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# MINIMUM REQUIREMENTS FOR BUILDING ACCESSIBLE SHELTERS

**1** The site of the shelter is flat, accessible, and clear of rubble and debris.

Use flat sites with minimal level changes for better mobility.  
Clear rubble and debris from the site and from access to the site.  
Ensure flat and uniform surfaces with surface water drainage in place.

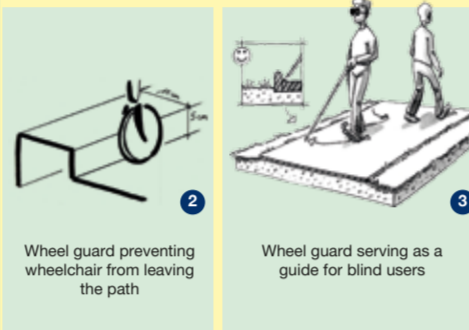
>> If entrances are placed at locations where the floor level is close to the ground, accessibility will be easier and less expensive to achieve. Sometimes, plans can just be rotated or flipped to bring entrances closer to ground level, avoiding the need to provide stairs or ramps.



**2** Pathways leading to main entrance of the shelter and/or latrines are accessible and clear of obstacles.

The pathway should be connected to the shelter and should be the most habitual, direct and shortest access route.  
The ground should be firm (compacted material, concrete), non-slippery, and without obstacle for the wheel, the foot or the cane.  
The pathway should be 120 cm wide in order for a wheelchair to circulate. If an obstacle cannot be avoided, pathway width can be reduced to a minimum of 90 cm on a short distance.  
Protrusion hazards (overhead hazards) above the path should be located at a height of at least 220 cm above the ground.

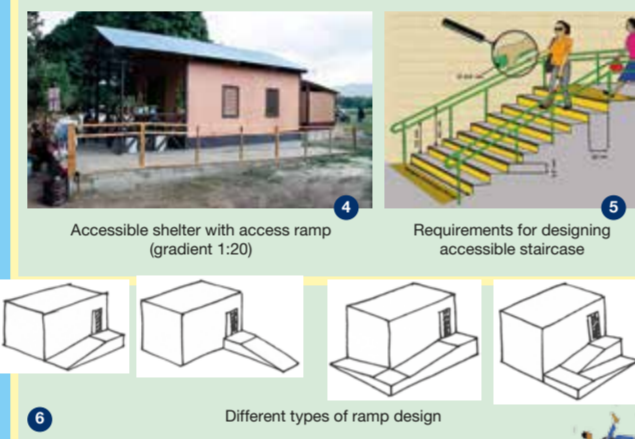
>> Small steps or ground level changes must be avoided. If not, rounded/chamfered edges can be applied.  
>> Wheel guards prevent a wheelchair from leaving the path and serve as a guide for blind users



**3** The entrance is possible to reach for persons with different types of disability, with possibility to install a ramp.

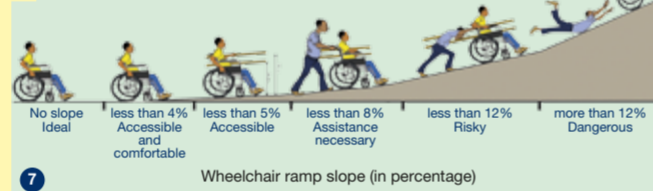
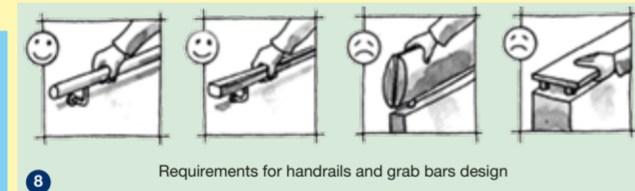
If there is a difference between ground level inside and outside the shelter, a ramp (wood or cement) should be provided to make the door entrance accessible:  
The recommended gradient is 1:20 (5%) and the run (length) should not exceed 10 m if the gradient is 1:20.  
If technically unavoidable, the gradient may be increased to a maximum of 8% (1:12). The run should not exceed 6 m if the gradient is 1:12.  
Landing areas should be provided at the top and the bottom of the ramp, with a minimum floor space of 140 x 140 cm.  
Handrails should be provided on both sides of the ramp at 70 cm and 90 cm from the ramp level.

Providing both stairs and a ramp at changes in level will allow people to choose the option that best suits their needs, resulting in a flexible and more universally accessible design. When provided, stairs must follow the following requirements:  
>> Handrails will be provided on both sides, at 70 cm and 90 cm from the step level.  
>> The edges of steps and stairs shall be marked in contrasting colours to make them easily visible.  
>> Steps shall have a height of 15 cm and a depth 30 cm.



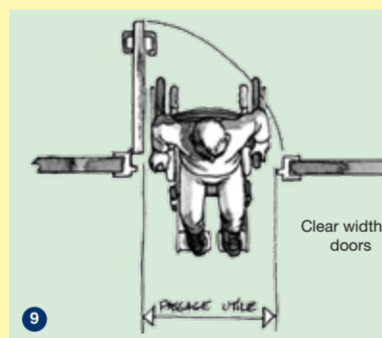
**4** Handrails are installed to provide support and security.

>> Handrails should be installed both on stairs and ramps at a height of 70 cm and 90 cm.  
>> Handrails should be easy to grab: diameter 4 cm  
>> Handrails should be solid enough to support bodyweight.



**5** Openings are at least 90 cm wide, in order for a wheelchair to pass through.

>> The clear width of the doors should be 90 cm in order to allow the easy passage of wheelchairs.



**6** Entrances have contrasting colour to make them easier to identify.

>> The colour of the doors should contrast with the wall; if the colour of the door is not contrasting with wall, door frames can be painted with a contrasting colour (e.g. yellow).

**7** Doors and windows are accessible and easy to open and close.

Door thresholds should be less than 12 mm high.  
Door handles should be located at a height of 90cm above the ground and should either be D-lever or vertical handles (easy to grab).  
Height of the base of the windows should be less than 80 cm above the ground.  
Windows should be equipped with lever handles or similar system that easy to use.



**8** Space inside the shelter is wide enough to allow a wheelchair user to circulate and complete a full turn.

Wheelchair users need a clear area of 150 cm x 150 cm to complete a full turn.  
The floor should be solid, non-slippery and non-reflective.

**9** Electrical lighting has been provided to increase accessibility and safety.

Switches or controls must be located at a height of 90 cm above the ground and must be easy to use.

**10** Other measures to increase the safety of the shelter have been considered, such as securing furniture and avoiding sharp edges.

Pay specific attention to protrusion hazards, particularly hazards around head height.

**11** Work surfaces are accessible, with seats or possibility to rest nearby.

- Table height: 85 cm
- Height of space under table: 70 cm
- Seat height: 45 cm
- Bed height: 50 cm
- Free space next to bed to allow transfer: 90 cm



**12** Persons with disabilities have access to sanitary facilities in proximity to their shelter.

Pathway is connected to the sanitary facilities, and is the most habitual, direct and the shortest route.

The ground is firm (compacted material, concrete), non-slippery, and without obstacle for the wheel, the foot or the cane.

The pathway should be 120 cm wide in order for a wheelchair to manoeuvre. If an obstacle cannot be avoided, pathway width can be reduced to a minimum of 90 cm for a short distance.

Protrusion hazards (overhead hazards) above the path are located at a height of 220 cm above the ground.

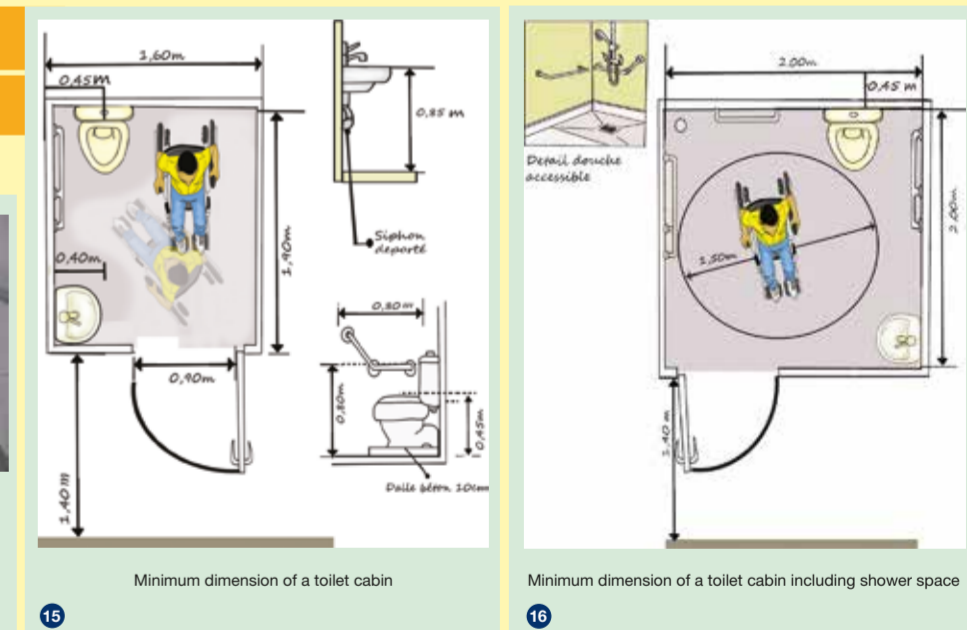


**13** The space outside or inside the toilet is wide enough to allow a person in a wheelchair to complete a full turn.

Wheelchair users need a clear area of 150 cm x 150 cm to complete a full turn; this clear area can be provided either inside or outside the cabin.

**14** Toilets are equipped with a seat at a height of 45-50 cm and a grab bar to facilitate the transfer.

Grab bars be installed at a height of 80 cm above the ground.  
Grab bars be strong enough to support body weight.



**15** Door is easy to open and close.

Door handles are located at a height of 90 cm above the ground and should either be D-lever or vertical handles (easy to grab).  
A horizontal grab bar at a height of 80 cm above the ground can be added to the doors in order to facilitate the closing.



**16** The shelter provides thermal comfort (not too hot in hot climates, and not too cold in cool climates).

Along with thermal comfort, additional features (such as window screens against mosquitos) must be provided.