

- (A). Every basement shall be in every part at least 2.5 m. in height from the floor to the soffit of the roof slab or ceiling;
- (B). Adequate ventilation shall be provided for the basement. The standard of ventilation shall be the same as required by the particular occupancy according to bye laws. Any deficiency may be met by providing adequate mechanical ventilation in the form of blowers, exhaust fans (one exhaust fan for 50 Sq.m. of basement area), air conditioning system etc;
- (C). The minimum height of the ceiling of upper basement shall be 1.20 m. and the maximum, 1.5 m. above the average surrounding ground level;
- (D). Adequate arrangement shall be made, so that surface drainage does not enter the basement;
- (E). The walls and floors of the basement shall be water-tight and be so designed that the effect of the surrounding soil and moisture, if any, are taken in to account in design and adequate damp proofing treatment is given;
- (F). The access to the basement shall be separate from the main and alternative staircase providing access and exit from higher floors shall be provided. Where the staircase is continuous in the case of buildings served by more than one staircase, the same shall be of enclosed type serving as a fire separation from the basement floor and higher floor.
- (G). Open ramps shall be permitted if they are constructed within the building line subject to provision of (D) above.
- (H). The ramp providing access to basement to be used for parking shall have a gradient not steeper than 1:10 and this shall not obstruct the clear vehicular and pedestrian movement around the building including movement of fire tender (6 meter).

48. Provision of Lift.-(1) Lift shall be provided for buildings above 15 m. height in case of apartments, group housing, commercial, institutional and office buildings.

- (2) The Number and capacity of lift shall be provided as specified in the National Building Code.
- (3) Lift shall be provided at the rate of one lift for twenty dwelling units, or part thereof for residential buildings and at the rate of one lift per one thousand Sq.m. or part thereof of built-up area per floor for non-residential buildings. Built-up area on ground floor and two upper floors shall be excluded in computing the above requirement.
- (4) Notwithstanding anything contained in these bye laws in case of building with 21 m. or more in height, at least two lifts shall be provided.
- (5) All lifts shall be inspected at least once a year by the agency designated by the Authority. The Authority can also outsource the inspection of lifts.

49. Heritage Zone.-(1) The Authority may notify the Heritage Zones in consultation with the Archaeological Survey of India, State Department of Art Culture and Youth and the Art Commission.

- (2) Conservation of Heritage Buildings, Heritage Precincts and Natural features: Conservation of buildings, artifacts, structures, areas and precincts of historic and /or aesthetic and/or architectural and /or cultural significance (Heritage buildings and heritage precincts) and/or natural features of environmental significance shall be taken up by the Authority in accordance with the relevant provisions in-force and those framed from time to time.

50. Barrier free access for the physically challenged person.-Barrier free environment is one, which enables people with disabilities to move about safely and freely and to use all facilities within the built environment. The goal of barrier free design is to provide an environment that supports the independent functioning of individuals so that they can get into and participate in all activities without assistance.

The main purpose is to integrate disabled and elderly persons fully into the society. In view of the above, the Government of India has enacted the Disabilities Act, 1955. Section 44, 45

and 46 of the said Act stipulates that the appropriate Governments, local authorities to ensure provisions of barrier free facilities in all new Government buildings and public utilities roads and transport. Also, in 1996 Government of India enacted another person with Disabilities (Equal Opportunity, Protection of Rights and Full Participation) Act for the Barrier Free Environment for differently abled persons.

(1) Site development:

Level of the roads, access paths and parking areas shall be described in the plan along with specification of the materials.

(2) Access Path/ Walk Way:

Access path from plot entry and surface parking to building entrance shall be minimum of 1800 mm. wide having even surface without any steps. Slope, if any, shall not have gradient greater than 5%. Selection of floor materials shall be made suitably to attract or to guide visually impaired persons (Limited to coloured floor material whose colour and brightness is conspicuously different from that of the surrounding floor material or the material that emit different sound to guide visually impaired persons hereinafter referred to as "guiding floor material"). Finishes shall have non slip surface with a texture traversable by a wheel chair. Curbs wherever provided should blend to a common level.

(3) Parking:

For parking of vehicles of handicapped people the following provisions shall be made:

- (A). Surface parking for two car spaces shall be provided near entrance for the physically handicapped persons with maximum travel distance of 30 meter from building entrance.
- (B). The width of parking bay shall be minimum 3.6 meter.
- (C). The information stating that the space is reserved for handicapped persons shall be conspicuously displayed.
- (D). Guiding floor materials shall be provided or a device which guides visually impaired persons with audible signals or other devices which serves the same purpose shall be provided.

(4) Building requirements:

The specified facilities for the buildings for handicapped persons shall be as follows:

- (A). Approach at plinth level: Every building must have at least one entrance accessible to the handicapped and shall be indicated by proper signage. This entrance shall be approached through a ramp together with stepped entry.
- (B). Ramp Approach: Ramp shall be finished with non-slip material. Minimum width of ramp shall be 1800 mm. with maximum gradient 1:12, length of ramp shall not exceed 9 meter having 800 mm high hand rail on both sides extending 300mm beyond top and bottom of the ramp. Minimum gap from the adjacent wall to the hand rail shall be 50mm.
- (C). Stepped Approach: For stepped approach width of tread shall not be less than 300 mm. and maximum riser shall be 150 mm. Provision of 800 mm. high hand rail on both sides of the stepped approach similar to the ramp approach shall be made.
- (D). Exit/Entrance Door: Minimum clear opening of the entrance door shall be 900mm and it shall not be provided with a step that obstructs the passage of a wheel chair user. Threshold shall not be raised more than 12 mm.
- (E). Entrance Landing: Entrance landing shall be provided adjacent to ramp with the minimum dimension 1800mm X 2000 mm. The entrance landing that adjoins the top end of a slope shall be provided with floor materials to attract the attention of visually impaired persons (limited to colored floor material whose color and brightness is conspicuously different from that of the surrounding floor material or the material that emits different sound to guide visually impaired persons hereinafter referred to as "guiding floor material").

- Finishes shall have a non-slip surface with a texture traversable by a wheel chair. Curbs wherever provided must blend to a common level.
- (F). **Corridor connecting the entrance/exit for the handicapped:** The corridor connecting the entrance/exit for handicapped leading directly outdoors to a place where information concerning the overall use of the specified building can be provided to visually impaired persons either by a person or by signs, shall be provided as follows:
- i. Guiding floor materials, shall be provided or devices that emit sound to guide visually impaired persons,
 - ii. The minimum width shall be 1250 mm.
 - iii. In case there is a difference of level, slope ways shall be provided with a slope of 1:12
 - iv. Hand rails shall be provided for ramps/slope ways at a height of 800mm.
- (5) **Stair ways:** One of the stairways near the entrance/exit for the handicapped shall have the following provisions:
- (A). The minimum width shall be 1350 mm.
 - (B). Height of the riser shall not be more than 150mm and width of the tread 300mm. The steps shall not have abrupt (square) nosing.
 - (C). Maximum number of risers on a flight shall be limited to 12.
 - (D). Hand rails shall be provided on both sides and shall extend 30mm on the top and bottom of each flight of steps.
- (6) **Lifts:** Wherever lift is required as per bye-laws, provision of at least one lift shall be made for the wheel chair user with the following cage dimensions of lift recommended for passenger lift of 13 persons capacity by Bureau of Indian Standards.
- Clear internal depth: 1100mm
Clear internal width: 2000mm.
Entrance door width: 900 mm.
- (A). A handrail not less than 600 mm. long at 1000mm. above floor level shall be fixed adjacent to the control panel.
 - (B). The lift lobby shall be of an inside measurement of 1800 mm x 1800mm or more.
 - (C). The time of an automatically closing door shall be minimum 5seconds and the closing speed should not exceed 0.25 meter/sec.
 - (D). The interior of the cage shall be provided with a device that audibly indicates the floor the cage has reached and indicates that the door of the cage for entrance/exit is either open or closed.
 - (E). The control panel shall have marking in Braille to help visually impaired.
- (7) **Toilets:** One special Water Closet, in a set of toilets shall be provided for the use of handicapped with essential provision of washbasin near the entrance for the handicapped.
- (A). The minimum size shall be 1500 x 1750 mm.
 - (B). Minimum clear opening of the door shall be 900mm and the door shall swing out.
 - (C). Suitable arrangement of vertical/horizontal handrails with 50mm clearance from wall shall be made in the toilet.
 - (D). The Water Closet seat shall be 50mm from the floor.
- (8) **Drinking Water:** Suitable provision of drinking water shall be made for handicapped near the special toilet provided for them.
- (9) **Designing for Children:** In a building meant for the predominant use of the children, it is necessary to suitably alter the height of the handrail and other fittings and fixtures.