097.13 DPWH
08.27.2009

Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE SECRETARY
Bonifacio Drive, Port Area
Manila

AUG 26 2009

DEPARTMENT ORDER)
No. 37)
Series of 2009 (08.27.09))

SUBJECT: **ENFORCEMENT OF THE ACCESSIBILITY LAW (BP 344) ALONG NATIONAL ROADS**

In order to ensure the proper and uniform implementation of accessibility features for use of persons with disabilities along national roads pursuant to Batas Pambansa Blg. 344, otherwise known as the Accessibility Law, and its Implementing Rules and Regulations (as amended), all implementing offices of the Department shall adopt the attached standard drawings containing the following minimum requirements for accessibility:

a.	Figure 1	:	Dropped Curbs
b.	Figure 2	:	Curb Cut-outs
c.	Figure 3	:	Walkways, Handrails and Open Spaces
d.	Figure 4	:	Signages
e.	Figure 5	:	Crossings

All heads of implementing offices are directed to be vigilant in the enforcement of the aforecited law by making sure that construction plans of national roads to be constructed/improved/repaired are provided with accessibility requirements in accordance with the aforesaid standard drawings. The Quality Assurance Units of the Department shall include in their inspection the compliance to said requirements.

All District Engineering Offices (DEOs) are also enjoined to monitor the implementation of the accessibility features along local roads. Coordination shall be made with the concerned City/Municipal Engineer/Local Building Official for any non-compliance of the requirements as set forth in this Department Order. Copies of this Order shall be furnished by the DEOs to said local engineering offices within their areas of jurisdiction for their information and reference.

This Order shall take effect immediately.

HERMOGENES E. EBDANE, JR.
Secretary

WIN9R00342

FIGURE 1 : DROPPED CURBS

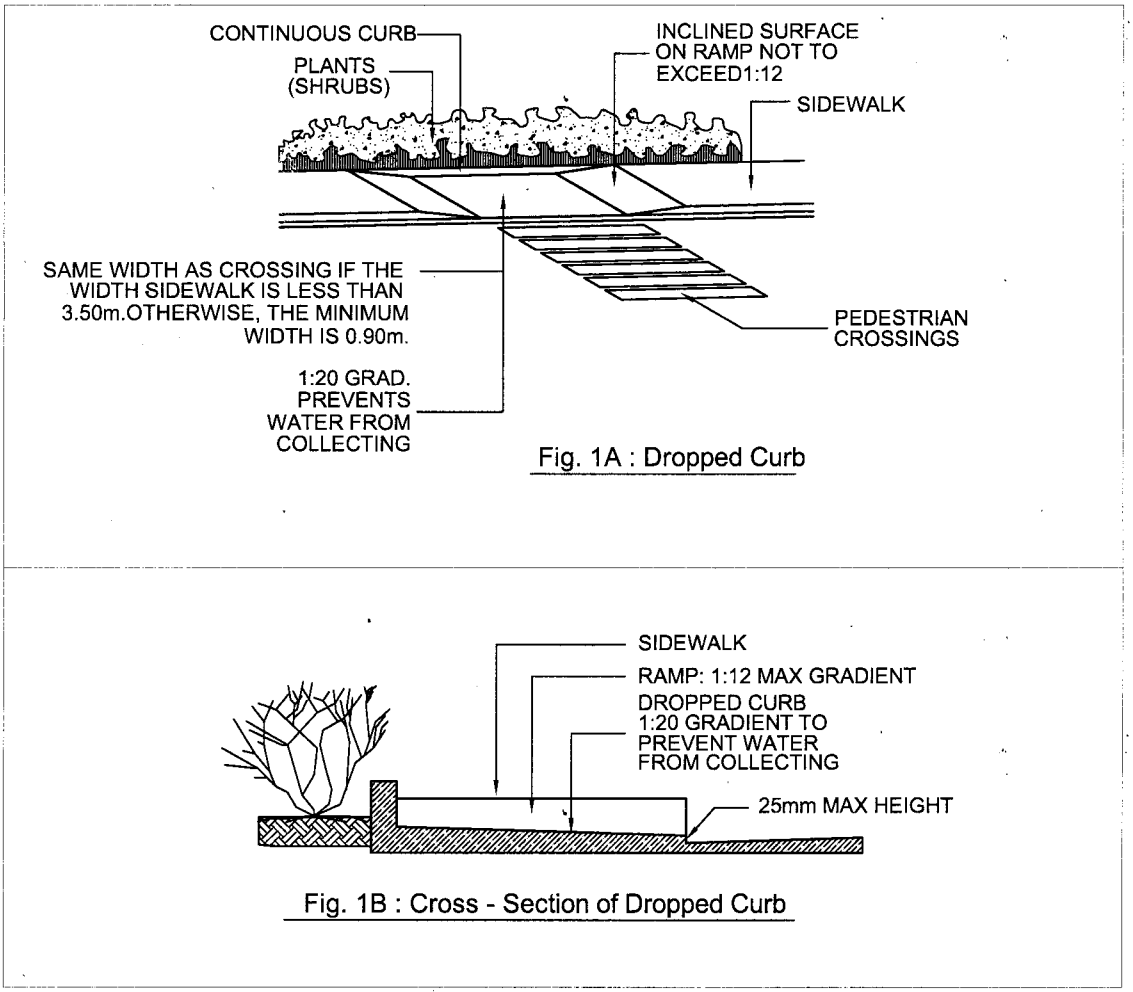


Fig. 1A : Dropped Curb

Fig. 1B : Cross - Section of Dropped Curb

Minimum Requirements

1.1 CHANGES IN LEVEL AT SIDEWALKS SHOULD BE EFFECTED BY SLIGHT RAMPS AND DROPPED CURBS;

1.2 DROPPED CURBS SHOULD BE PROVIDED AT PEDESTRIAN CROSSINGS AND AT THE END OF FOOTPATHS OF A PRIVATE STREET OR ACCESS ROAD; NO DROPPED CURBS SHALL BE PROVIDED AT CORNERS OF SIDEWALK.

1.3 DROPPED CURBS AT PEDESTRIAN CROSSINGS SHOULD HAVE A LENGTH CORRESPONDING TO THE WIDTH OFTHE CROSSING IF THE SIDEWALK WIDTH IS LESS THAN 3.50m. OTHERWISE, THE MINIMUM WIDTH SHOULD BE 0.90m.

1.4 DROPPED CURBS SHALL BE RAMPED TOWARDS ADJOINING CURBS WITH A GRADIENT NOT MORE THAN 1:12;

1.5 DROPPED CURBS SHALL BE SLOPED TOWARDS THE ROAD WITH A MAXIMUM CROSS GRADIENT OF 1:20 TO PREVENT WATER FROM COLLECTING AT THE SIDEWALK;

1.6 THE LOWEST POINT OF THE DROPPED CURB SHOULD NOT EXCEED 25 mm HEIGHT ABOVE THE ROAD GUTTER;

FIGURE 2 : CURB CUT - OUTS

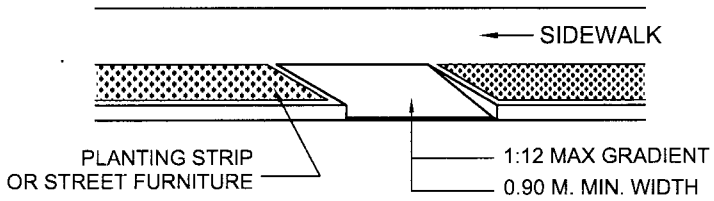


Fig. 2A : Curb Cut - Out

Fig.2B : Other Variation of Dropped Curb at Corners

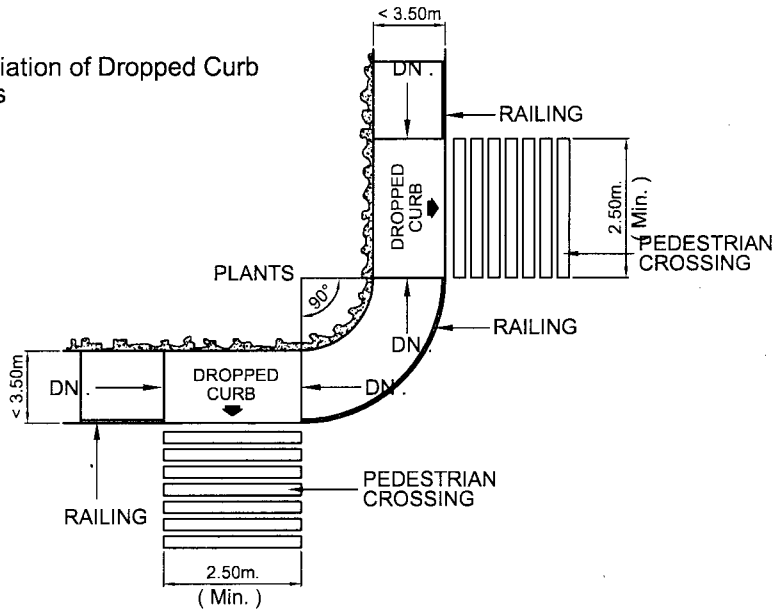


Fig.2C : Other Variation of Dropped Curb at Corners

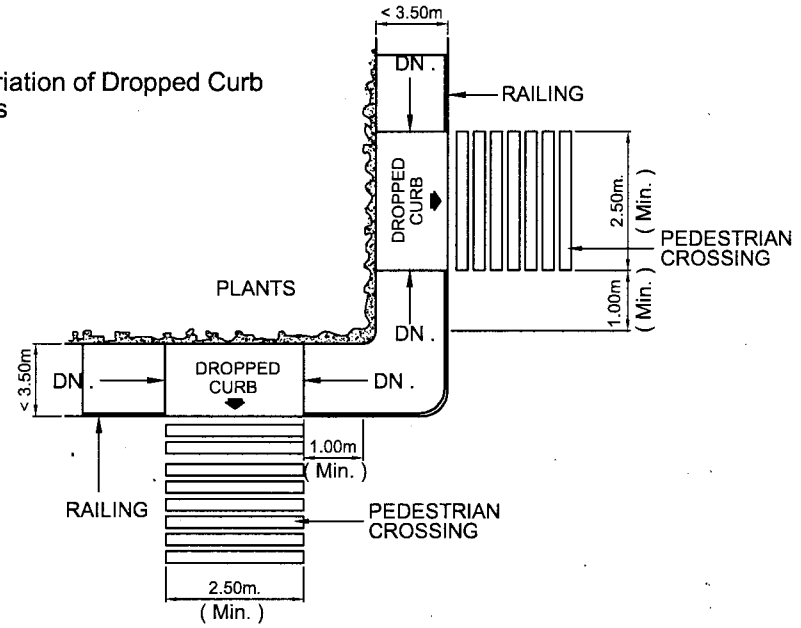
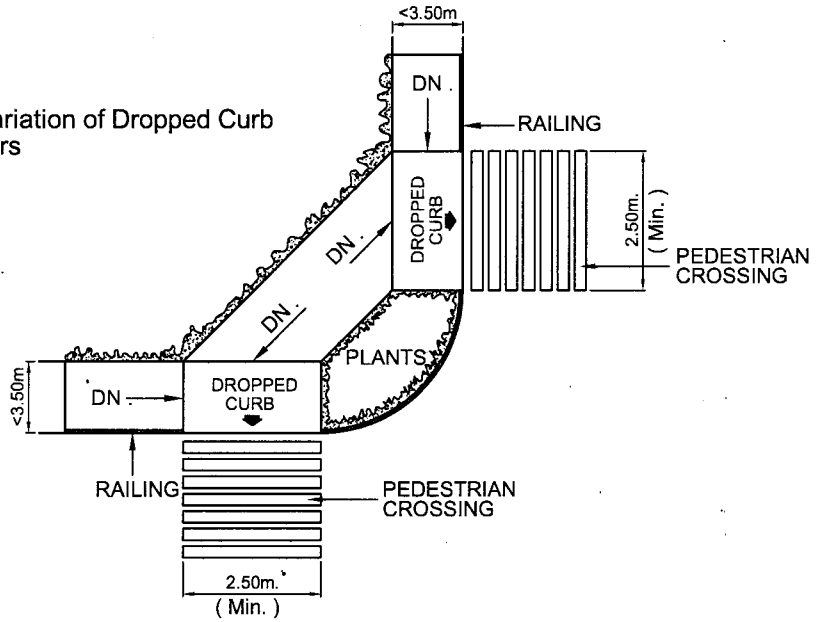


Fig.2D : Other Variation of Dropped Curb at Corners



Minimum Requirements

2.1 CURB CUT-OUTS SHOULD ONLY BE ALLOWED WHEN IT WILL NOT OBSTRUCT A SIDEWALK OR IN ANY WAY LESSEN THE WIDTH OF A SIDEWALK OR IF THE SIDEWALK WIDTH IS LESS THAN 3.50m. NO CURB CUT-OUTS SHALL BE PROVIDED AT CORNERS OF SIDEWALKS.

2.2 THE MINIMUM WIDTH OF A CURB CUT-OUT SHOULD BE 0. 90m.;

2.3 CURB CUT-OUTS SHOULD NOT HAVE A GRADIENT NOT MORE THAN 1:12;

FIGURE 3 : SIDEWALKS,HANDRAILS AND OPEN SPACES

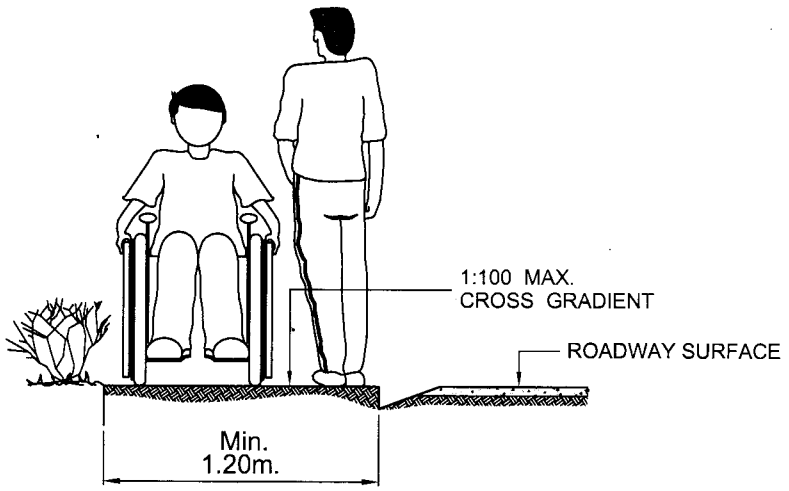


Fig. 3A : Sidewalks

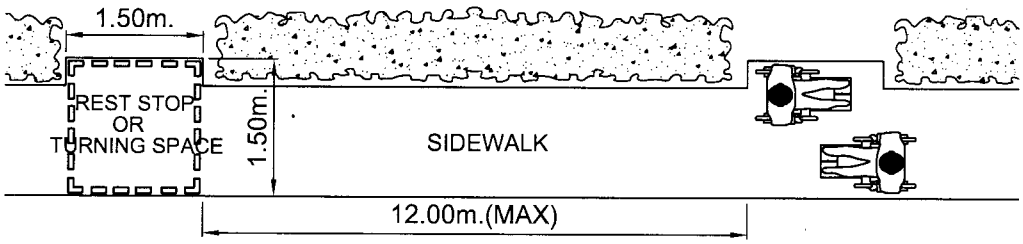


Fig. 3B : Rest Stops On Busy or Lengthy Sidewalks

Minimum Requirements

3.1 SIDEWALKS SHOULD BE KEPT AS LEVEL AS POSSIBLE AND PROVIDED WITH SLIP-RESISTANT MATERIAL;

3.2 WHENEVER AND WHEREVER POSSIBLE, SIDEWALKS SHOULD HAVE A GRADIENT NO MORE THAN 1:20 OR 5%

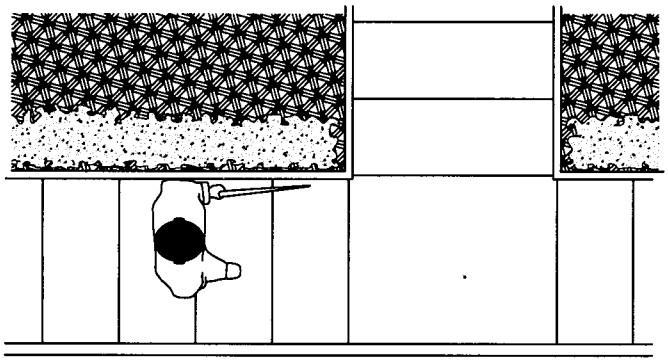
3.3 SIDEWALKS SHOULD HAVE A MAXIMUM CROSS GRADIENT OF 1:100;

3.4 SIDEWALKS SHOULD HAVE A MINIMUM WIDTH OF 1.20 METERS;

3.5 IF POSSIBLE, GRATINGS SHOULD NEVER BE LOCATED ALONG SIDEWALKS; WHEN OCCURING ALONG SIDEWALKS, GRATING OPENINGS SHOULD HAVE A MAXIMUM DIMENSIONS OF 13mm X 13mm AND SHALL NOT PROJECT MORE THAN 6.5mm ABOVE OR BELOW THE LEVEL OF THE SIDEWALK;

3.6 SIDEWALKS SHOULD HAVE A CONTINUING SURFACE WITHOUT ABRUPT PITCHES IN ANGLE OR INTTERUPTIONS BY CRACKS OR BREAKS CREATING EDGES ABOVE 6.5mm;

3.7 IN LENGTHY OR BUSY SIDEWALKS, SPACES SHOULD BE PROVIDED AT SOME POINT ALONG THE ROUTE SO THAT A WHEELCHAIR MAY PASS ANOTHER OR TURN AROUND; THESE SPACES SHOULD HAVE A MINIMUM DIMENSION OF 1.5 METERS AND SHOULD BE SPACED AT A MAXIMUM DISTANCE OF 12.00 METERS BETWEEN STOPS;



KEEP ROUTES AS STRAIGHT AS POSSIBLE WITH RIGHT ANGLE TURNS

Fig. 3C : Sidewalks To Guide The Blind

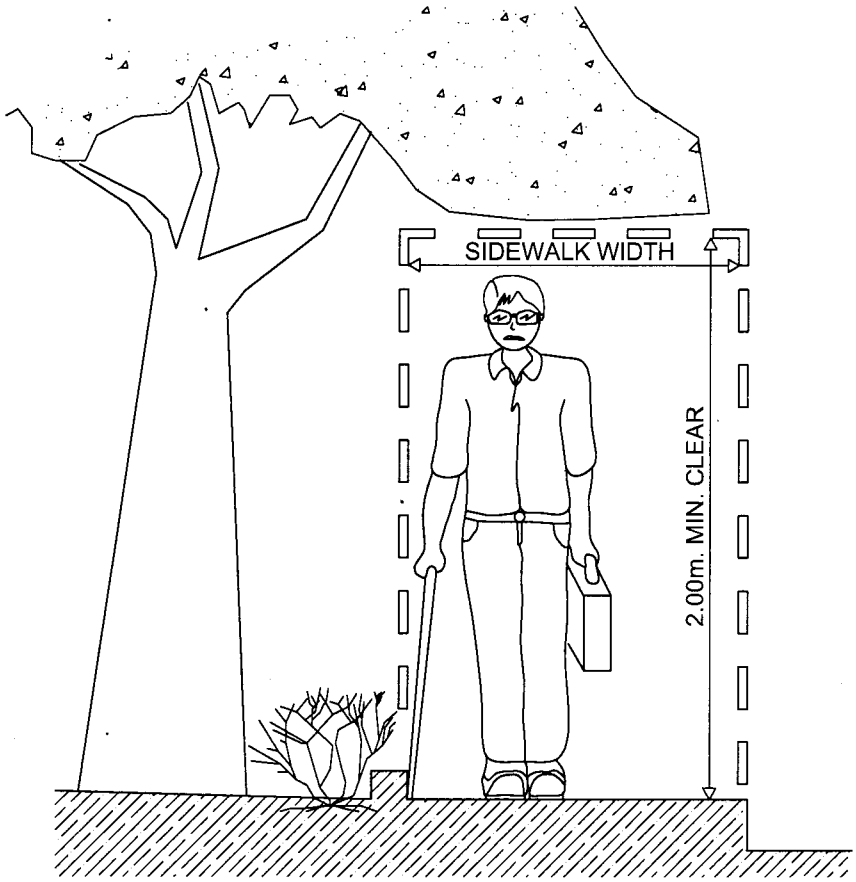


Fig. 3D : Sidewalks With Headroom

3.8 TO GUIDE THE BLIND, SIDEWALKS SHOULD AS MUCH AS POSSIBLE FOLLOW STRAIGHT FORWARD ROUTES WITH RIGHT ANGLE TURNS;

3.9 WHERE PLANTING IS PROVIDED ADJACENT TO THE WALKWAY, REGULAR MAINTENANCE IS ESSENTIAL TO ENSURE BRANCHES OF TREES OR SHRUBS DO NOT OVERHANG SIDEWALKS OR PATHS, AS THEY DO NOT ONLY PRESENT A PARTICULAR DANGER TO THE BLIND, BUT THEY ALSO REDUCE THE EFFECTIVE FOOTWAY WIDTH AVAILABLE TO PEDESTRIANS;

3.10 SIDEWALK HEADROOM SHOULD BE LESS THAN 2.00m. AND SHOULD PREFERABLY BE HIGHER;

3.11 PASSAGEWAYS FOR THE DISABLED SHOULD NOT BE OBSTRUCTED BY STREET FURNITURE, BOLLARDS, SIGN POSTS OR COLUMNS ALONG THE DEFINED ROUTE, AS THEY CAN BE HAZARDOUS;

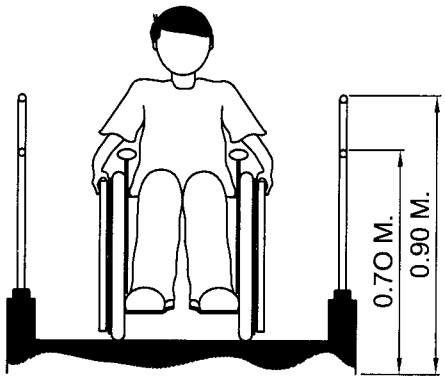


Fig. 3E : Handrail Height

Minimum Requirements

3.12 HANDRAILS SHOULD BE INSTALLED AT BOTH SIDES OF RAMPS AND STAIRS AND AT THE OUTER EDGES OF DROPPED CURBS AT CROSSINGS; HANDRAILS SHOULD NOT BE INSTALLED BEYOND THE WIDTH OF ANY CROSSING SO AS NOT TO OBSTRUCT PEDESTRIAN FLOW;

3.13 HANDRAILS SHALL BE INSTALLED AT 0.90m AND 0.70m ABOVE STEPS OR RAMPS; HANDRAILS FOR PROTECTION AT GREAT HEIGHTS MAY BE INSTALLED AT 1.00m TO 1.06m;

3.14 .30m LONG EXTENSION OF THE HANDRAIL SHOULD BE PROVIDED AT THE START AND END OF RAMPS AND STAIRS;

3.15 HANDRAILS THAT REQUIRE FULL GRIP SHOULD HAVE A DIMENSION OF 30mm TO 50mm;

3.16 HANDRAILS ATTACHED TO WALLS SHOULD HAVE A CLEARANCE NO LESS THAN 50mm FROM THE WALL; HANDRAILS ON LEDGES SHOULD HAVE A CLEARANCE NOT LESS THAN 40mm;

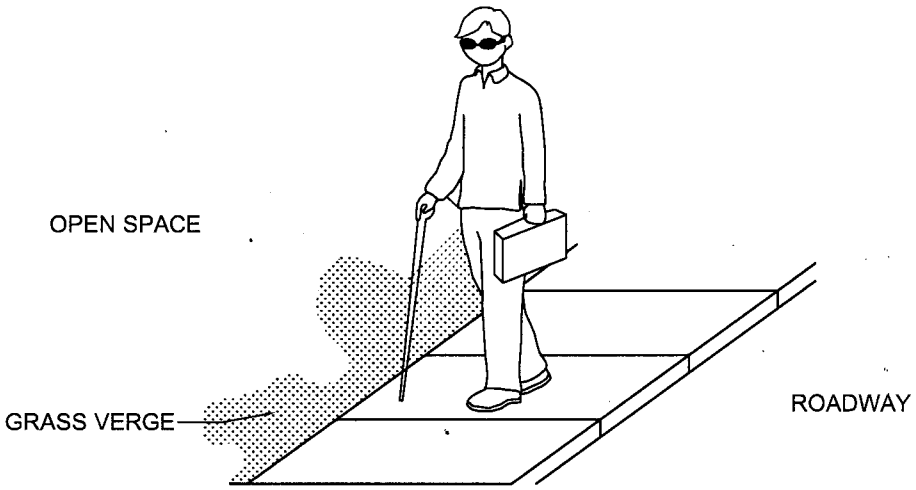


Fig. 3F : Grass Verge Defines Edge of Sidewalks

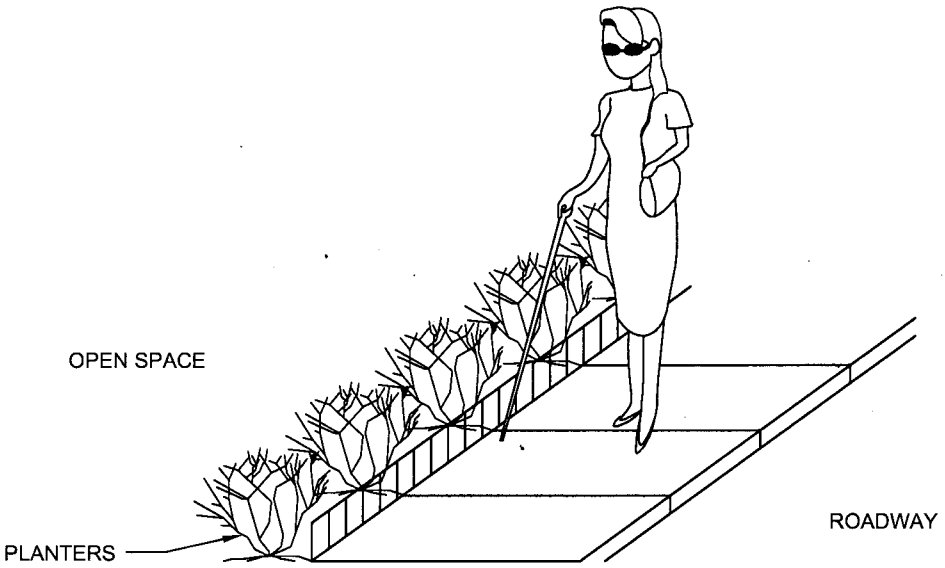


Fig. 3G : Planters Define Back of Sidewalks

Minimum Requirements

3.17 WHERE OPEN SPACES ARE PROVIDED ADJACENT TO WALKWAY, THE BLIND CAN BECOME PARTICULARLY DISORIENTED. THEREFORE, IT IS EXTREMELY HELPFUL IF ANY SIDEWALK OR PATHS CAN BE GIVEN DEFINED EDGES EITHER BY THE USE OF PLANTERS WITH DWARF WALLS, OR A GRASS VERGE, OR SIMILAR, WHICH PROVIDES A TEXTURE DIFFERENT FROM THE PATH.

FIGURE 4 : SIGNAGES

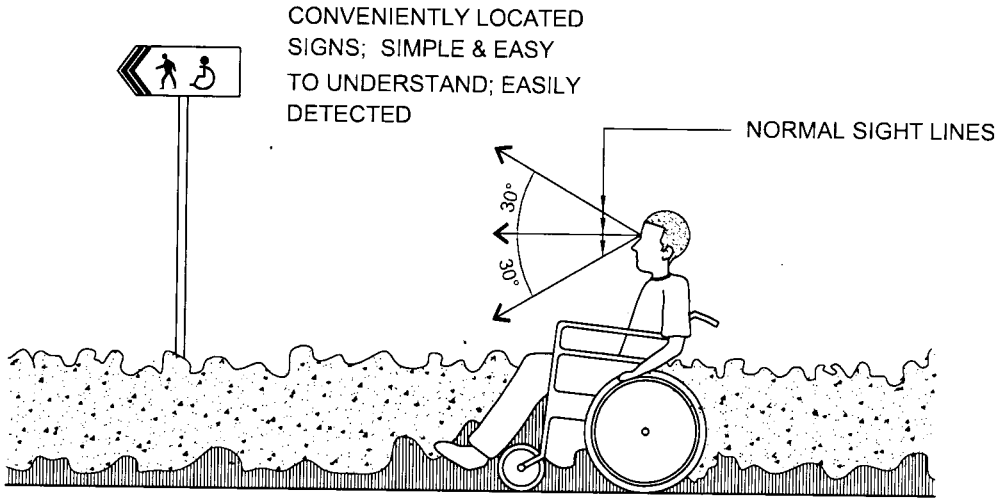


Fig. 4A : Conveniently Located,Simple & Easy to Understand, Easily Detected Sign

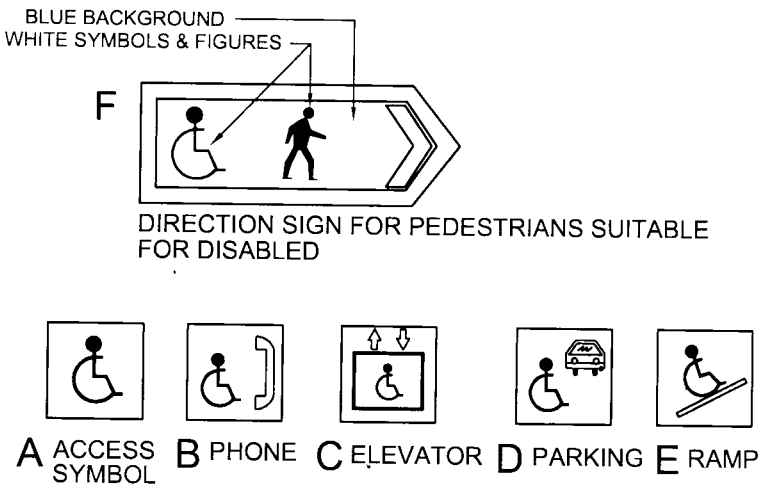


Fig. 4B : Signages

SIGN	SIZE (cm)	USAGE
A	10 x 10	COMFORT ROOM, STALL DOORS
A, B, C, D	15 x 15	WITH OR WITHOUT DIRECTIONAL ARROWS TO IDENTIFY DOORS, ROOMS
A, B, C	22 x 22	WITH OR WITHOUT ARROWS
A, B, C, D, E	30 x 30	FOR EXTERIOR USE
A, B, C, D, E	60 x 60	FOR EXTERIOR USE
F	20 x 60	FOR EXTERIOR USE

Minimum Requirements

4.1 DIRECTIONAL AND INFORMATIONAL SIGN SHOULD BE LOCATED AT POINTS CONVENIENTLY SEEN EVEN BY A PERSON ON A WHEELCHAIR;

4.2 SIGNS SHOULD BE KEPT SIMPLE AND EASY TO UNDERSTAND; SIGNAGES SHOULD BE MADE OF CONTRASTING COLORS AND GRAY VALUES TO MAKE DETECTION AND READING EASY;

4.3 THE INTERNATIONAL SYMBOL FOR ACCESS SHOULD BE USED TO DESIGNATE ROUTES AND FACILITIES THAT ARE ACCESSIBLE;

4.4 SHOULD A SIGN PROTRUDE INTO A WALKWAY OR ROUTE, A MINIMUM HEADROOM OF 2.00 METERS SHOULD BE PROVIDED; SEE FIG.

4.5 SIGNS ON WALLS AND DOORS SHOULD BE LOCATED AT A MAXIMUM HEIGHT OF 1.60 METERS AND MINIMUM HEIGHT OF 1.40 METERS;

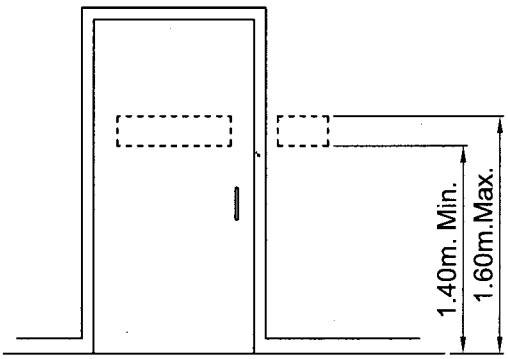


Fig. 4C : Signs on Walls & Doors

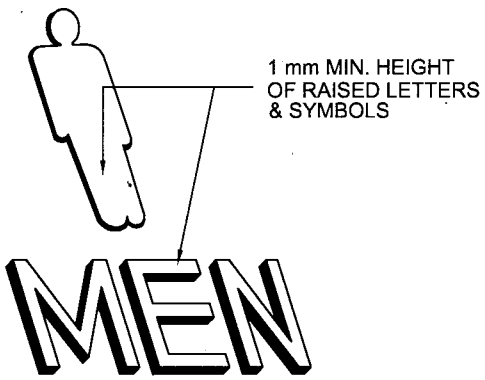


Fig. 4D : Height of Raised Letters & Symbols

4.6 SIGNAGES LABELING PUBLIC ROOMS AND PLACES SHOULD HAVE RAISED SYMBOLS, LETTERS OR NUMBERS WITH A MINIMUM HEIGHT OF 1mm; BRAILLE SYMBOLS SHOULD BE INCLUDED IN SIGNS INDICATING PUBLIC PLACES AND SAFETY ROUTES;

4.7 TEXT ON SIGNBOARDS SHALL BE OF A DIMENSION THAT PEOPLE WITH LESS THAN NORMAL VISUAL ACUITY CAN READ AT A CERTAIN DISTANCE.

FIGURE 5 : CROSSINGS

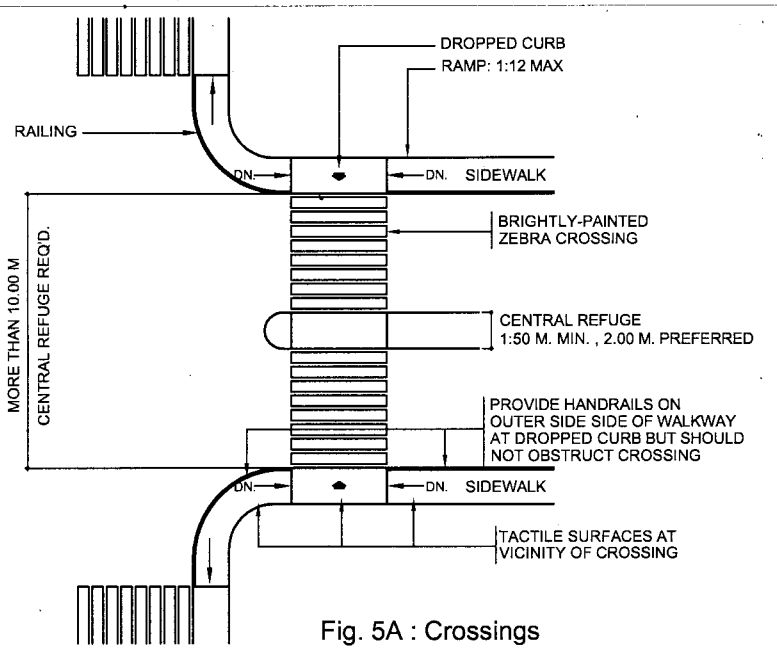


Fig. 5A : Crossings

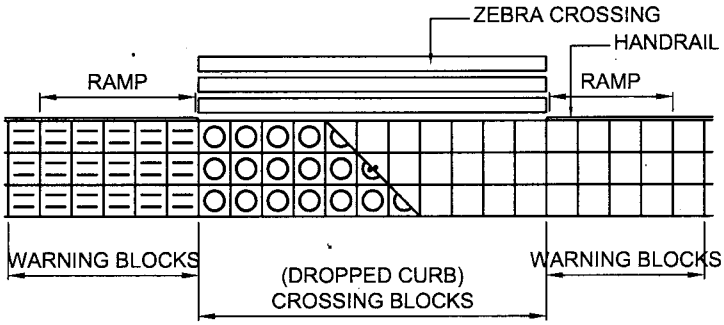


Fig. 5B : Tactile Blocks

Minimum Requirements

5.1 IN ORDER TO REDUCE THE EXPOSURE TIME TO VEHICULAR TRAFFIC, ALL AT GRADE CROSSING SHOULD:

5.1.1 BE AS PERPENDICULAR AS POSSIBLE TO THE CARRIAGEWAY;

5.1.2 BE LOCATED AT THE NARROWEST, MOST CONVENIENT PART OF THE CARRIAGEWAY;

5.1.3 HAVE CENTRAL REFUGES OF AT LEAST 1.50m IN DEPTH AND PREFERABLY 2.00m, PROVIDED AS A MID-CROSSING SHELTER, WHERE THE WIDTH OF CARRIAGEWAY TO BE CROSSED EXCEEDS 10.00m;

5.2 ALL CROSSINGS SHOULD BE LOCATED CLOSE IF NOT CONTIGUOUS WITH THE NORMAL PEDESTRIAN DESIRE LINE;

5.3 PROVIDE TACTILE BLOCKS IN THE IMMEDIATE VICINITY OF THE CROSSING AS AN AID TO THE BLIND; THE TACTILE SURFACE SHOULD BE HIGH ENOUGH TO BE FELT BY THE SOLE OF THE SHOE BUT LOW ENOUGH SO AS NOT TO CAUSE PEDESTRIANS TO TRIP OR TO AFFECT THE MOBILITY OF WHEELCHAIR USERS;

NOTE: TACTILE STRIPS FORMED FROM BRUSHED OR GROOVED CONCRETE HAVE NOT PROVED SUCCESSFUL AS THEY DO NOT PROVIDE SUFFICIENT DISTINCTION FROM THE NORMAL FOOTWAY SURFACE AND THEREFORE SHOULD NOT BE USED;

5.4 LIGHT CONTROLLED CROSSINGS WITH PEDESTRIAN PHASES AND AUDIBLE SIGNALS ARE MOST BENEFICIAL TO THE DISABLED; THEY SHOULD BE PROVIDED WHEREVER POSSIBLE;

5.5 THE AUDIBLE SIGNALS USED FOR CROSSINGS SHOULD BE DISTINGUISHABLE FROM OTHER SOUNDS IN THE ENVIRONMENT TO PREVENT CONFUSION TO THE BLIND; A PROLONGED SOUND COULD SERVE AS WARNING SIGNAL THAT THE CROSSING TIME IS ABOUT TO END;

5.6 SUFFICIENT TIME SHOULD BE ALLOWED FOR THE SLOWER PERSONS NEGOTIATING A CROSSING; A WALKING SPEED OF 0.90m/sec RATHER THAN 1.20m/sec SHOULD BE CONSIDERED; A MINIMUM CROSSING PERIOD OF 6.0 SECONDS OR THE CROSSING DISTANCE TIMES THE CROSSING SPEED (0.90m/sec), WHICHEVER IS GREATER.