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Theme: Accessibility

Accessibility for the Disabled - A Design Manual for a Barrier Free Environment

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INTRODUCTION

We are all physically disabled (1) at some time in our lives. A child, a person with a broken leg, a parent with a pram, an elderly person, etc. are all disabled in one way or another. Those who remain healthy and able-bodied all their lives are few. As far as the built-up environment is concerned, it is important that it should be barrier-free and adapted to fulfill the needs of all people equally. As a matter of fact, the needs of the disabled coincide with the needs of the majority, and all people are at ease with them. As such, planning for the majority implies planning for people with varying abilities and disabilities.

PURPOSE

This publication is an attempt to provide for the first time in Lebanon a design manual on accessibility for the disabled. It is a design guidebook made for the purpose of providing architects and designers with the basic information and data necessary for a barrier-free environment. Its intent is to establish standards and recommendations that will not only influence the development and reconstruction of the BCD but assume national importance as well. The manual is expected to be a stimulus that will lead, in the long run, to the establishment of national building and planning legislation covering access for disabled people.

APPLICATION

The manual does not cover all the requirements of disabled people in detail. It is a straightforward guide expected to be the first in a series of publications having the same theme. Most of the recommended measures have been tested in developed countries, and while some have proven to be effective, the outcome of others is still unknown. To determine the reliability and efficacy of these measures for Lebanon,

it is important to conduct experimental trials of all provisions. This will be of great help in determining the positive and negative aspects of each measure. Practical advice from legal, professional and academic institutions as well as individuals with disabilities is also of the utmost importance in shaping the final form of an accessibility code which can be applied on a national level, as an integral part of the Lebanese building law.

THE BCD - A CASE-STUDY

Since the BCD is a pilot project in the reconstruction process of Lebanon, implementing accessibility requirements for the disabled will help to make the BCD a case-study or a demonstration project on a national level. This will include the design of the traffic infrastructure and new buildings plus the renovation of the existing infrastructure and buildings.

AIM

The social aim of this study is to integrate disabled people into society in order for them to take an active part in society and lead a normal life. To be active, a disabled person should be able to commute between home, work and other destinations. The technical aim of the manual is to provide a barrier-free environment for the independence, convenience and safety of all people with disabilities.

TARGET GROUP

The target group is composed of five major categories:

(a) Wheelchair users
(b) People with limited walking abilities
(c) The sightless
(d) The partially sighted
(e) The hearing impaired

Other categories that may benefit to some extent from the proposed measures include the mentally disabled, people susceptible to physical fits, people with extreme physical proportions, and people with functional disabilities of the arm or hand.

As for the composition and size of the target group, no dependable statistics currently exist to define the extent of disability in Lebanese society. However,

taking into consideration the duration of the war, one can deduce that the disabled form a significant percentage of the population. A good database on disability in Lebanon is essential for any future development in this field.

CONTENT

The manual deals with the technical considerations and design provisions or measures to be taken into account in the planning of the built-up environment. This includes issues related to the design of several complementary domains: open spaces and recreational areas, local roads and pathways, the immediate vicinity of buildings, building entrances and the interiors of buildings. For the purposes of this manual, all information is divided into five sections:

I. URBAN DESIGN CONSIDERATIONS
II. ARCHITECTURAL DESIGN CONSIDERATIONS
III. BUILDING TYPES
IV. IMPLEMENTATION CHECKLISTS
V. APPENDICES

I. URBAN DESIGN CONSIDERATIONS

This section deals with the design requirements of open spaces, recreational areas and pedestrian routes. It introduces solutions to the principal problems in the design of an accessible outdoor environment.

It is subdivided into seven chapters:

1. OBSTRUCTIONS
2. SIGNAGE
3. STREET FURNITURE
4. PATHWAYS
5. CURB RAMPS
6. PEDESTRIAN CROSSINGS
7. PARKING

II. ARCHITECTURAL DESIGN CONSIDERATIONS

This section deals with the design requirements of vertical and horizontal access in both new and existing constructions. It is subdivided into 10 chapters:

1. RAMPS
2. ELEVATORS
3. PLATFORM LIFTS

4. STAIRS
5. RAILINGS AND HANDRAILS
6. ENTRANCES
7. VESTIBULES
8. DOORS
9. CORRIDORS
10. REST ROOMS

III. BUILDING TYPES

This section deals briefly with the accessibility requirements of selected building types. Special buildings for people with disabilities, such as health and residential facilities and schools, do not fall within the scope of this section. To establish building and planning legislation regarding access for disabled people, this section needs to be thoroughly developed by local authorities, based on the size of the target group, a classification of the various building types and a study of the specific needs of each district.

IV. IMPLEMENTATION CHECKLISTS

This section can be used by both designers and inspectors to identify and assess physical barriers in the built-up environment, for both new and existing constructions. The checklists are arranged according to the categories listed in sections I and II. Questions on almost all problem areas are asked, and possible solutions are offered.

V. APPENDICES

1. TROUBLESHOOTING
2. ANTHROPOMETRICS
3. COMPARATIVE TABLES
4. HEIGHT LIMITS

CHAPTER ORGANIZATION

Each chapter is composed of four parts:

1) Problem identification

This part defines problems encountered by the disabled in the built-up environment owing to the absence or improper application of a certain measure or provision.

2) Planning principle

This part defines the target group, the general goal and the need for a certain measure.

3) Design considerations

This part deals with the technical and architectural aspects of implementing certain measures with regard to general and particular application characteristics, criteria, minimum dimensions and measurements, materials, etc.

4) Existing constructions

This part defines the problems encountered in existing constructions which hinder the implementation of a certain measure. Accordingly, alternative solutions and modifications are suggested.

REFERENCES

The information provided is based on the accessibility codes and relevant knowledge available in various countries. A comparative study of the available sources was conducted regarding each measure. The information was then synthesized and organized according to the needs of the target group. (See the list of references at the end of the book).

DIMENSIONAL DATA

Dimensional data are given in metric units. The graphic illustrations show only the minimum allowable dimensions. Where appropriate, the maximum or approximate dimension or an allowable range is given.

Notes:

(1) It should be noted that a handicap is not a synonym for disability. A disability refers to a physical, sensory or mental limitation that interferes with a person's ability to move, see, hear or learn; a handicap refers to a condition or barrier imposed by the environment, society or oneself. As such, physical obstructions of the built-up environment constitute a handicap to a disabled person. For example, a stairway is a handicap to a wheelchair user. On the other hand, feeling different and inferior to other people constitutes a handicap imposed by oneself

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