What Our Laws and Regs Do Not Say About Low Vision and the Built Environment

American Foundation for the Blind™
Low Vision Poses Special Issues for Planners

• The low vision population in this country is large and growing. Current estimates indicate over 25 million with vision problems.

• The population is comprised of people who have normal age-related vision loss as well as people with eye conditions that affect vision temporarily or permanently.

• Most of these individuals are used to having good vision and may not have adapted to reduced vision nor have most of them had low vision services.

• Most have received no skills training such as orientation to the environment, trailing or self-protective techniques, nor braille.

• Most do not use mobility canes.

• If traveling with others, most do not know proper sighted guide techniques.

• Many older individuals experience hearing losses. These can be disorienting and also make it difficult for persons to interpret verbal directions and to localize sounds.
Existing Codes re Lighting

ASHRAE 90.1: Commercial lighting code. Code does allow for lighting in spaces designed for people with special light needs such as those with vision loss or age-related issues.

ASHRAE 189.1—sustainability code for green buildings; provides for 10% less interior lighting wattage than ASHRAE
Lighting in public outdoor areas should be addressed in the “green” codes to ensure that people do not have to step out of brightly lit interior into a darker exterior. As we age, accommodation to lighting is much more difficult and the need for lighting increases exponentially.

(IEP publication RP-28-07 addresses)
Building and Facility Specifications

- Americans with Disabilities Act Accessibility Guidelines (ADAAG)
- Model Building code: ICC/ANSI A117.1
- Uniform Federal Accessibility Standards (UFAS) (note-these codes are similar to ADAAG)
- ADA Final Rule Title III, Sept., 2010
- Draft Public Rights-of-Way Accessibility Guidelines (PROWAG)
Accessible Approach to Buildings

Not covered:

• Accessible routes that provide landmarks for way finding (purposefully move through an environment toward a destination) (e.g. walking through a parking lot is not accessible route for persons with vision loss).

• Lighting standards

• Contrast or texture indicators with sidewalks

Addressed in PROWAG:

• Curb ramp indicators with detectable warnings at the street; disorientation for users with vision loss not addressed

• Removal of protruding objects (covered in ADAAG as well)

• Removal/modification of thresholds over $\frac{3}{4}$"
Signage

Not addressed:

• Glare and contrast on signage (addressed but not adequately)
• Audible signage
• Building directories
• Use of texture on flooring to promote wayfinding (e.g.: carpet and tile in contrasting colors)
Stairs

Not addressed:

• Color contrasting rails including extensions

• Contrast and texture on the edge of steps (contrast covered by ANSI; not by ADAAG).

• Adequate lighting on steps
Elevators

Not addressed:

• Audible voice announcement indicating floor number inside elevator

• Destination-oriented elevators (addressed in 2010 Title III but not adequately)
Restrooms

Not addressed:

• Building layout for placement of restrooms on the same side of hall consistently throughout a building

• Layout of restrooms such as placement of lavs, toilets, trashcans, towel dispensers in same locations

• Use of visual contrast in restrooms—such as contrast of towel dispensers with wall; stall doors with supports, etc.)
Building Layout

Not addressed:

• Placement of elevators and stairways consistently adjacent

• Avoid diagonals; use right angles if possible

• Eliminate extra noise and distractions such as waterfalls and fountains

• Use the flooring to create a building map such as the use of differences in flooring texture and color contrast

• Use of contrast on door frames
Other Safety Considerations

Not addressed:

• Markings on floor-to-ceiling windows
• Glare on flooring
• Window treatments to reduce glare
Design Concepts That Enhance Wayfinding

- Increasing “visibility” with high contrast
- Providing sufficient lighting and glare control
- Using logical, consistent layouts in building design
- Eliminating extra/distracting sounds/echoes
- Using tactile/visual surfaces for flooring.
- Consistently placing signage in large print and braille (ADA requires raised print or braille).
References

Built Environment:


Note: This chapter includes several pages of references.

For built environment consultation (other than lighting): www.accessforblind.org
References

Lighting:

Terry McGowan, Director of Engineering Technology for the American Lighting Association

IES publication: Lighting and the Visual Environment for Senior Living (RP-28-07)