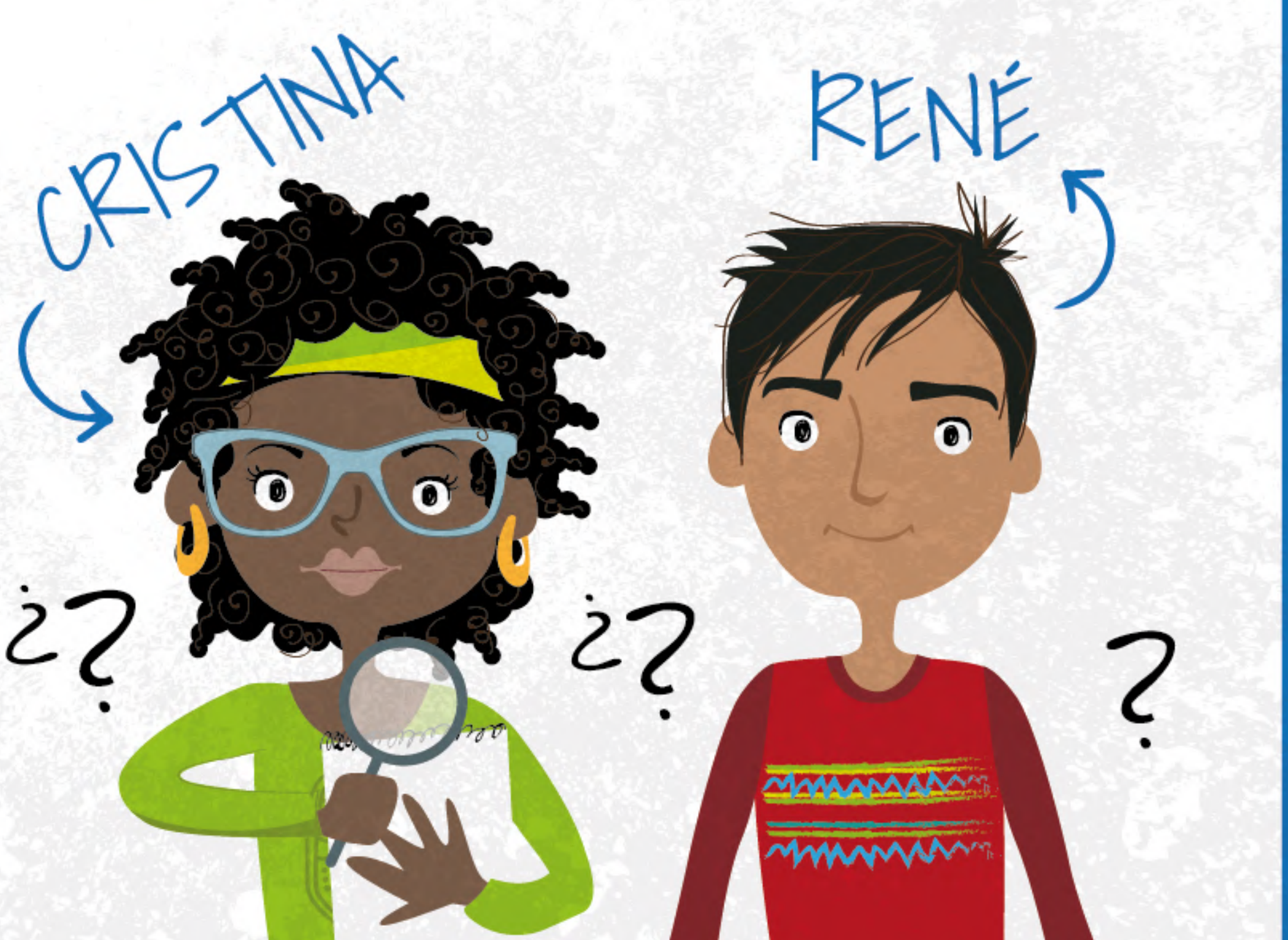
A Guide to Design More Accessible Spaces

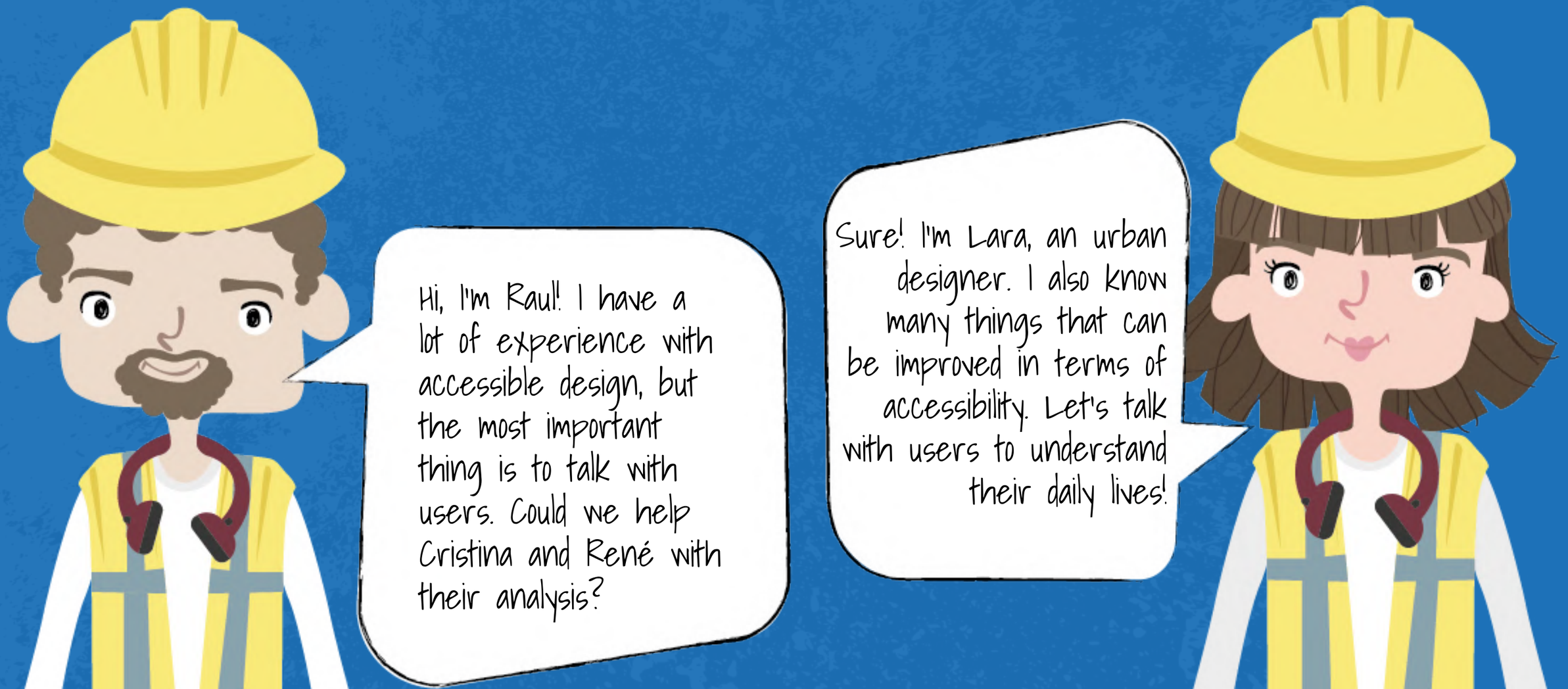
José Luís Borau Jordán
Juliana de Moraes Pinheiro - Suzanne Duryea

We introduce you to Cristina and René, students of Architecture.

They have finished classes for today, but they have to write a paper on the possible barriers found in their surroundings.

They have to analyze the itinerary from their university to their houses, looking for obstacles, and proposing solutions.




Hi, I'm Raul! I have a lot of experience with accessible design, but the most important thing is to talk with users. Could we help Cristina and René with their analysis?
Sure! I'm Lara, an urban designer. I also know many things that can be improved in terms of accessibility. Let's talk with users to understand their daily lives!

OUR ALLIES, THE USERS OF THE INFRASTRUCTURE

ANA

PEDRO

ISABELA

SONIA

DAREK

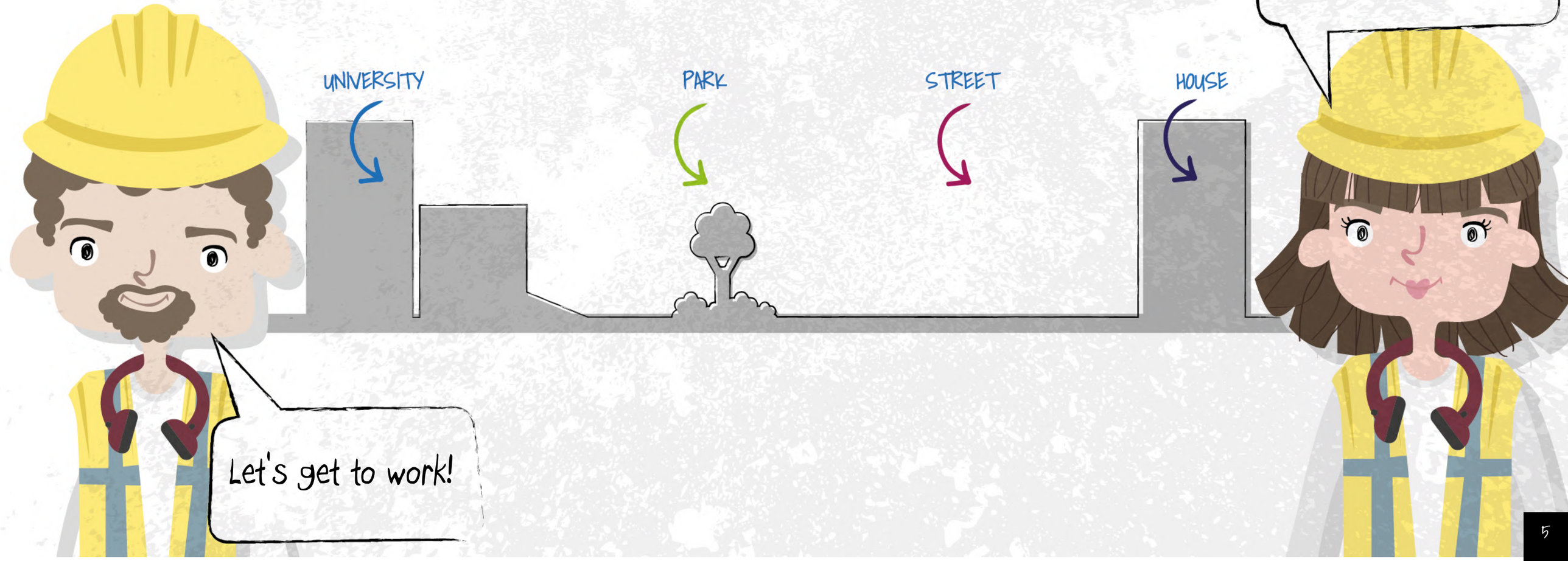
FELIPE

PAULA

JORGE

PAUL

OUR ITINERARY



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BACKGROUND INFORMATION

Most countries in Latin America and the Caribbean have regulations, manuals, or standards for inclusive designs so that more and more measures that make life easier for people with disabilities can be adopted in new constructions. Despite of this, there are still places that do not facilitate the inclusion of all people in buildings and urban spaces of the region.

GOODBYE BARRIERS! identifies everyday situations that cause difficulties in accessibility and proposes simple solutions that can be implemented. This guide demonstrates why it is necessary to correct these situations, with a particular focus on the users of urban spaces and social infrastructures.

GOODBYE BARRIERS! is aimed at those responsible for the design and execution of construction work in public and private spaces (architecture and engineering professionals, landscape designers, maintenance personnel, construction personnel, etc.) interested in making accessible designs and those who understand the need and benefits to have accessible spaces, going beyond the compliance with national and international standards.

The idea to have this guide originated with Jesús Hernández Galán, Director of Universal Accessibility and Innovation at the Fundación Once, and Iciar Hidalgo Roca, Social Infrastructure Specialist at the Inter- American Development Bank.

From Fundación Once, the guide was developed by José Luis Borau Jordán, Chief of Accessibility to the Physical Environment and his team of the ONCE Social Group composed by Miguel Ángel Carnicero Munilla, Elena Paneque Flores, Natasha Trujillo Angurell, Iván Salado Gil, Raúl López Gómez, Sergio Martín Jiménez, Ricardo Fajardo Pardo and Raúl Núñez García. From the IDB, the guide had the technical supervision of Icíar Hidalgo Roca, Wilhelm Dalaison, Carlos Henriquez, Livia Minoja, Suzanne Dureya, and Juan Pablo Salazar, with the general coordination, drafting and editing carried out by Juliana de Moraes Pinheiro.

It also had the invaluable collaboration of Jose Luis Irigoyen, Lauramaría Pedraza, Diana Sandoval, and Odile Johnson.

This guide was originally written in Spanish. Its content was translated by Aline Piva and revised by Juliana de Moraes Pinheiro.

CONCEPTS

Accessibility: Condition that must be met by the environment, processes, goods, products and services, as well as the objects, instruments, tools and devices, to be understandable, usable and practicable by all people, especially those with disabilities or reduced mobility, in conditions of safety and comfort and in the most autonomous and natural way possible.[1]

Barriers: Factors in a person's environment that, in their absence or presence, limit functionality, and cause disability. These include inaccessible physical environments, lack of adequate technical assistance, and negative attitudes toward disability.[2]

Basic capabilities: A set of actions that allow people, families, and communities to have a basic platform, in terms of skills, abilities as ownership, especially in food, education, health, housing, environment and other aspects that improve their well-being, raise their productivity and allow them to start accumulating assets and achieve full and free social participation.[3]

Communication: According to Art. 2 of the United Nations Convention on the Rights of Persons with Disabilities (CRPD), it includes languages, text display, Braille writing system, tactile communication, macro types, multimedia devices that are easily accessible, written language, hearing systems, simple language, digitized voice media and other augmentative or alternative modes, media and communication formats, including information technology and easy access communications.[4]

Disability: An evolving concept that results from the interaction between people with disabilities and barriers due to the attitude and environment that prevent their full and effective participation in society, on equal terms with others[5]. It includes deficiencies, activity limitations, and restrictions on participation, referring to the negative aspects of the interaction between an individual (with a health condition) and the contextual factors of that same individual (personal and environmental factors). A disability can be physical, mental, intellectual, or sensory.[6]

Discriminaton due to disability: Any distinction, exclusion or restriction on the grounds of disability that has the purpose or effect of impeding or voiding the recognition, enjoyment or exercise, on equal terms, of all human rights and fundamental freedoms in the political, economic, social, cultural, civil or other fields. It includes all forms of discrimination, including the denial of reasonable accommodation.[7]

Universal design (or design for all): Design of products, environments, programs, and services to be used by all people without the need for adaptation or specific project. It must have equal use, easily understood information, adequate dimensions and, be flexible, intuitive and straightforward, requiring little physical effort.[8]

"Good design enables, bad design disables"

Stockholm Declaration, May 2004

1. Associação Brasileira de Normas Técnicas. Acessibilidade a edificações, mobiliário, espaços e equipamentos urbanos. ABNT NBR 9050:2015
2. Glosario de Terminos sobre Discapacidad. Comision de Politica Gubernamental en Materia de Derechos Humanos. Mexico.
3. Idem
4. Convencion sobre los Derechos de las Personas con Discapacidad (CDPD), Naciones Unidas. 2006.
5. Idem
6. Glosario de Términos sobre Discapacidad. Comisión de Política Gubernamental en Materia de Derechos Humanos. Mexico
7. Convencion sobre los Derechos de las Personas con Discapacidad (CDPD), Naciones Unidas. 2006
8. Clasificaciones de la OMS sobre discapacidad. Carlos Egea García, Pedagogo. Alicia Sarabia Sánchez, Trabajadora Social.

INTRODUCTION

Today, there are more than 1 billion people with some disability, which is approximately one in eight people in the world. According to the World Health Organization (WHO), approximately 90% of the visually impaired population is concentrated in developing countries.[9] In Latin America and the Caribbean (LAC) region, about 12% (12.4% in Latin America and 5.4% in the Caribbean)[10] of all people live with at least one disability. This part of the population, in turn, obtains lower academic results, participates less in the economy, and has high poverty rates when compared to its counterpart.

To continue improving lives with the perspective of development with identity and inclusion for all people, the Inter-American Development Bank has approved a Diversity Action Plan for Operations (PADO in its Spanish acronym) in June 2019.[11]

The PADO is aligned with the global commitments that were undertaken as part of the Sustainable Development Goals (SDGs), which all IDB member countries adopted as their own in 2015. The SDGs state that their goals must be achieved for all segments of society and that nobody should be excluded. In particular, the SDG number 10 refers to the **reduction of inequality, aimed at promoting the social, economic, and political inclusion of all people, and eliminating discriminatory laws, policies, and practices.**

In addition to adopting actions to meet the needs of indigenous peoples, Afrodescendants, and LGBTQ+ people in LAC countries, the PADO also contemplates addressing the needs of persons with disabilities. For the universal accessibility agenda and in the framework of inclusion for all, the Bank seeks to: (i) define relevant policy agendas; (ii) integrate cross-sectional analysis, actions and results; (iii) invest directly in development with identity and inclusion that are scalable and can be reproduced; (iv) promote knowledge and dissemination of materials that meet everyone's priorities and needs; and (v) promote the ethical use of cutting-edge technology towards a development with identity and socioeconomic inclusion for all people.

Similarly, universal accessibility, when implemented in all projects from the beginning of the design process, improves the quality of life of all people[12]. When the design of public spaces does not have the requirements to attend all people - regardless of their physical, mental, intellectual, or sensory capabilities - this design can be considered discriminatory since it could prevent full, effective, and universal participation in society on equal terms.

But what is the concept of disability? According to the biopsychosocial model of disability applied in the United Nations Convention on the Rights of Persons with Disabilities (CRPD), disability is a complex concept that encompasses the interaction between a person with disabilities and barriers due to attitude and the environment that prevents their full and effective participation in society.

According to the Preamble to the CRPD, the Member States have undersigned a series of agreements considering persons with disabilities as all of those who have physical, mental, intellectual, or sensory impairments that suffer from the barriers that prevent their full participation in society.

In general terms, these agreements: (i) reaffirm the universality, indivisibility, interdependence and interrelation of all human rights and fundamental freedoms, as well as the need to ensure that persons with disabilities exercise them wholeheartedly and without discrimination; (ii) recognize that disability is an evolving concept that results from the interaction between people with disabilities and the

9 Organización Mundial de la Salud (OMS), Centro de Prensa, 2011
10 Panorama Social de América Latina, 2012. Cepal
11 Plan de Acción de Diversidad para Operaciones, 2019-2021. Inter-American Development Bank
12. Serebrisky, Tomás. Infraestructura sostenible para la competitividad y el crecimiento inclusivo. 2014. Inter-American Development Bank

INTRODUCTION

barriers due to the attitude and the environment that prevent their full and effective participation in society, on equal terms; (iii) stresses the importance of incorporating disability issues as an integral part of the relevant sustainable development strategies; (iv) also recognizes that discrimination against any person due to their disability constitutes a violation of the inherent dignity and value of the human being; and (v) recognize the importance of international cooperation to improve the living conditions of people with disabilities in all countries, particularly in developing countries.

Health is a state of complete physical, mental, and social well-being, and not just the absence of health conditions or diseases. The contents of this guide will facilitate dialogue between decision-makers when coming to understand the need to invest in constructions that facilitate access to all people.

This guide is organized into four main sections that cover building facilities and their surroundings. Through an informational and interactive story about two architecture students who have the task of making a complete and integrated analysis of their itinerary, from their University to their homes, considering various types of disabilities. The two students count with the support of project and managers construction workers who explain how to implement specific standards for each type of space. The whole story is told with the valuable support of people with different types of disabilities and who follows the same itinerary and go to the same spaces as the two students. The four main sections of this guide are not exclusive to the field to which they belong, and they can be used as reference in different scenarios. For example, the case of the University can be applied to other social infrastructure buildings such as schools, hospitals, community centers, and others.

The sections of this guide cover different basic knowledge needs and include application examples and reference standards.

- University
- Park
- Street
- House

Join us in getting to know the important task of these architecture students and to learn with all the actors what can be improved in terms of inclusion and universal accessibility, practically and efficiently.

We are at the UNIVERSITY

Shower and changing rooms
- Location of the shower area
- Bath seat and faucets
- Location, typology, stability, and firmness of grab bars
- Flush-mounted shower floors and sinks

Toilets
- Toilet location
- Location, typology, stability, and firmness of grab bars
- Height of elements and mechanisms
- Height of sinks
- Mirror location
- Toilet signage arrangement
- Use of pictograms in signage

Signaling
- Toilet signage arrangement
- Use of pictograms in signage

Stairs and ramps
- Protected space under ramp/stairs
- Height, finish, continuity, stability, and firmness of handrails
- Tactile-visual pavements on the beginning and end of ramp/stairs
- Step edge signage

SHOWER AND CHANGING ROOMS

Location of the shower area

Issue raised

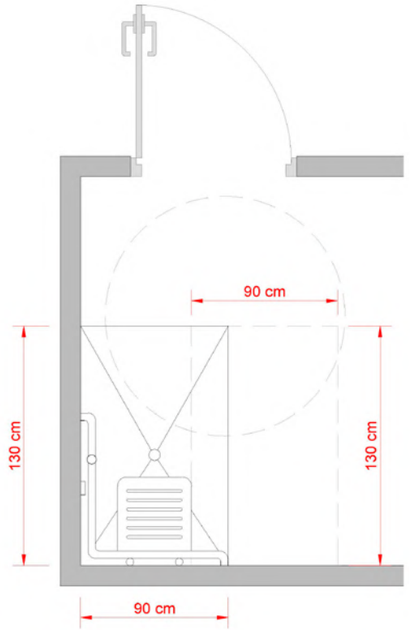
- Improper execution adapting the shower spaces due to incorrect dimensions and location.

Design criteria:

The shower area must always be located at a perpendicular vertex of the area where it is located and have minimum dimensions of 90 cm wide and 130 cm deep. The shower seat must have an obstacle-free transfer space on one side, with minimum transfer dimensions of 90 cm wide and 130 cm deep, which must be measured from the side edge of the seat to the wall or up to any other item that hinders the transfer.

This space may be shared with the transfer space discussed in the toilet location section.

There must be an obstacle-free turning space inside the shower cubicle with a minimum diameter of 150 cm.



UNE-ISO 21542. Page 86 (Image 45)

WHY?... Cristina and René ask

FELIPE has a physical disability and uses a wheelchair.

If there is not enough shower space, Felipe cannot enter the shower or have space to turn around.

SHOWER AND CHANGING ROOMS

Bath seat and faucets

Issue raised

- The appropriate location and features of the elements belonging to the adapted shower (seat and faucet) are not observed.

Design criteria::

The shower seat should be located in the corner of the shower, and the installation height should be between 40 and 48 cm measured from the upper face of the seat to the floor.

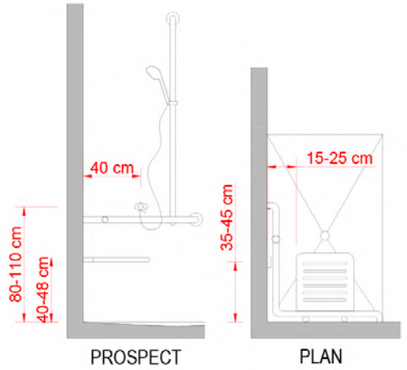
The separation between the seat and the sidewall must be between 15 and 25 cm (distance conditioned by the diameter of the bars and its separation from the wall where it is located), measured from the end of the seat to the finished surface of the wall.

The seat and shower head must be located in the walls on a curb of 90º.

The shower faucet must be located at a height between 80 and 110 cm.

The shower faucet should be located at a distance between 35 and 45 cm from the corner. The restraint system of the shower seat must be firm and stable.

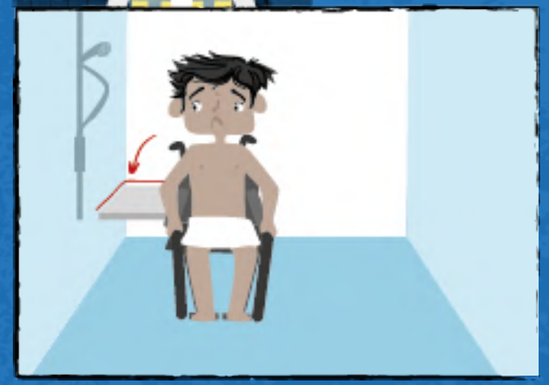
Therefore, both the anchoring system and the vertical wall where it is located must be checked and decisions made *in situ* to avoid its detachment (internal support systems).



UNE-ISO 21542. Page 86 (Image 45)

WHY?... Cristina and René ask

FELIPE has a physical disability and uses a wheelchair.



If the shower seat is too close to the wall or if it is not at the right height, Felipe cannot move from the chair to the shower seat.

SHOWER AND CHANGING

Location, typology, stability, and firmness of grab bars

Issue raised

Inadequate or poorly placed grab bars.

Design criteria:

Horizontal grab bars:

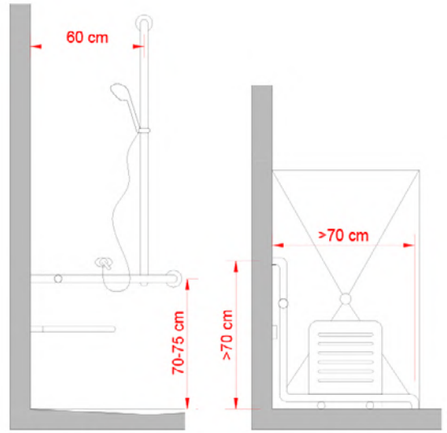
On the side of the seat, horizontal grab bars should be located perimetrically on at least two corner walls, at a height between 70 and 75 cm measured from the top of the bar to the floor.

The length of the bars (corner) must be larger than 70 cm on both sides.

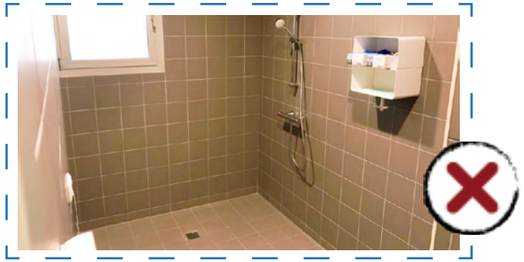
Vertical grab bars:

It should be placed in the vertical wall perpendicular to the seat, that is, where the faucet is located, and should be at 60 cm from the corner or the back of the seat.

The restraint system must be firm and stable. Therefore, both the anchoring system and the vertical wall where it is located must be checked and decisions made *in situ* to avoid its detachment (internal support systems).



UNE-ISO 21542. Page 86 (Image 45)



WHY?... Cristina and René ask

FELIPE has a physical disability and uses a wheelchair.

If the grab bars are not well installed or do not support the indicated weight, Felipe may fall.

SHOWER AND CHANGING

Flush-mounted shower floors and sinks

Issue raised

- Floors and sinks in the shower area not adequately leveled.

Design criteria:

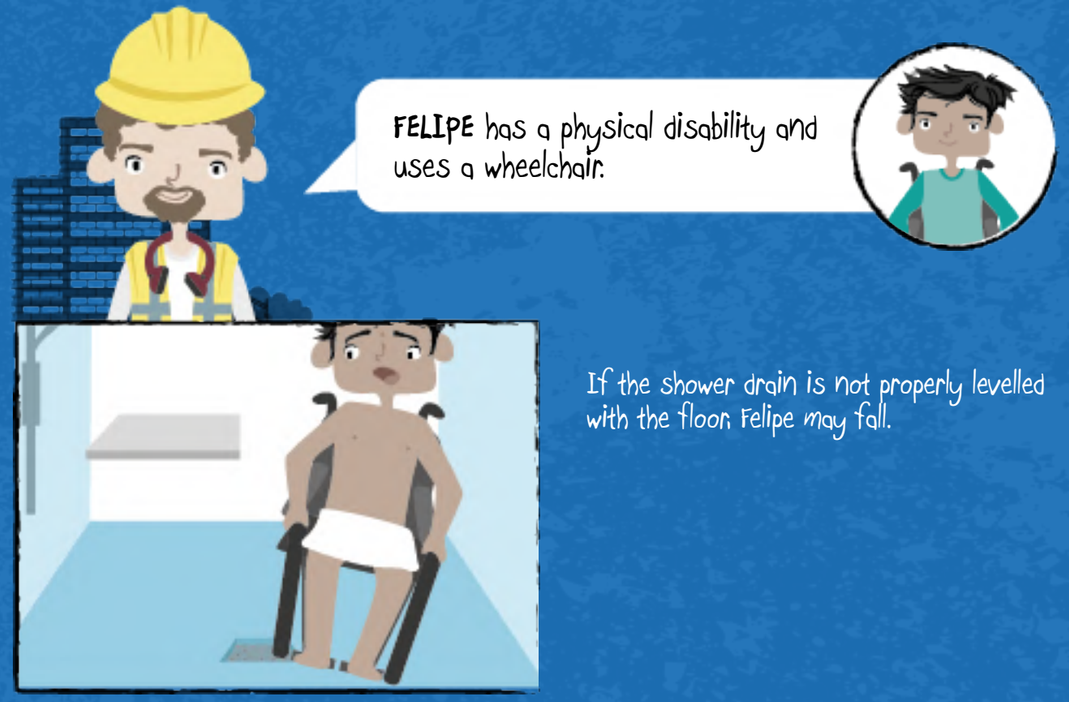
The floor of the shower area must be perfectly leveled with the floor of the rest of the cabin, without any protrusion.

Specific aspects must be taken into account to achieve a proper execution:

- The excellent preparation of the ground where the pavement sits is essential to maintain a firm and levelled pavement. Therefore, the installation instructions recommended by the manufacturer and the provisions of the corresponding project must be followed, avoiding sloping areas, or areas without adequate leveling, etc.
- It must be verified that the pavement pieces do not show visible irregularities (broken, defective parts, etc.).
- It should be verified that no protrusions or gaps between floor pieces are left.
- Special care must be taken when executing drainage slopes, which must not exceed 2%.
- Sinks and drains must be perfectly leveled with the floor.

UNE-ISO 21542. Page 86 (Image 45)

WHY?... Cristina and René ask



Toilet location

Issue raised

- The position in which the toilet is located does not allow the transfer from a wheelchair.

Design criteria:

In buildings other than houses:

The toilet must have an obstacle-free space of more than 90 cm wide on both sides (where only the corresponding foldable grab bars can be placed).

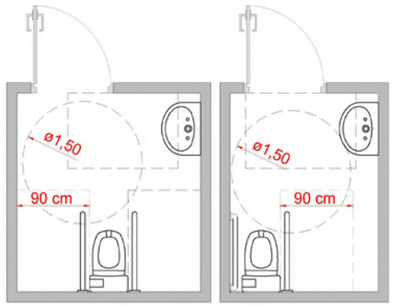
It should be measured from the side edge of the toilet to the wall or to any other element that hinders the transfer (such as a sink).

Residential buildings:

The toilet must have an obstacle-free space of more than 90 cm wide, at least on one side (where only the corresponding foldable grab bars can be placed).

It should be measured from the side edge of the toilet to the wall or to any other element that hinders the transfer (such as a sink).

For the location of the toilet, the separation of the grab bars must be taken into account, so the distance between the toilet and the vertical wall on the side where the transfer is not carried out will be conditioned by the width of the toilet and the separation between the grab bars (centered on the axis of the toilet and separated from each other at a distance between 60 and 70 cm).



UNE-ISO 21542. Page 76 and 80

WHY?... Cristina and René ask

FELIPE has a physical disability and uses a wheelchair.

If the toilet space is not adequate, Felipe cannot make the turn or be near enough the toilet to be able to make the transfer.

Location, typology, stability, and firmness of grab bars

Issue raised

- Absence of grab bars.
- Inadequate location.
- Inadequate typology.

Design criteria:

Location:

Grab bars must be foldable to allow the transfer from the wheelchair.

It should be placed on both sides of the toilet, at a height between 20 and 30 cm measured from the upper face of the toilet seat.

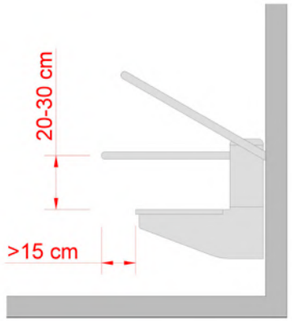
The length of the grab bars must extend to a minimum distance of 15 cm from the front edge of the toilet seat.

It should be centered and separated from each other between 60 and 70 cm measured from the axis of the toilet.

Execution on site:

The restraint system of the grab bars must be firm and stable. Therefore, both the anchoring system and the vertical wall where it is located must be checked and decisions made *in situ* to avoid its detachment (internal support systems).

Its fixation and support must withstand a force of 1 kN in any direction.



UNE-ISO 21542. Page 81

WHY?... Cristina and René ask

FELIPE has a physical disability and uses a wheelchair.

If the grab bars are not foldable, Felipe cannot transfer from the chair to the toilet.

Height of elements and mechanisms

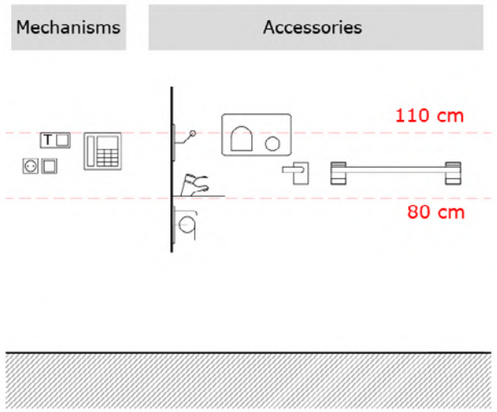
Issue raised

- The height of the elements and mechanisms of the toilet is incorrect.

Design criteria:

The elements (soap and paper towel dispensers, hand dryers, etc.) and mechanisms should be located at a height between 80 and 110 cm, and more than 30 cm apart from any corner to allow the approach of all people.

All accessories must respect the maneuvering and transfer spaces and must not invade it.



UNE-ISO 21542. Page 82 (Image 42)

WHY?... Cristina and René ask

FELIPE has a physical disability and uses a wheelchair.

If the hand dryer is too high, Felipe cannot reach it.

Height of sinks

Issue raised

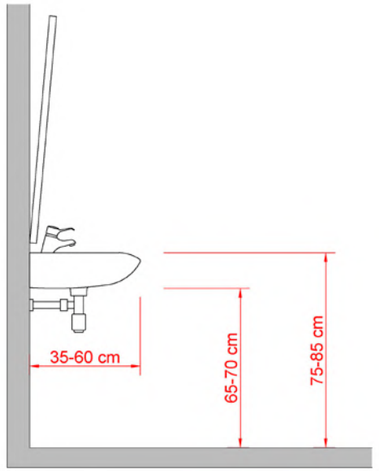
- Inadequate height.
- Insufficient lower space for frontal approach.
- Existence of other elements (obstacles) that hinder frontal access to the sink.

Design criteria:

The height of the upper face of the sink should be between 75 and 85 cm, measured from its outer face to the finished floor.

The sink must not have a pedestal or semi-pedestal, respecting a minimum clearance of between 65 and 70 cm high and between 35 and 60 cm deep.

It must be separated more than 15 cm from any vertical wall on both sides (it must be measured from the side edge of it to the wall), and the minimum free width to the sink must be 90 cm.



UNE-ISO 21542. Page 83 (Image 43)

WHY?... Cristina and René ask

FELIPE has a physical disability and uses a wheelchair.

If the sink has a pedestal, Felipe cannot get close enough to use it.

Mirror location

Issue raised

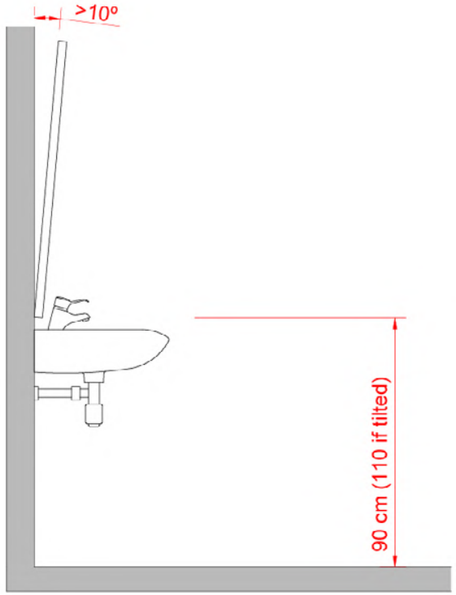
Mirror location at excessive height.

Design criteria:

The mirror should be centered on the sink with which it is associated.

The height of the lower edge of the mirror should be a maximum of 90 cm, measured from the bottom edge to the finished floor.

If the mirror is collapsed (minimum 10º above the vertical), it can be placed at 110 cm, measured from the bottom edge to the finished floor.



UNE-ISO 21542. Page 83 (Image 43)

WHY?... Cristina and René ask

FELIPE has a physical disability and uses a wheelchair.

If the mirror does not have the necessary inclination, Felipe cannot see himself in it.

Toilet signage arrangement

Issue raised

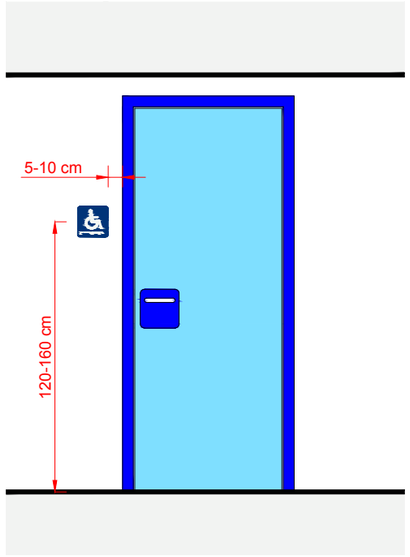
Inadequate signage location.

Design criteria:

General toilets and adapted toilet cabins must always show sign of use, regardless of the area of the building in which it is located and regardless of whether it is an individual cabin or part of an area of public toilets (in this case the sign must be placed outside and inside the toilets, identifying the adapted cabin).

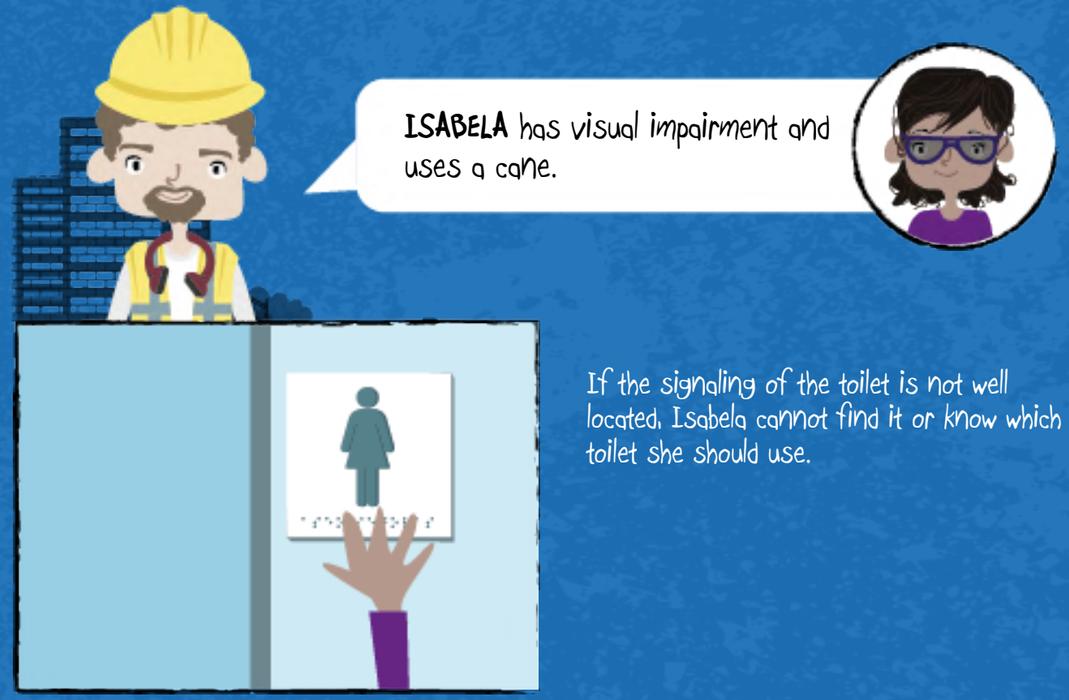
The signage should be located at a height between 120 and 160 cm, next to the door frame. When there is enough space, the door signs should be located on the side of the handle, at a distance of between 5 and 10 cm from the door frame.

Adapted cabins must always be marked with the IAS (International Accessibility Symbol).



UNE-ISO 21542. Page 120 (Image 65)

WHY?... Cristina and René ask



If the signaling of the toilet is not well located, Isabela cannot find it or know which toilet she should use.

Use of pictograms in signage

Issue raised

- Use of pictograms challenging to understand.

Design criteria:

The use of pictograms must be a signaling and orientation resource related to a specific environment that contextualizes their meaning and intention, trying to make them recognizable and understood by the highest number of people.

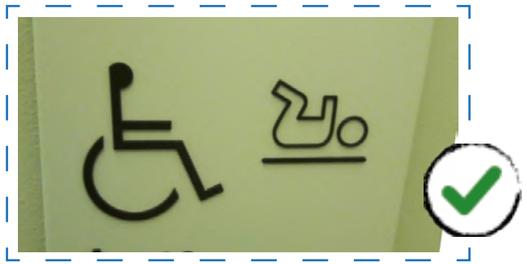
Under this premise, it should be taken into account that:

- Pictograms must be unequivocal, clear, and schematic, avoiding complex, abstract, or redundant forms.

- Pictograms must enable correct identification; that is, it must be legible and likely to be described verbally, identifying all its elements.

In any case, the criteria established in the specific regulations must prevail, considering that the creation of new pictograms must comply with the methodology and requirements established by these regulations.

UNE-ISO 21542. Page 122 (Images 68, 69 and 70)



WHY?... Cristina and René ask

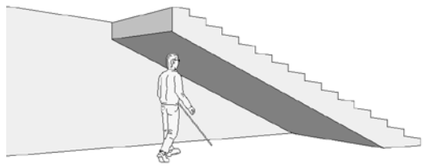
Protected space under ramp/stairs

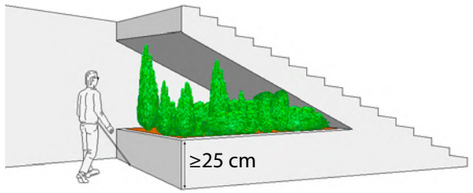
Issue raised

- Absence of protection in spaces under stairs and ramps.

Design criteria:

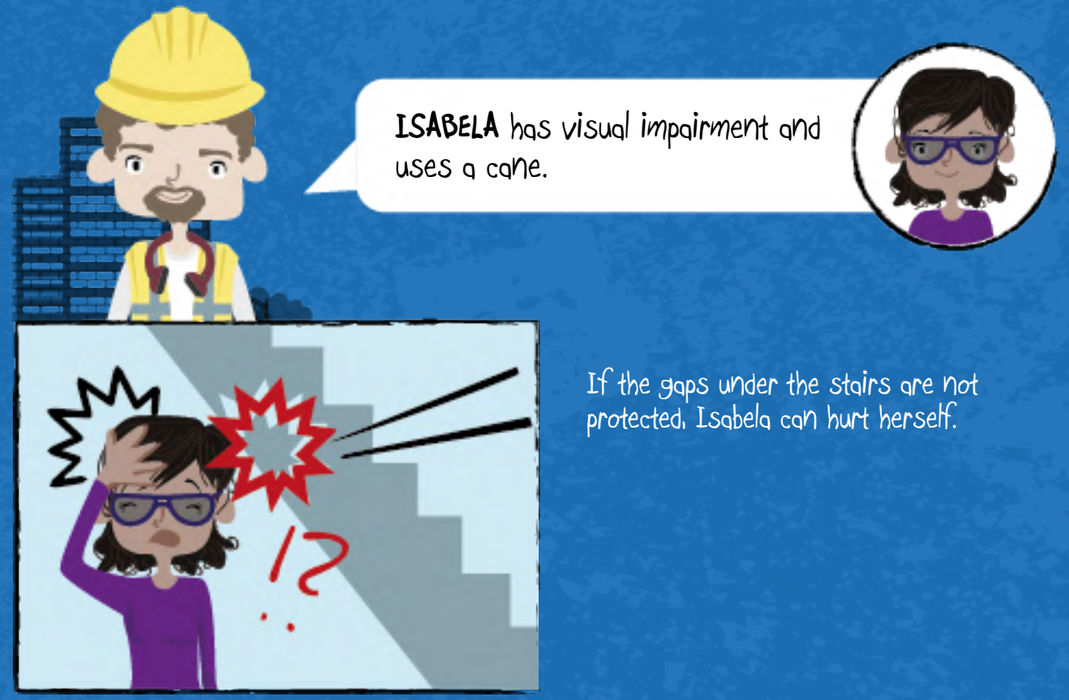
Lower part of stairs that are below 210 cm must be closed or protected, either by furniture, decoration, or gardening.





UNE-ISO 21542. Page 47

WHY?... Cristina and René ask



If the gaps under the stairs are not protected, Isabela can hurt herself.

STAIRS AND RAMPS

Height, finish, continuity, stability, and firmness of hand rails

Issue raised

- Incorrect placement of handrails on ramps and stairs.

Design criteria:

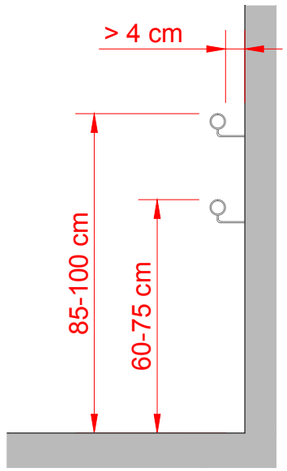
Handrails must be at least 4 cm apart from the vertical wall, with a firm support system that does not interfere with the continuous passage of the hand along its entire length.

Double handrails must be installed, with a placement height between 85 and 100 cm for the upper handrail, and between 60 and 75 cm for the lower one.

In the case of ramps, the height of the handrails must be measured from any point of the inclined plane, while on the stairs, it must be measured from the inclined line defined by the vertex of the steps.

The handrails should be curved or descended and must be continuous along the ramps and stairs, including flat or level parts.

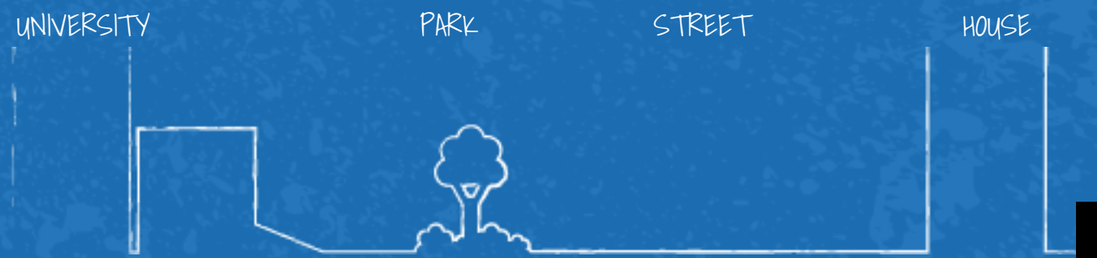
The fastening system of the handrails must be firm and stable, so the anchoring system and the vertical wall where it is located must be checked, making decisions in situ to avoid its detachment.



UNE-ISO 21542. Page 36 and 49

WHY?... Cristina and René ask

If the handrails do not have enough space to grip properly, or there are elements that prevent the hand from sliding along its entire path, Jorge may feel insecure when using them.



STAIRS AND RAMPS

Tactile-visual pavements

Issue raised

- Incorrect placement of tactile-visual flooring on ramps and stairs.
- Absence of tactile-visual pavements.

Design criteria:

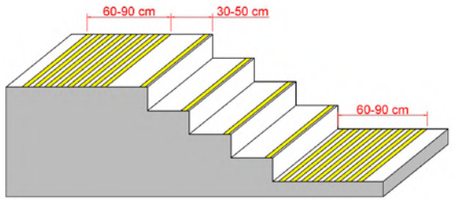
On both ramps and stairs, tactile-visual warning pavement should be placed on both shipments (lower and upper), with a depth between 60 and 90 cm and with the same width as the ramp or steps.

Stairs:

In the lower shipment, the pavement must be placed as to occupy all the space until the edge of the first step, while in the upper shipment, it must finish between 30 and 50 cm before the edge of the first step of descent.

Ramps:

The pavement must be placed on both horizontal shipments, without invading the inclined surface.



UNE-ISO 21542. Page 48 and Annex A

WHY?... Cristina and René ask

ISABELA has visual impairment and uses a cane.

If the beginning and the end of the stairs do not have tactile-visual signaling, Isabela cannot locate it and may fall.

Step edge signage

Issue raised

Absence of signaling of step edges.

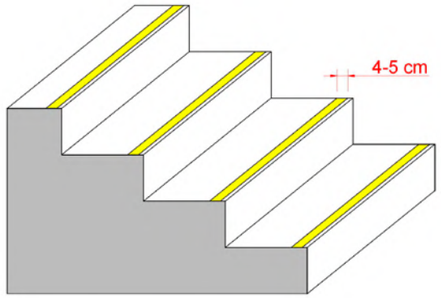
Design criteria:

Each step must be marked along its entire length with a visual-tactile strip 4 to 5 cm wide.

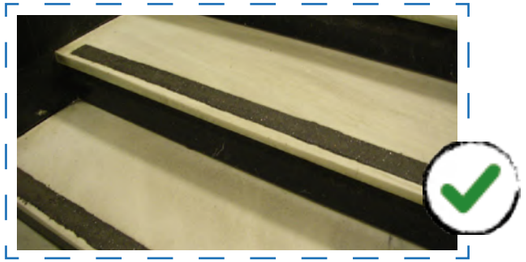
The separation of the strip to the edge of the step must be of 1.5 cm maximum.

This strip may continue downwards, along the height of each step in relation to the previous one, for a maximum of 1 cm.

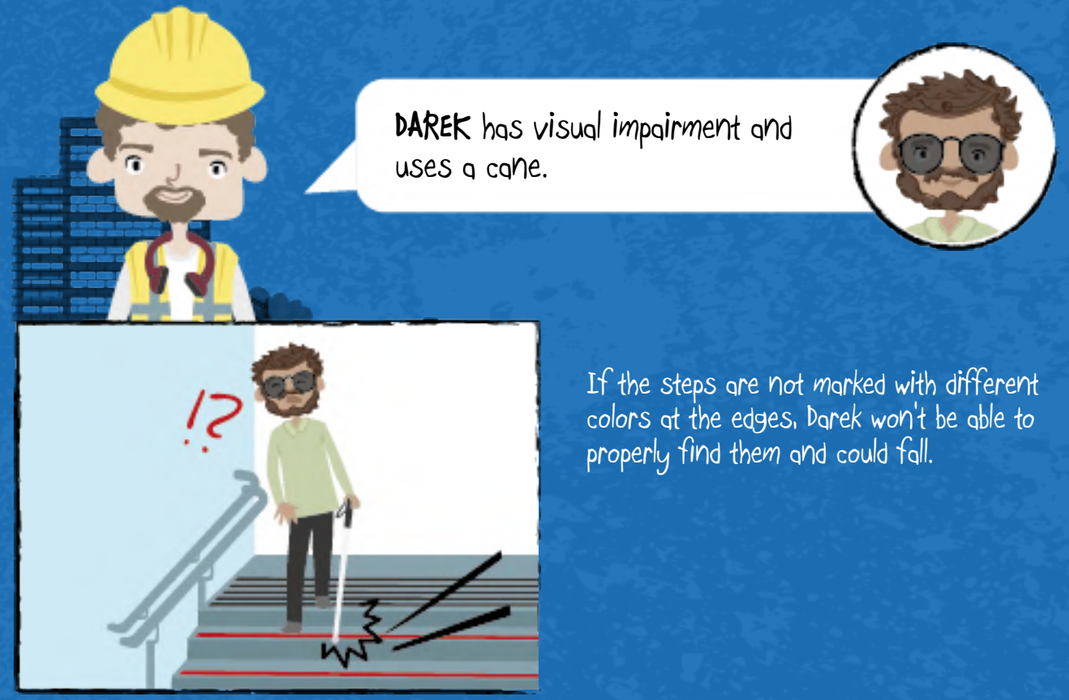
The strip must contrast both in texture and color with the pavement of the step and must have nonslip treatment.



UNE-ISO 21542. Page 48



WHY?... Cristina and René ask



If the steps are not marked with different colors at the edges, Darek won't be able to properly find them and could fall.

We are in the PARK

Pavements

- Gaps and projections
- Discontinuities or change of pavement
- Grids and culverts
- Location and coverage of flowerbeds

Vegetation maintenance and pruning

PAVEMENTS

Gaps and projections

Issue raised

- Gaps and projections in the pavement.
- Deterioration of the pavement due to poor execution.

Design criteria:

The excellent preparation of the ground where the pavement sits is essential to maintain a firm and levelled pavement. Therefore, the installation instructions recommended by the manufacturer and the provisions of the corresponding project must be followed, avoiding sloping areas, or areas without adequate leveling, etc.

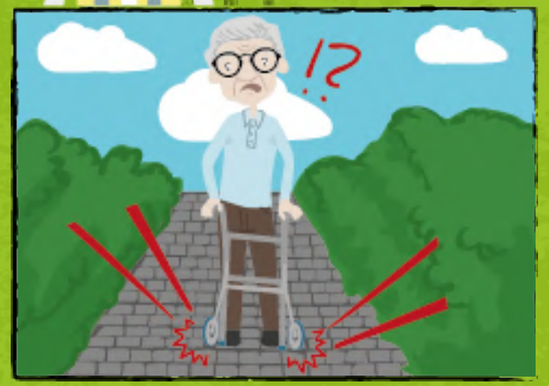
It must be verified that all the pieces of the pavement to be placed do not show visible irregularities (broken, defective parts, etc.).

No gaps or pojections larger than 3mm should be left between pieces. In addition, the separation joints on floor pieces must not exceed 20 mm.

Good practices

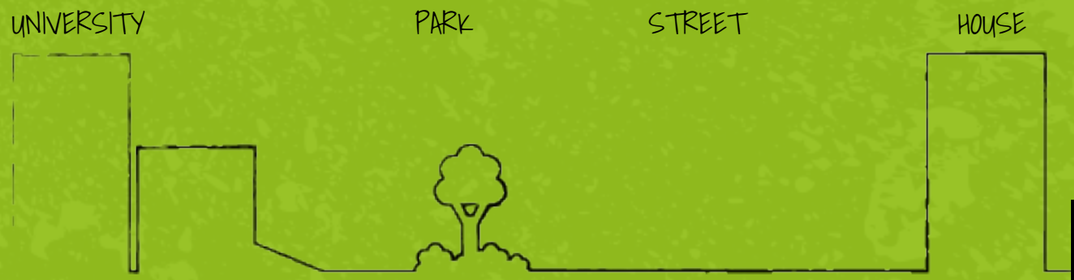
WHY?... Cristina and René ask

PEDRO is an older person and uses a walker.



If the ground has many slopes or the cobblestones are far apart, Pedro cannot go through that area because the walker can get stuck and tip over.

Examples of Good Practices: Technical Standard ABNT NBR 9050 (Brazil) Chapter 6.3.2



PAVEMENTS

Discontinuities or change of pavement

Issue raised

- Discontinuities due to the change of pavements, encounter between different pavements, or existence of work or expansion joints.

Design criteria:

It should be checked that no protrusions larger than 3 mm are left and that the separation joints in pavement changes are no larger than 20 mm.

The installation of the pavement must be executed according to the manufacturer's instructions and must not have gaps larger than 20 mm.

Expansion joints (with gaps larger than 20 mm) must be filled with specific material or covered with fixed elements (such as plates). Projections must be removed or, at least, generate inclined surfaces with slopes with less than 25% of inclination.

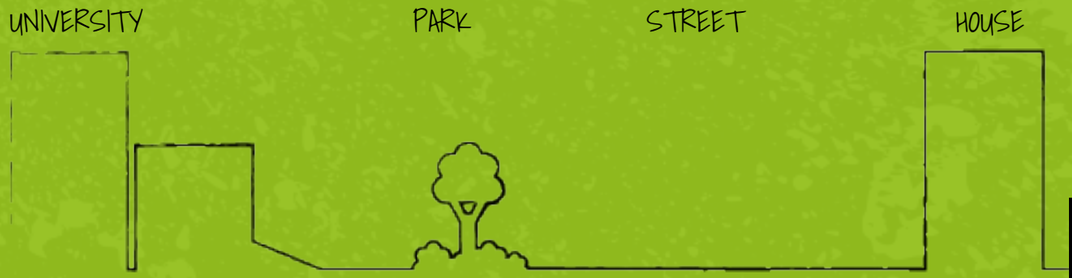
Good practices

WHY?... Cristina and René ask

ANA is an older person, has vision problems, and uses a cane.

If there are discontinuities between pavements, Ana can trip and fall!

Examples of Good Practices: Development of the National Accessibility Standards in Urban Planning and Architecture (Panama) Flooring (Page 29)



Grids and culverts

Issue raised

- Installation of grids and culverts not adequately leveled with the pavement.

Design criteria:

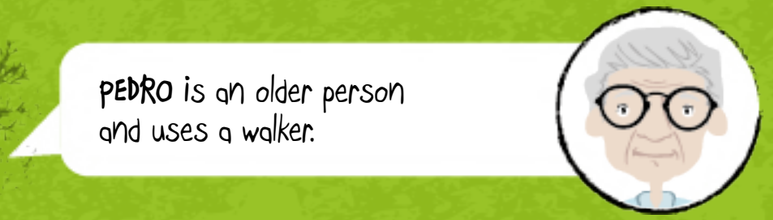
Grids and culverts located in areas of pedestrian use should be placed carefully so that they do not invade the pedestrian itinerary.

It must be perfectly levelled with the surrounding flooring.

When longitudinal voids form the grid lattice, they must be oriented transversely to the direction of the pedestrian itinerary.

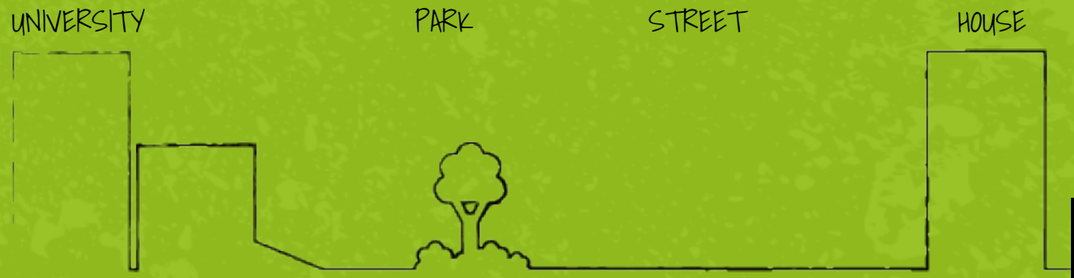
Good practices

WHY?... Cristina and René ask



If manholes and manhole covers are not aligned with the sidewalk surrounding it, Pedro's walker can get stuck and tip over.

Examples of Good Practices: Universal Accessibility Standards drawn and commented. Decree 50 OGUC (Chile) Art. 2.2.8, point 8



Location and coverage of flowerbeds

Issue raised

- Incorrect location of flowerbeds.
- Unevenness between pavement and flowerbed.

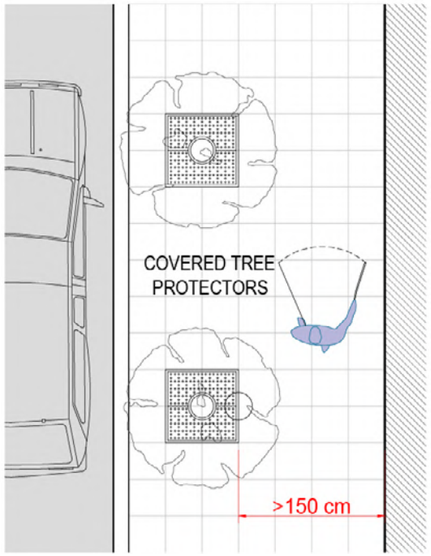
Design criteria:

Flowerbeds or pots should be placed outside the pedestrian circulation area.

It should be covered with floor-level grid or permeable materials.

It should be verified during project execution that no protrusions of more than 3 mm remain between the floor pieces and the covering material (metal, rubber or porous concreteresins, etc.) do not exceed 20 mm.

Optionally, a vertical element with a height of at least 10 cm may be provided, surrounding the perimeter of flowerbeds or pots.



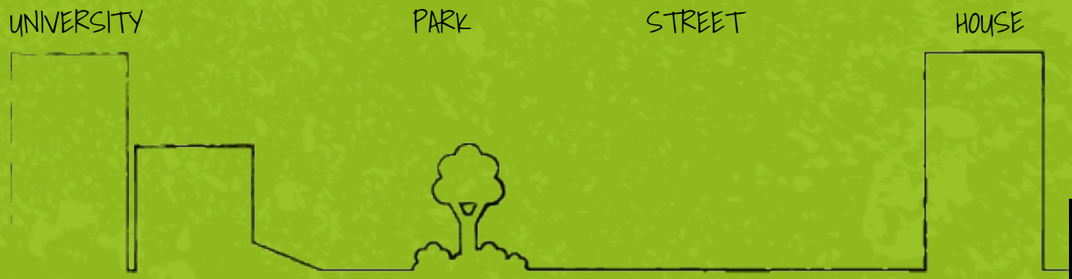
UNE-ISO 21542. Page 48 and Annex A

WHY?... Cristina and René ask

FELIPE has a physical disability and uses a wheelchair.

If the flowerbed is not well protected, Felipe's wheel can fall into the hole and tip over.

Examples of Good Practices: Universal Accessibility Standards drawn and commented. Decree 50 OGUC (Chile) Art. 2.2.8, point 9D



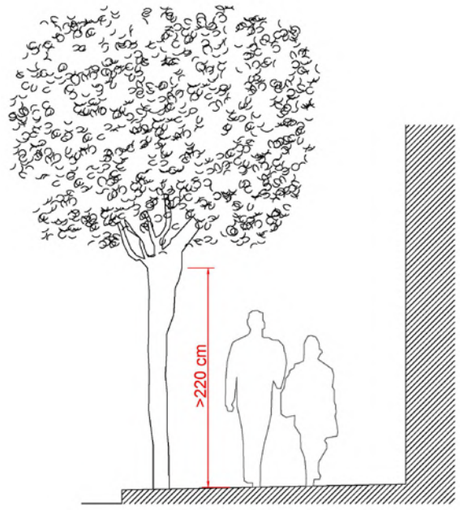
VEGETATION MAINTENANCE AND TRIMMING

Issue raised

- Trees, shrubs, ornamental plants or vegetation elements that invade the pedestrian itinerary.

Design criteria:

The maintenance and periodic trimming of the vegetation must be mandatory to keep the area of the pedestrian itinerary, as well as the visual field of people to traffic signs, indicators, signs, traffic lights, etc., free of obstacles. It must also allow the correct lighting of public areas.



Good practices

WHY?... Cristina and René ask

ISABELA has visual impairment and uses a cane.

If the branches of trees and shrubs are not well trimmed, Isabela can hurt herself.

Examples of Good Practices: Technical Standard ABNT NBR 9050 (Brazil) Chap. 8.9

We are in the STREET

Obstacles
- Location of urban elements
- Traffic signs or street lamps on the sidewalk
- Bollards

Crosswalks
- Level of curb and sidewalk
- High-rise crosswalk-curb encounters
- Touch-visual pavement

Signaling
- Accessible parking space signage
- Location of traffic and directional signs

Bus stop
- Bus stop design
- Bus stop Information

Location of urban elements

Issue raised

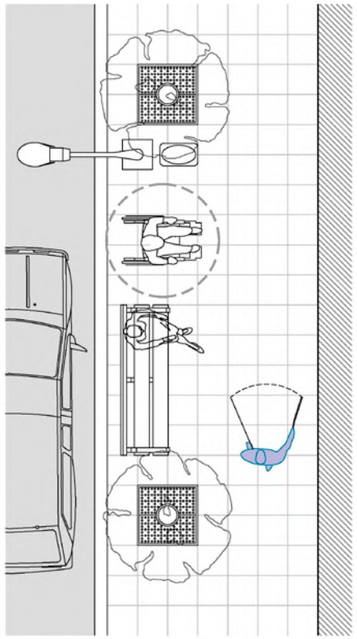
- Incorrect location of urban elements (benches, waste bins, fountains ...).
- Interruption of the pedestrian path.

Design criteria:

Urban elements such as fountains, banks, waste bins, etc., must be located outside the pedestrian itinerary, without invading it, maintaining a minimum obstacle clearance of 1.80 m.

They should preferably be placed aligned next to the outer side of the sidewalk and at a minimum distance of 40 cm from the boundary between the curb and the street.

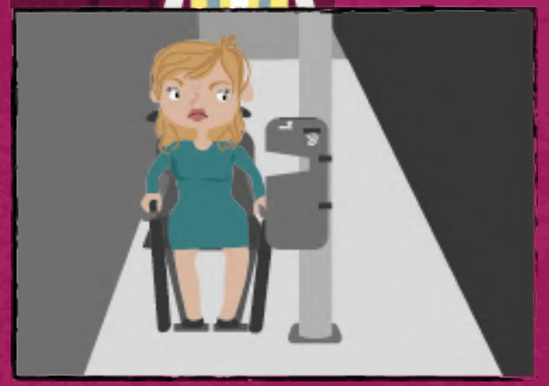
If these elements have pavement anchors, the plates must be flush with the pavement without protruding.



Good practices

WHY?... Cristina and René ask

LIS has a physical disability and uses a wheelchair..



If bins, banks, fountains, etc. are placed on the pedestrian path, Lis does not have enough space to circulate.

Examples of Good Practices: Development of the National Accessibility Standards in Urban Planning and Architecture (Panama) Urban Equipment (Page 14 et seq.)

Traffic signs or street lamps on the sidewalk

Issue raised

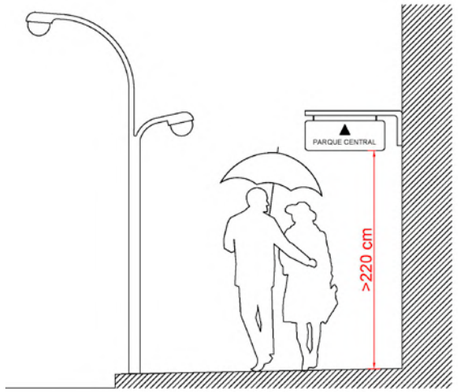
- Incorrect location of traffic signs and street lamps on sidewalks.

Design criteria:

The installation of the signaling and lighting elements must not invade the pedestrian route. These should be located next to the outer edge of the sidewalk.

For suspended elements, either on masts or attached to a vertical wall, a height of 220cm of clearance should be left from the bottom edge of the element to the pavement.

If these elements have pavement anchors, the plates must be flush with the pavement without protruding.



Good practices

WHY?... Cristina and René ask

SONIA is a *mom* and carries a stroller.

If traffic signs are placed too low, Sonia can hit them.

Examples of Good Practices: Technical Standard ABNT NBR 9050 (Brazil) Cap. 5.2.8.2

OBSTACLES

Bollards

Issue raised

- Incorrect location of bollards.
- Obstacles in pedestrian and vehicular paths.

Design criteria:

Bollards should not be installed in the area of pedestrian itinerary. It should not reduce the width of the itinerary at the crossings (pedestrian crosswalks), leaving a distance of at least 0.90m and in no case it should be located on the axis of the crosswalk.

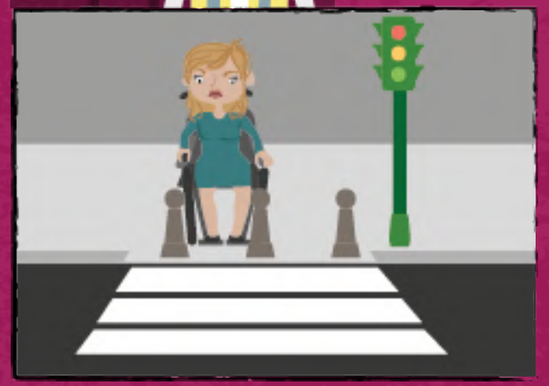
On pedestrian itineraries, it should be located aligned to the sidewalk edge, without invading the pedestrian itinerary.

If these elements have pavement anchors, the plates must be flush with the pavement without protruding.

Good practices

WHY?... Cristina and René ask

LIS has a physical disability and uses a wheelchair.



If the bollards are too close together, Lis cannot cross through the crosswalk.

Examples of Good Practices: Universal Accessibility Standards drawn and commented. Decree 50 OGUC (Chile) Art. 2.2.8, points 9E and 9F

Level of curb and sidewalk

Issue raised

- Incorrect execution of the encounter between sidewalk and road.
- Unevenness (presence of step, chamfer, or gap).

Design criteria:

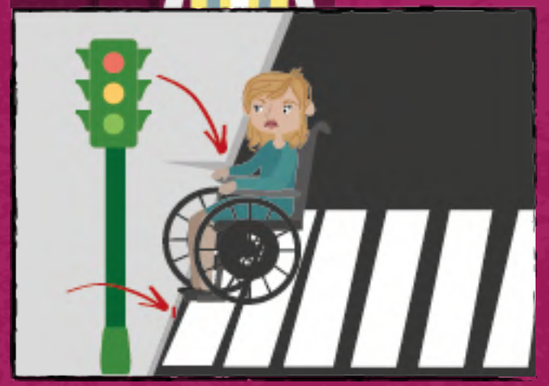
The encounter between the curb and the road must be perfectly flush. In case of it not being perfectly leveled, due to conservation reasons, 3 cm of unevenness will be allowed. In this case:

- If the slope does not exceed 2 cm, the edge of the curb should be chamfered or rounded.
- If the slope is between 2 and 3 cm, the encounter must be chamfered with a maximum slope of 25% (using specific curb pieces).

Good practices

WHY?... Cristina and René ask

LIS has a physical disability and uses a wheelchair.



If the unevenness between the sidewalk and the roadway is too large, the wheels of Lis' chair cannot overpass it and Lis cannot cross the street.

Examples of Good Practices: Regulations 2010 2010 ADA Standards for Accessible Design (United States) Chapter 4 Accessible Routes, point 406 Curbs Ramps

High-rise crosswalks-curb encounters

Issue raised

- Incorrect execution of elevated crosswalks.
- Unevenness due to the inadequate encounter between the sidewalk and the surface of the elevated crosswalk.
- Sidewalk discontinuities and the surface of the raised crosswalk interrupting the flow of rainwater.

Design criteria:

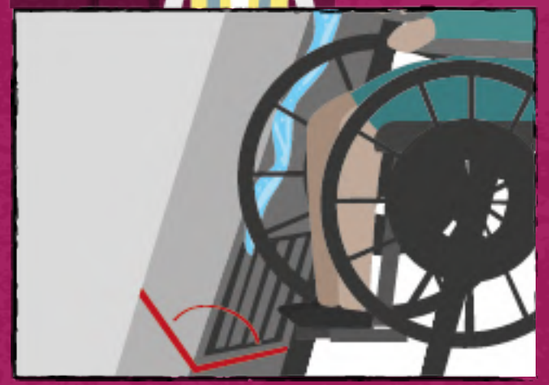
The encounter between the sidewalk and the surface of the over-raised crosswalk must be perfectly flush and without any discontinuity.

To allow the flow of rainwater, a through tube or a grid that ensures the leveling and continuity between the sidewalk and the surface of the raised crosswalk may be installed.

Good practices

WHY?... Cristina and René ask

LIS has a physical disability and uses a wheelchair.



If the sidewalk and the surface of the crosswalk are not perfectly levelled, Lis cannot cross because the wheels of the chair can get stuck.

Examples of Good Practices: Technical Standard ABNT NBR 9050 (Brazil) Cap. 6.12.7.2

Tactile-visual pavement

Issue raised

- Incorrect execution of tactile-visual pavements in pedestrian pathways.
- Wrong pavement typologies.

Design criteria:

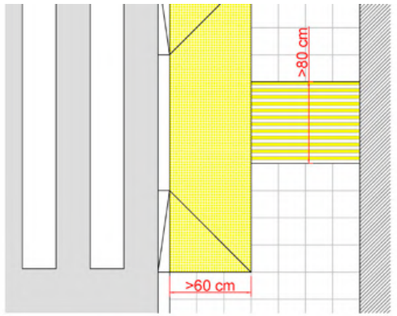
The design criteria of the tactile-visual pavement in pedestrian curbs are defined in the corresponding regulations, and must be taken into account since these pavements have predefined finishes and configurations.

Grooving pavements:

In pedestrian pathways, they should be placed in strips of 0.80 m between the edge of the curb and the beginning of the pedestrian crosswalk.

Button pavements:

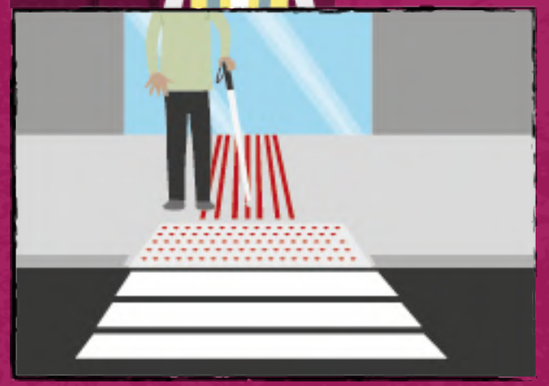
It should be placed, if possible, on the entire surface of the pedestrian curb, or in a strip with a minimum of 0.60 m deep throughout the line of the encounter between the curb and the crosswalk. For vehicle pathways, stripes must be placed at 0.60 m deep across the width of the area reserved for the pedestrian itinerary.



Good practices

WHY?... Cristina and René ask

DAREK has visual impairment and uses a cane.



If the tactile-visual pavements that indicate the crosswalk are not adequate, Darek cannot find the access to cross the street with his cane

Examples of Good Practices: Order VIV / 561/2010 (Spain) Art. 45) Art. 35, point 5

Accessible parking space signage

Issue raised

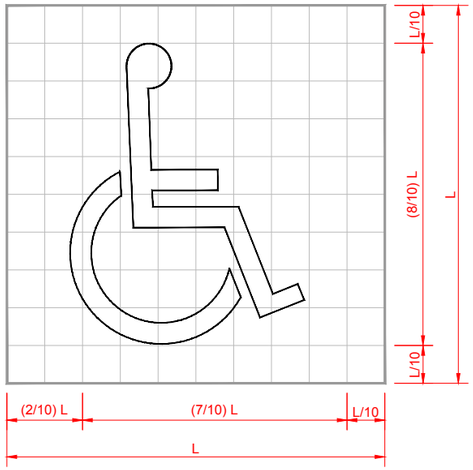
- Parking spaces reserved for People with Reduced Mobility that do not have the corresponding vertical and horizontal signage through the International Accessibility Symbol.

Design criteria:

To identify the access and possibilities of use of the accessible parking space, it must be permanently marked with the approved International Accessibility Symbol, according to the following criteria:

- To signal with the International Accessibility Symbol both accessible parking spaces and pedestrian access routes.

- The design, style, shape, and proportion of the International Accessibility Symbol must correspond to that indicated by the International Standard ISO 7000, which regulates a white figure on a blue Pantone Reflex Blue background.



Good practices

WHY?... Cristina and René ask

FELIPE has a physical disability and uses a wheelchair.

If the parking spaces are not well marked, Felipe cannot see if it is a parking space for people with reduced mobility and will not park in it.

Examples of Good Practices: Order VIV / 561/2010 (Spain) Art. 45) Art. 35, point 5

Location of traffic and directional signs

Issue raised

- Challenging recognition of signs in public roads.
- Absence of accessible signage of places of interest.

Location:

The signage should be highlighted with chromatic contrast, being located on the edge of the sidewalk and next to the road, thus avoiding hindering the pedestrian route.

In addition, the information provided must present a good contrast between the background of the sign and the written information, and be readable at an appropriate distance, indicating the different places of interest in the environment, as well as libraries, museums, etc.

The use of standardized pictograms is recommended to improve the understanding of theinformation.

Good practices

WHY?... Cristina and René ask

If the street sign is not clear and simple or is not in good condition, Paula cannot find the way to get there.

Examples of Good Practices: Universal Accessibility Standards drawn and commented. Decree 50 OGUC (Chile) Art. 2.2.8, point 9E

BUS STOP

Bus stop design

Issue raised

- Bus stops that are not accessible.

Design criteria:

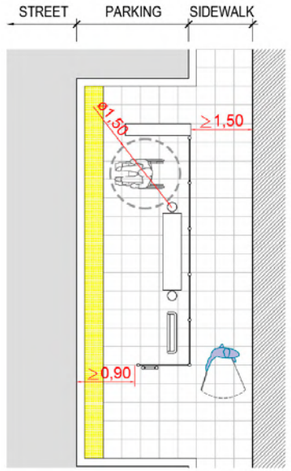
Bus stops must meet a series of minimum requirements:

It must be connected to the sidewalk, without interrupting the pedestrian itinerary and respecting a minimum distance from the curb of 90 cm.

It must have enough space for the user to stay and wait outside the pedestrian path of the sidewalk.

It must have the sidewalk marked with tactile-visual pavement to inform users of the safe waiting area. It must also provide the necessary information for the user, such as lines and schedules and allow the bus to approximate all doors to the edge of the sidewalk of the stop, and limit parking possibilities to ensure the maneuverability of the bus.

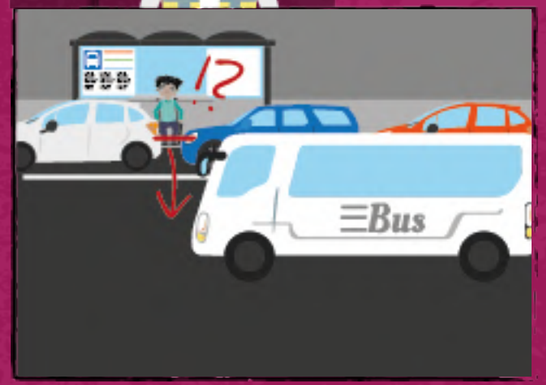
Depending on the weather conditions, it may be necessary to install a waiting canopy, which must have seats with armrests and backrest and enough free space for a wheelchair user to wait under it and to maneuver.



Good practices

WHY?... Cristina and René ask

FELIPE has a physical disability and uses a wheelchair..



If the stop area is not reserved, limiting parking possibilities to ensure the maneuverability of the bus, Felipe cannot pass between parked cars or get on the bus.

Examples of Good Practices: Universal Accessibility Standards drawn and commented. Decree 50 OGUC (Chile) Art. 2.2.8, point 9C

Bus stop Information

Issue raised

- Bus stops without accessible information.

Design criteria:

Bus stops must offer bus service information available to all users. This information must include:

- The number or denomination of the stop.
- The necessary information for the user, such as lines and schedules.
- Alternative information for blind people, such as Braille.

In addition, it is recommended the installation of systems to inform in real-time the expected time of arrivals and the waiting time, such as:

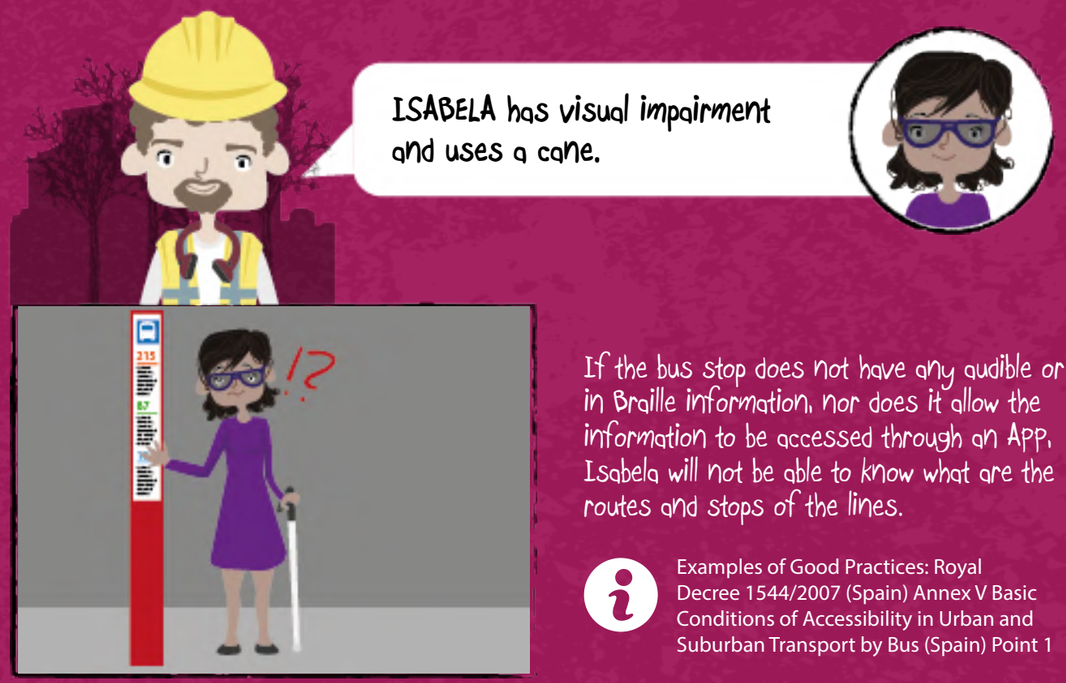
- Information screens with an audible alternative.

  Query through QR codes.

  Query through mobile applications.

Good practices

WHY?... Cristina and René ask



If the bus stop does not have any audible or in Braille information, nor does it allow the information to be accessed through an APP, Isabela will not be able to know what are the routes and stops of the lines.

Examples of Good Practices: Royal Decree 1544/2007 (Spain) Annex V Basic Conditions of Accessibility in Urban and Suburban Transport by Bus (Spain) Point 1

We are in the HOUSE

Doors and access

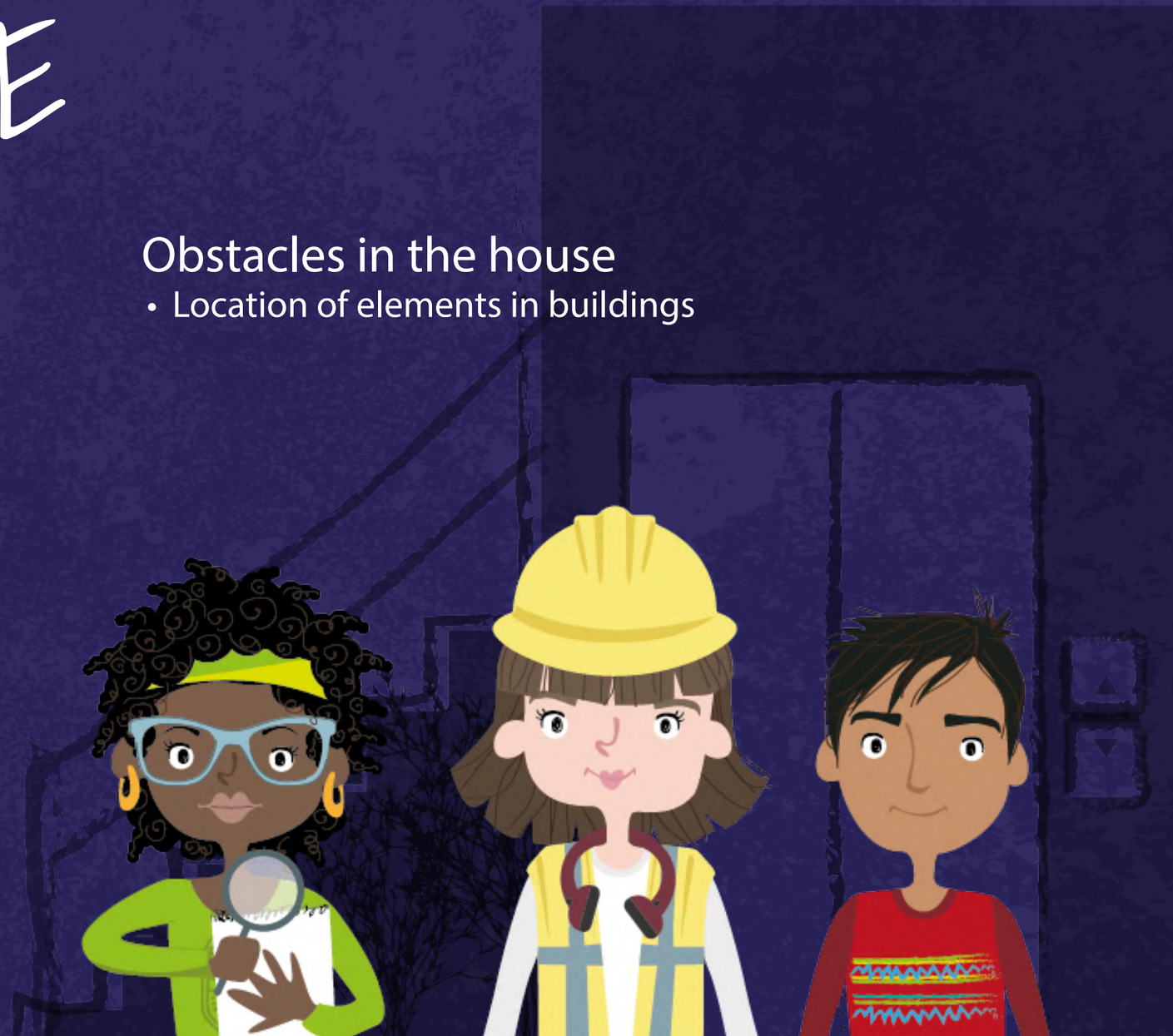
- Unevenness in access doors
- Relocation of doors next to corners
- Location of handles on sliding doors
- Callbox and opening mechanisms
- Differentiation of glass walls and other doors

Elevators

- Location of the external keypad
- Floor number signage
- Tactile-visual flooring
- Braille signage on keypads

Obstacles in the house

- Location of elements in buildings



Unevenness in access doors

Issue raised

- Change of floor level between the exterior and interior of a building.

Design criteria:

If there is a high threshold, it must have a maximum height of 1.5 cm, be chamfered if the height is larger than 0.5 cm, and visually contrast with the adjacent floor.

It is possible to admit an unevenness that does not exceeds 5 cm, with an inclination of not more than 25%, since this solution can limit the entrance of rainwater on the building, therefore limiting possible slips and falls.

In case of a variable height difference (for example, access to a building from a sloping sidewalk), 5 cm must not be exceeded at the point of greatest unevenness.

UNE-ISO 21542. Page 61

WHY?... Cristina and René ask

If there is a unevenness between the sidewalk and the interior of the building, Lis' wheelchair cannot surpass it and cannot access the building.

Relocation of doors next to corners

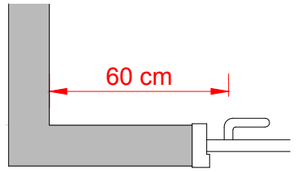
Issue raised

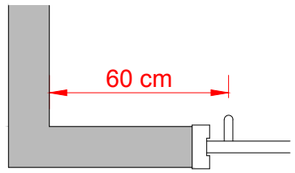
- Insufficient distance between the door opening mechanism (doorknob or handle) and the corner.

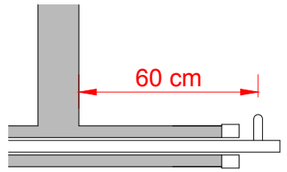
Design criteria:

This criterion is valid for both sliding and swing doors.

The position of the doors must be reconsidered, leaving a minimum distance of 60 cm between the opening mechanism (doorknob or handle) and the adjacent corner (if any).

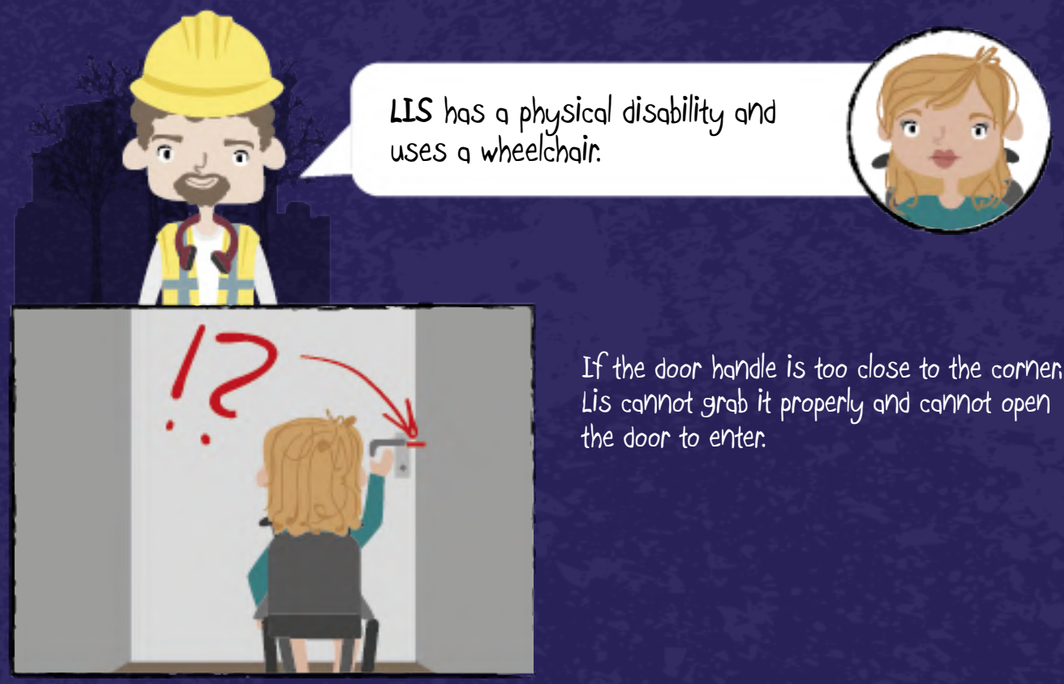






UNE-ISO 21542. Page 62 (Image 26)

WHY?... Cristina and René ask



If the door handle is too close to the corner, Lis cannot grab it properly and cannot open the door to enter.

Location of handles on sliding doors

Issue raised

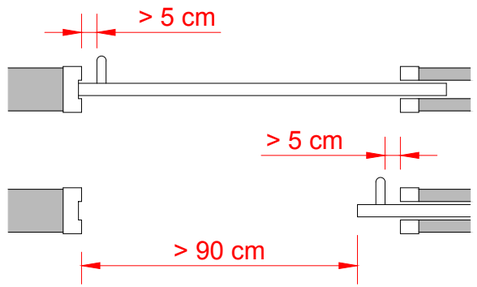
- Lack of space between the handle and the door frame (both open and closed).

Design criteria:

In sliding doors, the position of the doorstop must be taken into account, providing a clearance space of at least 5 cm between the door handle and the door frame to allow the introduction of the hand or elbow to open the door.

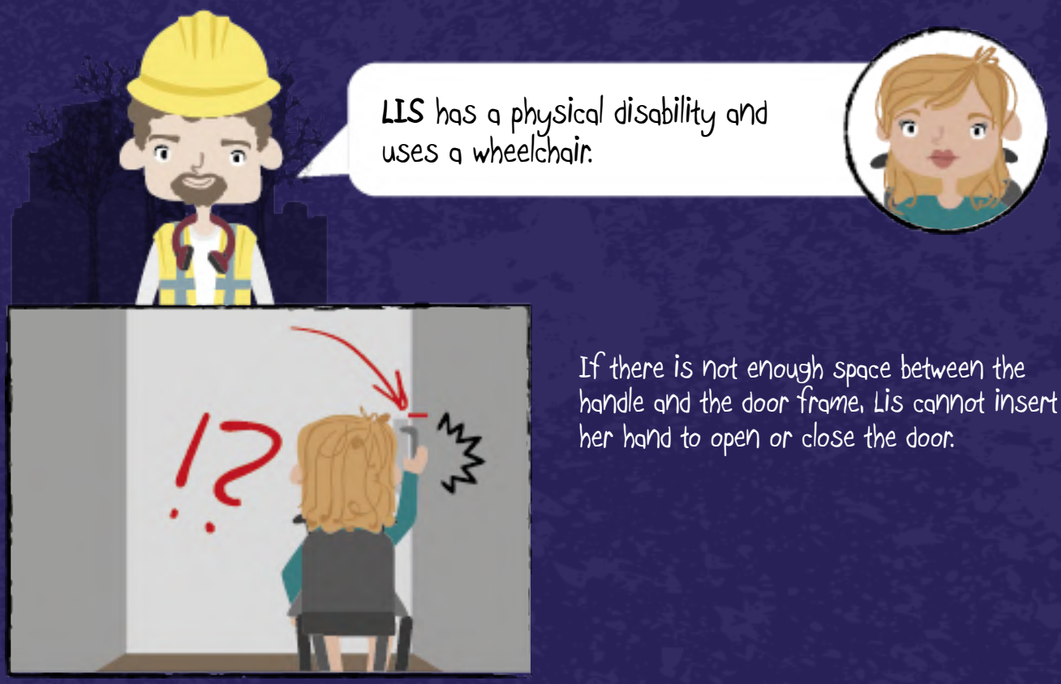
These 5 cm between the frame and the handle must also be secured in the closed position of the door, and on both the inner and outer sides.

Additionally, the opening and closing mechanisms must be placed at a height between 80 and 100 cm from the floor (preferably 90 cm).



UNE-ISO 21542. Page 62 (Image 26)

WHY?... Cristina and René ask



If there is not enough space between the handle and the door frame, Lis cannot insert her hand to open or close the door.

Call and opening mechanisms

Issue raised

- Incorrect location of mechanisms associated with doors (intercoms or call boxes, doorbells, cardholders).

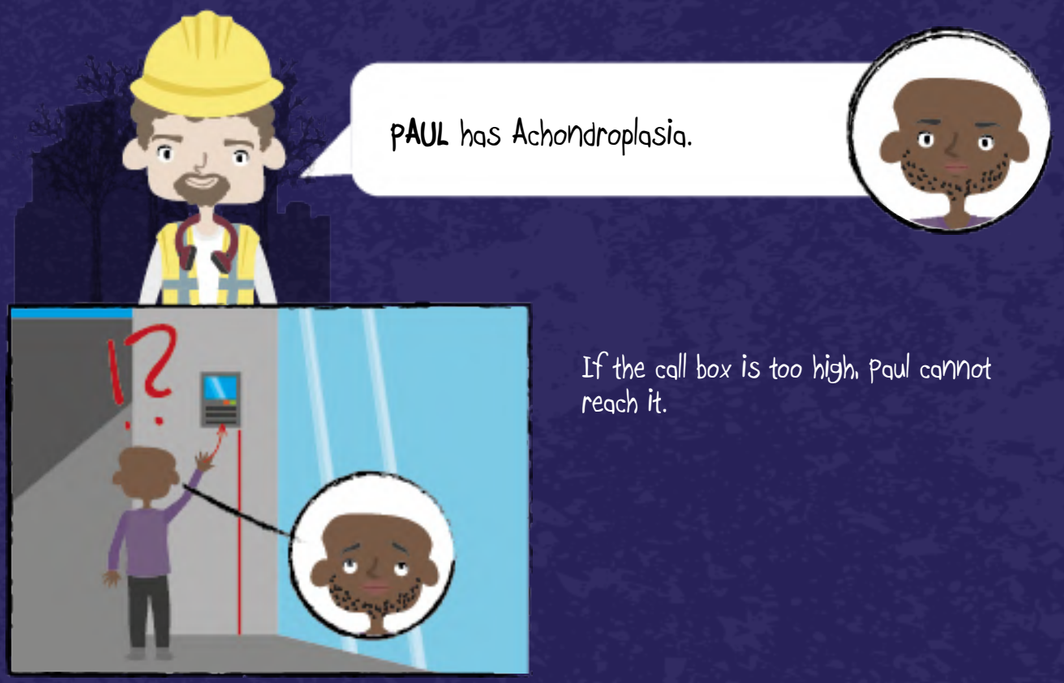
Design criteria:

Mechanisms associated with doors, such as call box, doorbells, cardholders, etc., should be located at a height between 80 and 100 cm (preferably 90cm).

In addition, these should be located more than 60 cm apart from the corner (adjacent) to allow the approach. The approach space must be free of obstacles.

UNE-ISO 21542. Page 67

WHY?... Cristina and René ask



Differentiation of glass walls and doors

Issue raised

- Incorrect signage of doors and glass surfaces.

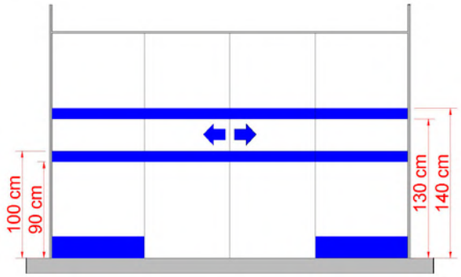
Design criteria:

Large glass surfaces that can be confused with doors or openings must be provided, in full length and double-height, with visually contrasted signage.

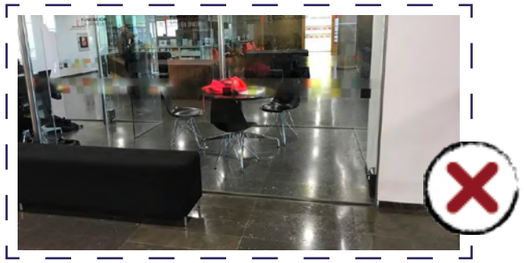
It must have the following features:

- A lower strip at a height between 90 and 100 cm from the ground.
- An upper strip at a height between 130 and 140 cm from the ground.
- A minimum bandwidth of 7.50 cm.
- An additional third strip at a height between 10 and 30 cm from the floor is recommended.

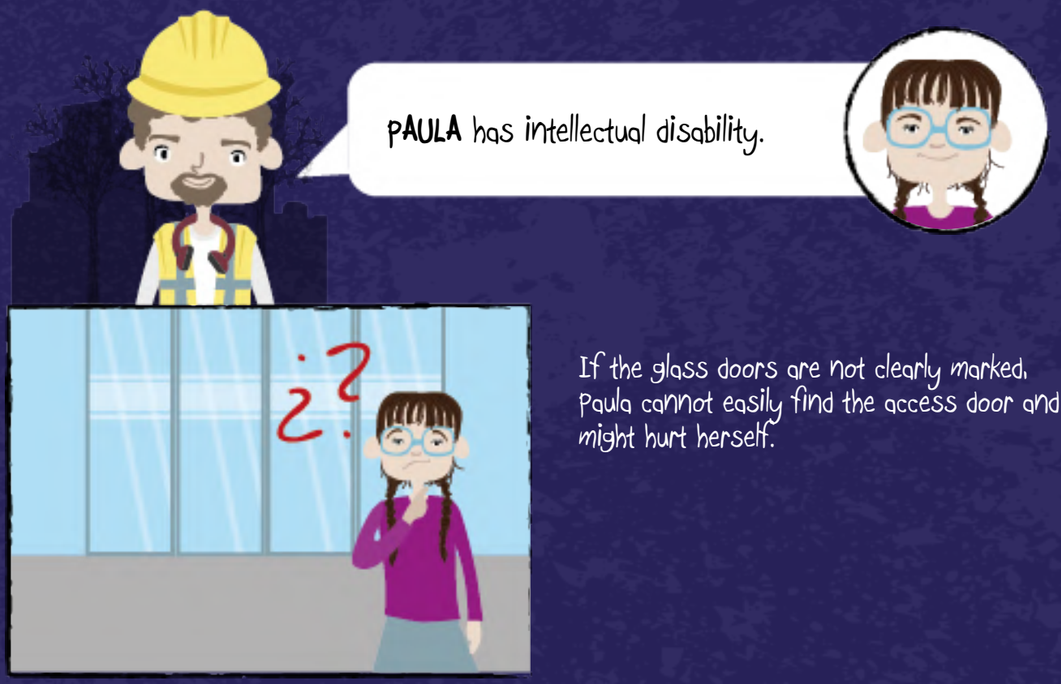
Glass doors must have signage according to the previous criteria. Glass doors located on glass facades must also differentiate the mobile part (door) from the fixed part (facade), by using the signage (for example different design or color).



UNE-ISO 21542. Page 62



WHY?... Cristina and René ask



If the glass doors are not clearly marked, Paula cannot easily find the access door and might hurt herself.

DOORS AND ACCESS

Chromatic contrast of doors

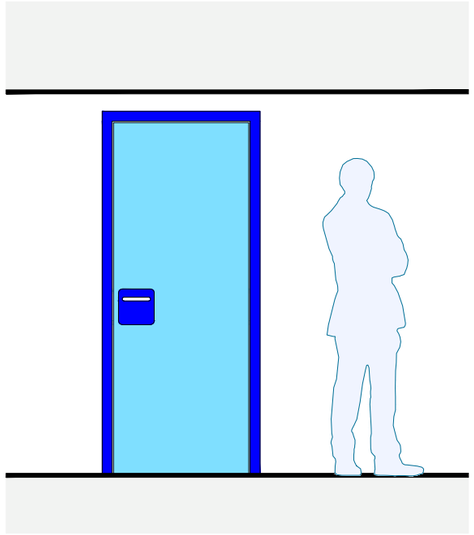
Issue raised

- Doors that do not contrast with the vertical wall.

Design criteria:

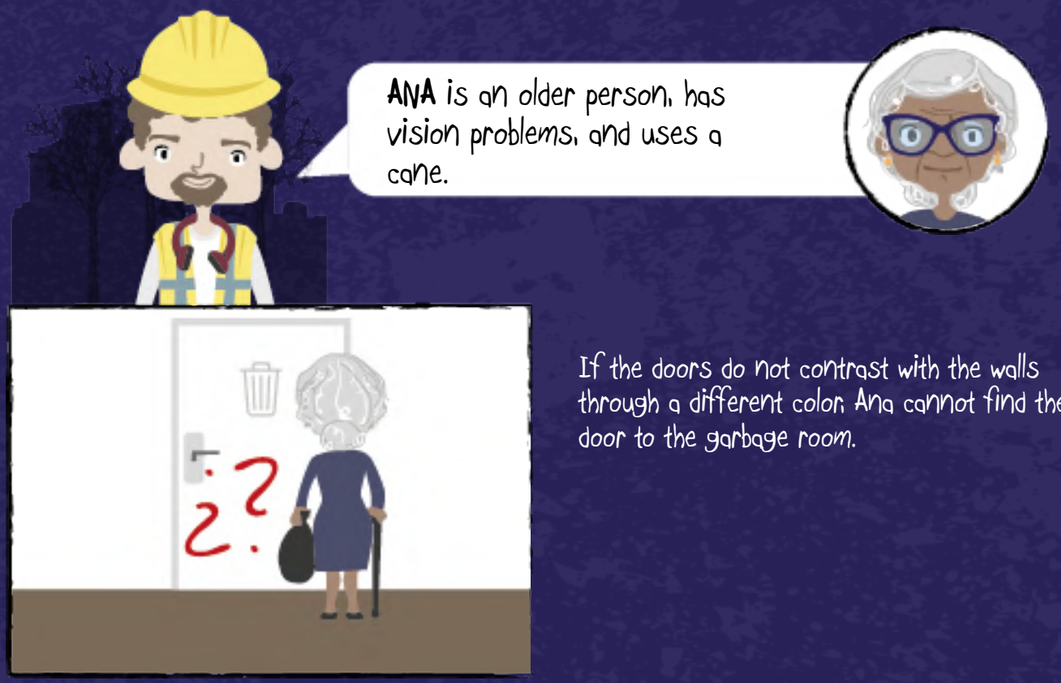
Doors must be easily identified, so there must be a color differentiation between vertical walls and the mobile parts of the doors (or at least its frames) and may even include color codes, depending on whether they are elevator doors or access to other rooms.

The carpentry and the handles must be differentiated, facilitating its location and operation.



UNE-ISO 21542. Page 64

WHY?... Cristina and René ask



If the doors do not contrast with the walls through a different color, Ana cannot find the door to the garbage room.

Location of the external panel

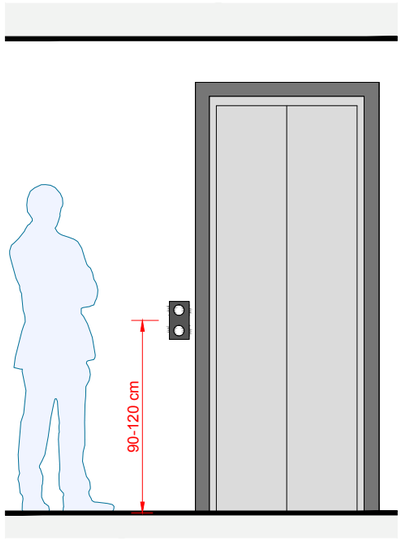
Issue raised

- Excessive height of the external panel.
- Location of the panel next to a corner.

Design criteria:

Exterior buttons of elevators should be located at a height between 90 and 120 cm (preferably 110 cm).

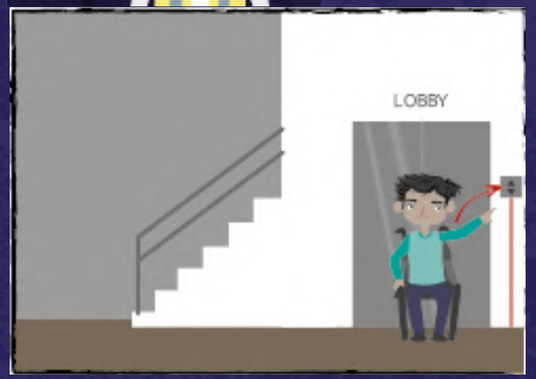
The minimum distance between the external panel and any corner (if any) must be of 50 cm (recommended 60 cm), to allow the approach.



UNE-ISO 21542. Page 56

WHY?... Cristina and René ask

FELIPE has a physical disability and uses a wheelchair.



If the elevator panel is too high or too close to a corner, Felipe cannot press the buttons to go up to his house.

Floor number signage

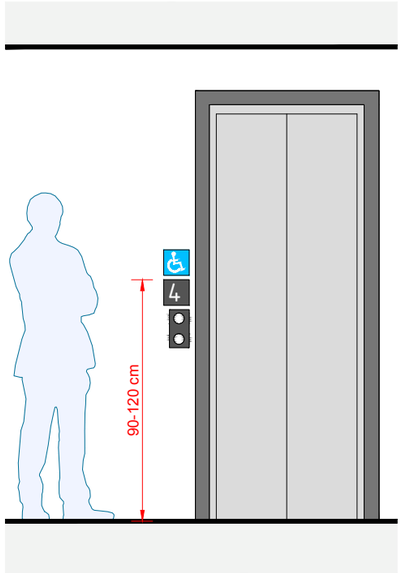
Issue raised

- Incorrect location of the tactile signage of the floor number in elevators.

Design criteria:

The floor number must be located on the right side of the elevator door (outside) in the direction of the exit of the cabin, at a height between 90 and 120 cm.

This signage must have an indication in Braille and Arabic in high-relief.



UNE-ISO 21542. Page 118

WHY?... Cristina and René ask

If the signage of the floor number is not well located or does not have Braille and high-relief, Ana cannot know on which floor she has gotten off the elevator.

Tactile-visual flooring

Issue raised

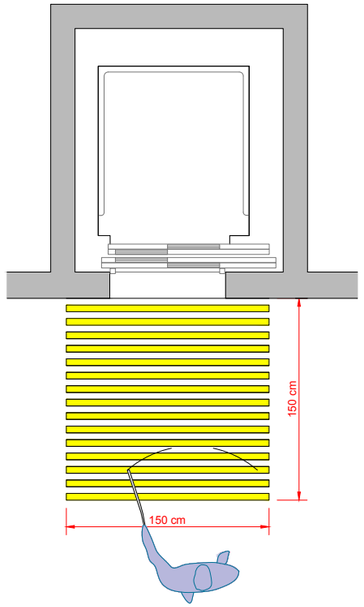
- Absence or incorrect design of the tactile-visual pavement on the entrance of the elevator.

Design criteria:

Tactile-visual flooring must be installed on all entrances of elevators, facilitating the location of the access to the elevator. It should be located in front of the doors.

The tactile-visual pavement must be150 cm wide and 150 cm deep.

To differentiate the pavement, changes can be made to the color of the floor or its finish. These changes must be aligned with the pavement.



UNE-ISO 21542. Page 55 and Annex A

WHY?... Cristina and René ask

If there is no tactile-visual pavement in front of the elevator, Darek cannot find the door to get off the elevator and go outside.

Braille signage on panel

Issue raised

- Absence of Braille signage and high-relief in the interior panel of the elevator.

Design criteria:

The information on the elevator panel must be in braille and Arabic, in high-relief and linked to the correspondent button.

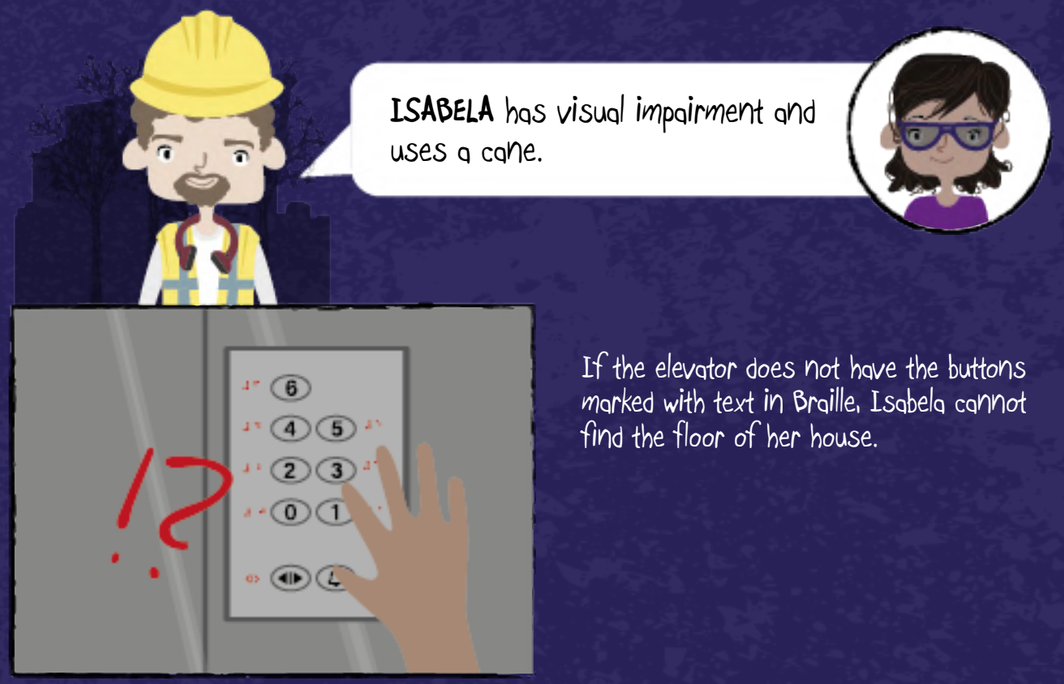
This information must present an adequate color contrast with the support on which it is located, using materials without glare or reflections.

In addition, the buttons must be large, differing in shape, color, and relief with the alarm and emergency buttons, which must be placed separately from the rest of the buttons to avoid accidental pulsations.

The button indicating the exit of the building must be distinguished from the rest, in green, and with greater relief.

UNE-ISO 21542. Page 57

WHY?... Cristina and René ask



If the elevator does not have the buttons marked with text in Braille, Isabela cannot find the floor of her house.

OBSTACLES IN THE HOUSE

Location of elements in buildings

Issue raised

- Incorrect location of protruding elements.

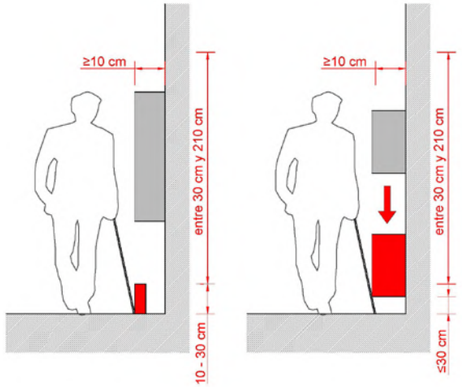
Design criteria:

The height of obstacle clearance must be of at least 210 cm.

Protruding elements attached to the wall that are larger than 10 cm should not be placed between 30 - 210 cm high, measured from the floor.

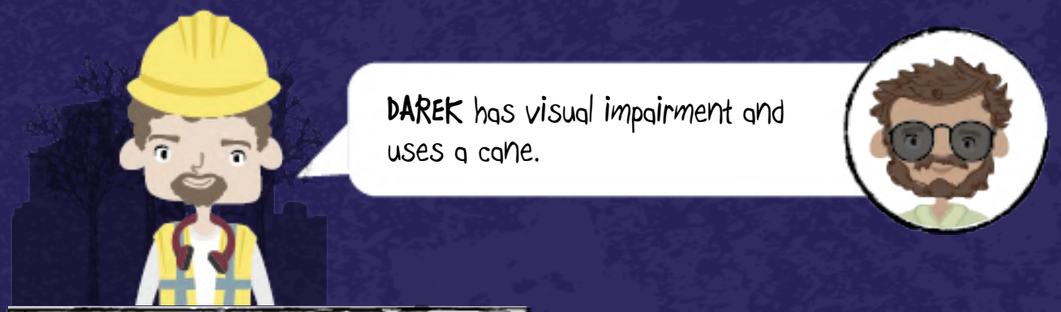
In the case of placing elements in this height range (protruding more than 10 cm), it should be clearly visible and detectable with a mobility cane.

For this purpose, a protective barrier must be provided at the ground level under the protruding obstacle, such as a curb or fixed element, measuring10 cm to 30 cm.



UNE-ISO 21542. Page 32

WHY?... Cristina and René ask



If the fire extinguisher hose box is not embedded in the wall and projects, Darek can hurt himself.

REFERENCES

REFERENCE STANDARDS FOR GOOD PRACTICES

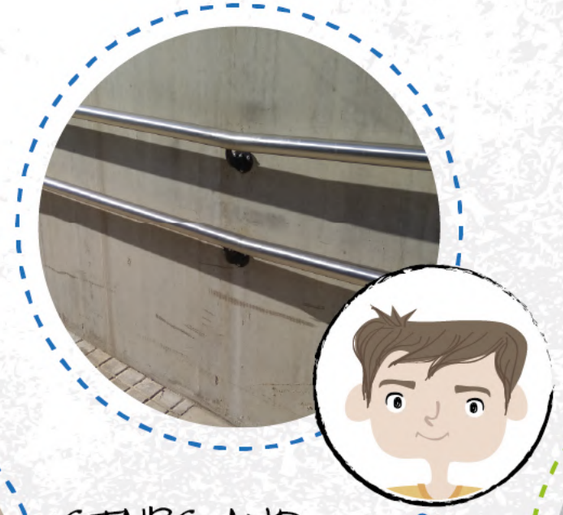
Argentina	"Código Edificación Gobierno de la Ciudad de Buenos Aires"
	"Código de Edificacion de Concepción del Uruguay"
Brazil	"Norma Brasileira ABTN NBR 9050/2015 Acessibilidade a edifcações, mobiliário, espaços e equipamentos urbanos"
Chile	"Guía de Soluciones Accesibles para espacios publicos y viviendas para personas con discapacidades. Ministerio de la Vivienda y Urbanismo"
	"Guía de Soluciones Accesibles DITEC 2017 Ministerio de Vivienda y Urbanismo"
	Normativa de Accesibilidad (version comentada de la OGUC - Ordenanza General de Urbanismo y Construcciones)
Colombia	ACCESIBILIDAD AL MEDIO FISICO Y AL TRANSPORTE
Ecuador	"NEC Norma Ecuatoriana de la Construcción Accesibilidad Universal"
Spain	Código tecnico de la Edificación. Documento Básico SUA (Seguridad de utilización y Accesibilidad)
	Orden VIV/561/2010, de 1 de febrero, por la que se desarrolla el documento técnico de condiciones básicas de accesibilidad y no discriminación para el acceso y utilización de los espacios públicos urbanizados.
	Manual de Accesibilidad para Tecnicos Municipales (Fundación ONCE)
United Stated	2010 ADA Standards for Accessible Design

"Japan (Tokyo 2020)"	"Tokyo 2020 Accessibility Guidelines"
Mexico	Código de Edificación de Vivienda
"ISO Standards (International)"	"ISO 21542:2011 Building construction -- Accessibility and usability of the built environment"
Panama	Desarrollo de la Normativa Nacional de Accesibilidad en temas de Urbanismo Arquitectura.
Peru	Norma técnica GH.020 componentes de Diseño Urbano
	"Norma A.120 Accesibildad para personas con discapacidad y de las personas adultas mayores"
	010-2009-VIVIENDA Accesibilidad para personas con discapacidad y de las personas adultas mayores"
	"Modificación Nº072-2019 Vivienda Norma Técnica A.120 ""Accesibilidad Universal en Edificaciones"
European Union	European Accessibility Act
Uruguay	"Instituto Uruguayo de Normas Técnicas"
Venezuela	"COVENIN 2733:2004 Entorno urbano y edificaciones, accesibilidad para personas."

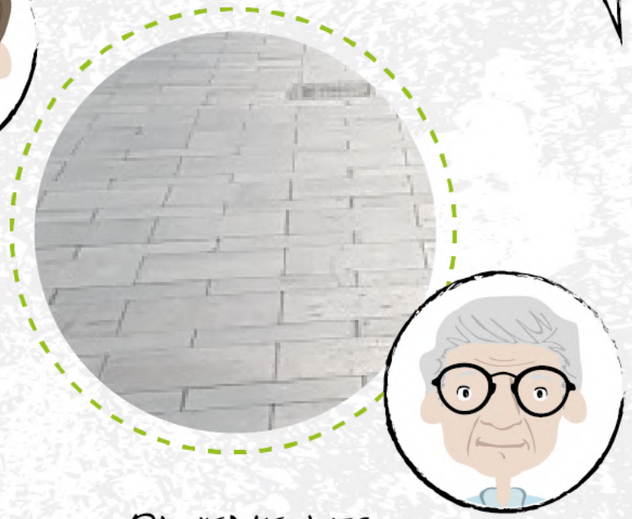
Thank you very much for including us in your analysis!

SHOWER AND CHANGING ROOM
FELIPE

TOILETS
PAULA



STAIRS AND RAMPS
JORGE



PAVEMENTS
PEDRO

Thank you very much for including us in your analysis!

MAINTENANCE TRIMMING AND VEGETATION

ISABELA

OBSTACLES

SONIA

CROSSWALKS

DAREK

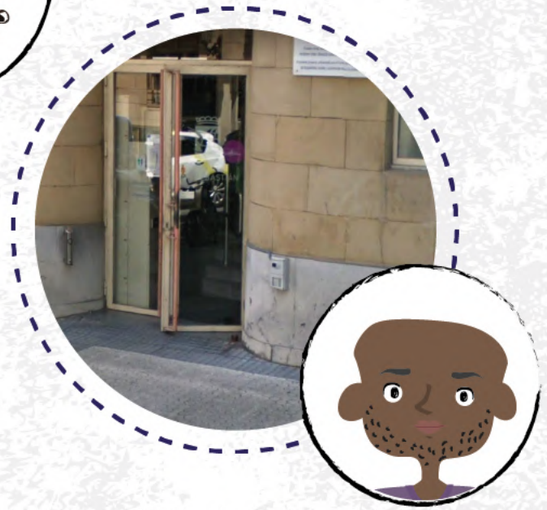
TRAFFIC AND SIGNS

PAULA

Thank you very much for including us in your analysis!

BUS STOP

ISABELA AND FELIPE



DOORS AND ACCESS

PAUL

ELEVATORS

ANA

OBSTACLES AT HOME

DAREK

Very good! It has been a great learning process to present these cases to Cristina and René!

Their analysis in the search for solutions to the obstacles has been amazing

CRISTINA AND RENÉ

Suggest reviewing the regulations applied in each country, so that the spaces are accessible to all people

Cristina has visual disability

René does not have a disability but has hurt himself and carries crutches

GOODBYE BARRIERS

According to the social rights model, disability is not a clinical diagnosis or a functional condition within a person. Being a deaf person or using a wheelchair, for example, are characteristics that are simply a part of what is understood as human diversity. They become disabled only when they interact with barriers in the environment that do not allow them to access their rights.

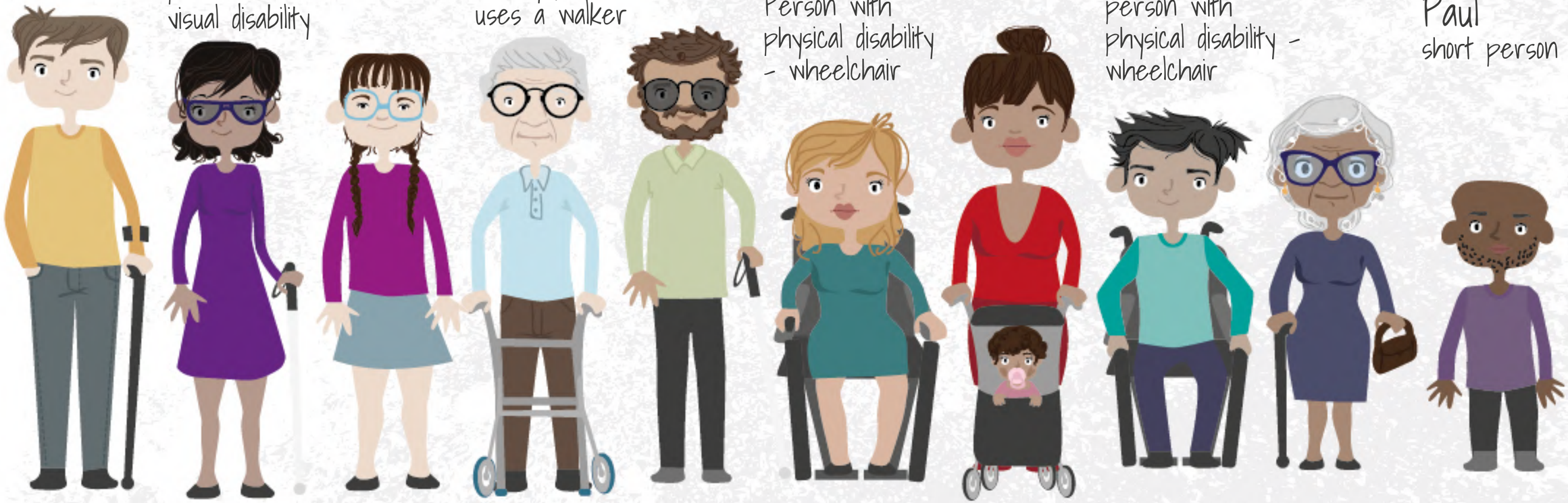
Under this perspective, led by the United Nations Convention on the Rights of Persons with Disabilities (CRPD), the Member States take on the challenge of eliminating these barriers and thus guaranteeing the full access to the rights of this social group. And where are those barriers exactly? For example, it may be an education system in which children and adolescents with disabilities go to segregated schools or a web page that does not have the technology to convert images into text, thus including blind people.

However, the most obvious barriers are architectural barriers. Most cities in Latin America and the Caribbean still have many obstacles in all of their infrastructure and designs that make moving freely and with dignity impossible. This form of discrimination becomes especially relevant in understanding that without access to public space, access to all other rights is compromised. No one can study, work, or go to the doctor if there are obstacles that prevent them from physically accessing these spaces.

Now, this task cannot be achieved only through regulation. While the CRPD gives the guidelines for States to work on accessibility, those guidelines need specific technical standards for its implementation, official monitoring to ensure compliance, and, above all, pedagogy for those who are making these reasonable adjustments to do so following international quality standards. This guide is an effort in this direction. It is also a bet so that we all get to say "goodbye barriers."

Juan Pablo Salazar Salamanca
Social Sector
Inter American
Development Bank

Thank you very much for joining us on our tour! The suggested changes benefit us when it comes to enjoying the city as well as the rest of the people around us!



Jorge
person with physical disability

Isabela
person with visual disability

Paula
person with intellectual disability/Down's Syndrome

Pedro
elderly person - uses a walker

Darek
person with visual disabilityl

Lis
Person with physical disability - wheelchair

Sonia
carries a stroller

Felipe
person with physical disability - wheelchair

Ana
elderly person with visual impairment

Paul
short person

Goodbye Barriers!

A Guide to Design More Accessible Spaces

José Luís Borau Jordán
Juliana de Moraes Pinheiro - Suzanne Duryea

IDB