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Public information guidance systems —

Part 4: Installation and assessment

Systèmes de guidage destinés à l'information du public —

Partie 4: Installation et évaluation

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 145, *Graphical symbols*, Subcommittee SC 1, *Public information symbols*.

A list of all parts in the ISO 28564 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Continued growth in travel and mobility within and between countries has generated a growing range of wayfinding guidance systems and styles containing a wide variety of information. Such systems serve various purposes, such as enabling users to:

— understand the range of facilities and points of interest present;

— understand the physical relationship between these facilities and points of interest;

— determine the best way to reach a required facility or point of interest given their mobility circumstances.

The purpose of this document is to provide guidance on the installation and assessment of wayfinding systems, enable users to evaluate the guidance systems scientifically and objectively, and further optimize them based on the evaluation results. It is not the intention to limit design freedom unnecessarily but to set guidelines and, where appropriate, specifications which reflect relevant research and best practice.

Public information guidance systems —

Part 4: Installation and assessment

1 Scope

This document specifies principles, requirements and methods for the installation of public information guidance systems. It also provides guidelines on the assessments of the outcomes of public information guidance systems.

It is intended for use by organizations providing design and installation services in the field of public information guidance systems and organizations selecting, using or developing relative assessments.

This document is applicable to the installation and assessment of public information guidance systems used in public places, such as bus and railway stations, airports, shopping centres, shops, hospitals, exhibition halls, sports and entertainment complexes, urban areas, parks, gardens and countryside, public attractions, museums and commercial office buildings.

This document is not applicable to:

— variable message signs (e.g. dynamic message signs, matrix signs and electronic traffic displays);

— sectors (e.g. traffic signs on a public highway) which are subject to specific regulations or specified installation principles; however, in a given public environment or within a wayfinding and signing design brief, public information sometimes needs to be associated with other messaging, so many of the principles contained in this document can be relevant in the planning of a coordinated scheme.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3864-1, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

ISO/TS 20559, *Graphical symbols — Safety colours and safety signs — Guidance for the development and use of a safety signing system*

ISO 28564-1, *Public information guidance systems — Part 1: Design principles and element requirements for location plans, maps and diagrams*

ISO 28564-2, *Public information guidance systems — Part 2: Guidelines for the design and use of location signs and direction signs*

ISO 28564-3, *Public information guidance systems — Part 3: Guidelines for the design and use of information index signs*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
assessment
test, examination or similar, designed to assess a public information guidance system's design or installation against specific reference points or/and standards

4 Preparation before installation

4.1 Target audience

Target audience analysis should consider the following:

a) basic demographic information, including age, sex, education level, occupation, cultural background and physical ability;

b) visitor flowrate, including daily average volume and peak volume;

c) proportion of people with disabilities, including physical impairment, visual impairment and hearing impairment, and special groups that possibly have obstacles (e.g. the elderly and children);

d) ways of visiting, for example on foot, by bike, by car, by taxi, by bus or by subway;

e) purpose of visit;

f) user familiarity with the facility for which the guidance system has been developed.

4.2 Spatial characteristics

Spatial characteristics analysis should consider the following:

a) distribution of the main functions carried out by the project in the architectural space;

b) influence of building spatial structure on the location of the guidance elements.

4.3 Renovation facilities

For renovation facilities, the following should be considered;

a) existing problems in maintenance records;

b) the material of existing guidance elements;

c) feasibility of renovation scheme.

4.4 Collaborative work

4.4.1 Users can work in coordination with disciplines and functions such as architecture, communication, decoration, power lighting, traffic planning, gardening and monitoring by considering the following:

a) Architecture: the installation of guidance elements should consider the relationship with load-bearing support structures or pipelines.

b) Adornments: when a guidance element is hung, the installation position should adapt to the adornments of the ceiling and the suspension rod should be located in a gap in the ceiling decoration;

attached signs should be coordinated with the adornments of wall columns and pavements; signs set on the ground should be coordinated with ground adornments and pavements.

c) Power or lighting: according to the location of guidance elements, determine the wiring mode of the power supply and reserve power supply.

d) Communication or monitoring equipment: guidance elements and monitoring equipment should not block each other.

e) Traffic: determine the location of guidance elements for visibility from routes planned for users.

f) Landscaping: select appropriate materials according to the characteristics of environmental style; for example, the botanical garden guidance system can use natural materials, such as wood or stone.

g) Advertisements: advertising should not block the guidance elements.

4.4.2 The safety signs of a safety signing system specified in ISO/TS 20559 shall not be blocked by the guidance elements of a public information guidance system. The safety colour and safety shape specified in ISO 3864-1 shall not be used in public information guidance systems to avoid confusion.

5 Installation principles

5.1 Conformity with existing standards

The design of the signs, plans, maps or diagrams in a specific public information guidance system shall conform to the guidelines and requirements of ISO 28564-1, ISO 28564-2 and ISO 28564-3.

5.2 Systematic

An independent public information guidance system should guide people to conduct orderly activities in public places by reasonably combining the guidance elements with specific functions.

For a specific public information guidance system, the role of the guidance elements in relation to the system's environment should be considered. For example, certain printed material (e.g. a city map) can be provided to demonstrate the whole environment or the naming of bus stops and subway stations can play a role in locating the surrounding area.

5.3 Continuity

The guidance information should be continuous inside a specific guidance system and between different systems. The surrounding information should also be provided while considering a specific guidance system, for example a hospital guidance system can provide relative road information, bus information and subway information.

Appropriate guidance elements should be installed at all decision points (e.g. the entrance and exit of a building, a fork or junction on a road) to provide wayfinding information such as the shortest or most suitable route to each destination.

5.4 Consistency

Different guidance elements should use the same visual means to convey the same information, including graphical symbols, words and colours.

When a public information guidance system is required, an integrated installation philosophy should be followed by using the same terminology and setting principles throughout (e.g. size, installation mode and mounting height).

5.5 Conspicuity

Conspicuity of a specific guidance system can be achieved, for instance, by:

— placing information at important decision points that users are expected to encounter, such as entrances and exits, stairs, elevators and route decision points;

— sufficient illumination or built-in light sources for use at night;

— sufficient contrast between the background upon which the sign is placed and the environment within which it is located;

— sufficient contrast with other environmental visual elements, including lighting, advertising or commercial signs and decorative colour schemes.

5.6 Safety

The guidance elements should be positioned such that they are not hazardous.

5.7 Inclusivity

The installation of the guidance elements should optimize visibility and reading comfort by taking into account:

a) physical ability of all intended users (e.g. wheelchair users);

b) possible installation conditions of the actual environment (e.g. narrow aisles).

5.8 Environmental sensitivity

5.8.1 In the development of a facility where a public information guidance system will be needed, the design of the facility and the plan for the public information guidance system should be coordinated from an early stage to ensure that:

a) the building's structure, services and other facilities do not compromise the optimum location for visual perception and clarity of signs;

b) the building's structure allows for the fixing and erection of signs in necessary locations;

c) the ambient and natural lighting conditions are optimum for viewing signs;

d) signs are coordinated with the environment in terms of materials, colour and design styles.

5.8.2 Changes should be made to the existing environment if the viewing of the signs is affected by:

a) existing signs and other features (e.g. advertising and posters);

b) ambient and natural lighting;

c) physical obstructions;

d) vegetation.

5.8.3 Signs should be made of environmentally friendly materials.

6 Installation method

6.1 The most commonly used methods of setting guidance elements are as follows:

a) attached: the back of the sign is fixed directly to an object;

b) hung: the sign is hung from the ceiling or wall of a building;

c) free placed: the sign is movable;

d) with a pillar: the sign is fixed to the top of one or more support posts;

e) on a desktop: the sign is fixed on a slanted plan;

f) in a frame: the sign is fixed in a frame or between support posts;

g) on the ground: the sign is set into or sprayed on the ground or the floor.

6.2 Recommended setting modes for different kinds of guidance elements are:

— direction signs: attached, hung, with a pillar;

— location signs: attached, hung, free placed, with a pillar;

— information index signs: attached, hung, with a pillar, on a desktop;

— location plans, maps and diagrams: attached, with a pillar, on a desktop.

7 Positioning

7.1 Location signs and direction signs

7.1.1 Setting location

A location sign should be set above or adjacent to the relative object. If the object is prominent and easily identifiable within the effective observation distance, the setting of the location sign should serve as a direction sign to be easily found by a user, for example hung from the ceiling or perpendicular to the wall.

Direction signs are necessary only when location signs are not visible from a certain direction. The information of the direction sign and the location sign should be consistent.

Direction signs should be set at each decision point that requires a direction choice along the route. Direction signs should be set repeatedly at an appropriate interval along a long route, even if there is no possibility for the user to choose between different directions.

In the design, installation and review stages this has to be considered from the aspect of a first-time visitor, including people with disabilities.

If it is necessary to guide both vehicles and pedestrians in the same facility, the two types of signs should be installed distinctively with respect to location and mounting height.

7.1.2 Information conveying

Location or direction signs should be set in the order of first being general and then specific, for example “toilets” first and then “men’s toilet” or “men’s” and “women’s toilet” or “women’s”.

7.1.3 Displacement

Distance between the centre of a sign and the central line of the normal direction of vision of the user should be kept appropriate and not be too large, so as not to affect the user's reading (see Figure 1).

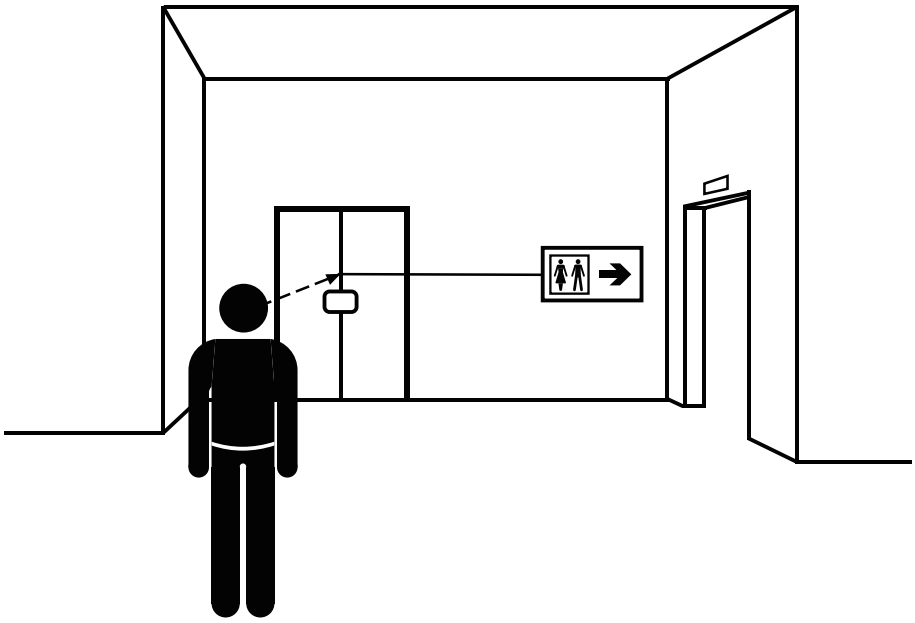

Figure 1 — Example of displacement of sign

7.1.4 Mounting height

An attached location sign should be set at a horizontal line of sight. If a location sign needs to be noticed from a greater distance, then the vertical distance between the lower edge and the ground should be well above the horizontal line of sight (see Figure 2).

For an attached direction sign, the mounting height of an attached direction sign should be such that the user's view cannot be obstructed.

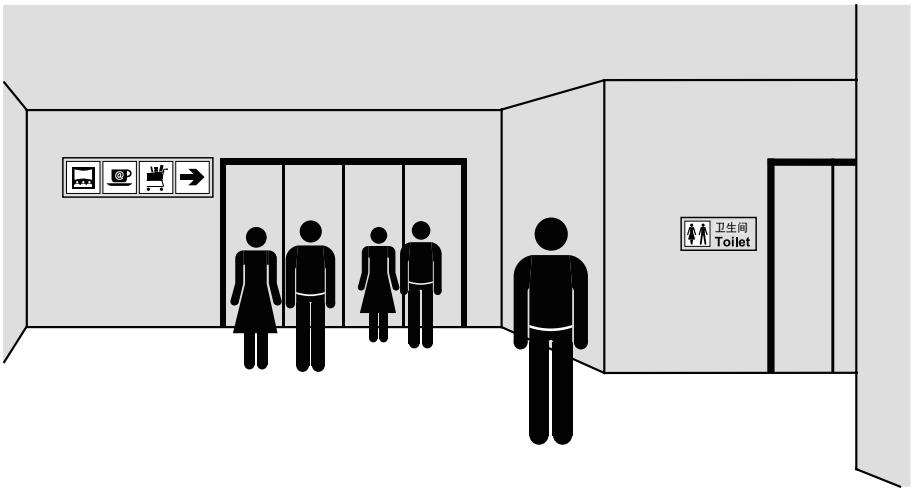

Figure 2 — Example of the mounting height of signs

7.2 Information index signs

7.2.1 Information index signs for multiple floors should be placed:

a) near the entrances to the buildings;

b) near reception desks or information points;

c) adjacent to stairs, lifts and escalators.

7.2.2 Information index signs for an open area should be placed:

a) near all entrances to a single large open area;

b) near the entrances to different zones within an open area;

c) near reception desks or information points;

d) near transport facilities.

7.3 Location plans and diagrams

Location plans and diagrams should be placed:

a) near the entrances to buildings;

b) near reception desks or information points;

c) at any point where there is a decision point or possible point of confusion for users.

7.4 Location maps

Location maps should be placed:

a) near the entrances to buildings;

b) near the exits of buildings;

c) near reception desks or information points;

d) near transport facilities;

e) at any point where there is a decision point or possible point of confusion for users.

8 Material, inspection and maintenance

8.1 Material

Materials used in the construction of guidance elements shall meet the minimum requirements of the service life.

The structural integrity of a guidance element shall not be affected by corrosion of its component.

Corrosion-resistant material should be considered for guidance elements intended for external use.

The material of outdoor signs should be UV (ultraviolet) resistant to reduce the influence of sunlight on colour and readability.

8.2 Inspection and maintenance

For each public information guidance system, a process for inspection and maintenance shall be established, implemented and carried out regularly to ensure that the system is serving its function properly. Such processes include the following:

a) Regular inspections: regular inspections of guidance elements should be conducted to ensure they remain legible, conspicuous, comprehensible and accurate.

b) Environmental information updating: any change of the information within the area covered by guidance systems should lead to review and, when necessary, revision.

c) Daily maintenance: for the daily maintenance of the sign carrier, the appropriate maintenance cycle should be determined according to the environmental characteristics.

d) Special maintenance: in case of bad weather, the outdoor sign carrier should be checked in advance and necessary safety protection measures shall be taken, such as reinforcement.

e) Replacement: when replacing the sign carrier, the type of material used should be the same as the original as far as possible. Manufacturing signs from sustainable resources should be considered.

9 Assessment

After the whole system is set, regular assessment should be conducted by the relative organization (e.g. building or facility owner) to ensure that the system achieves the desired design effect and meets actual needs. For an assessment list, see Annex A.

The whole system should be reviewed at regular intervals to ensure the effectiveness of the entire system as the external environment and internal needs change.

Annex A
(informative)

Assessment list of public information guidance systems

An assessment of a public information guidance system should include at least the following information:

a) project name of the public information guidance system;

b) year and month of the assessment conducted;

c) location and area covered;

d) original design aim of the system;

e) current situation of the system;

f) is the system designed to conform with ISO 7001, the ISO 28564 series and other relevant standards?;

g) are registered graphical symbols and safety signs included?;

h) accuracy of all the information and languages presented on different signs, plans and maps;

i) are different signs, plans and maps designed to conform to relevant standards?;

j) are different signs, plans and maps installed to conform to relevant standards?

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