

Tips for Environmental Design and Accessibility

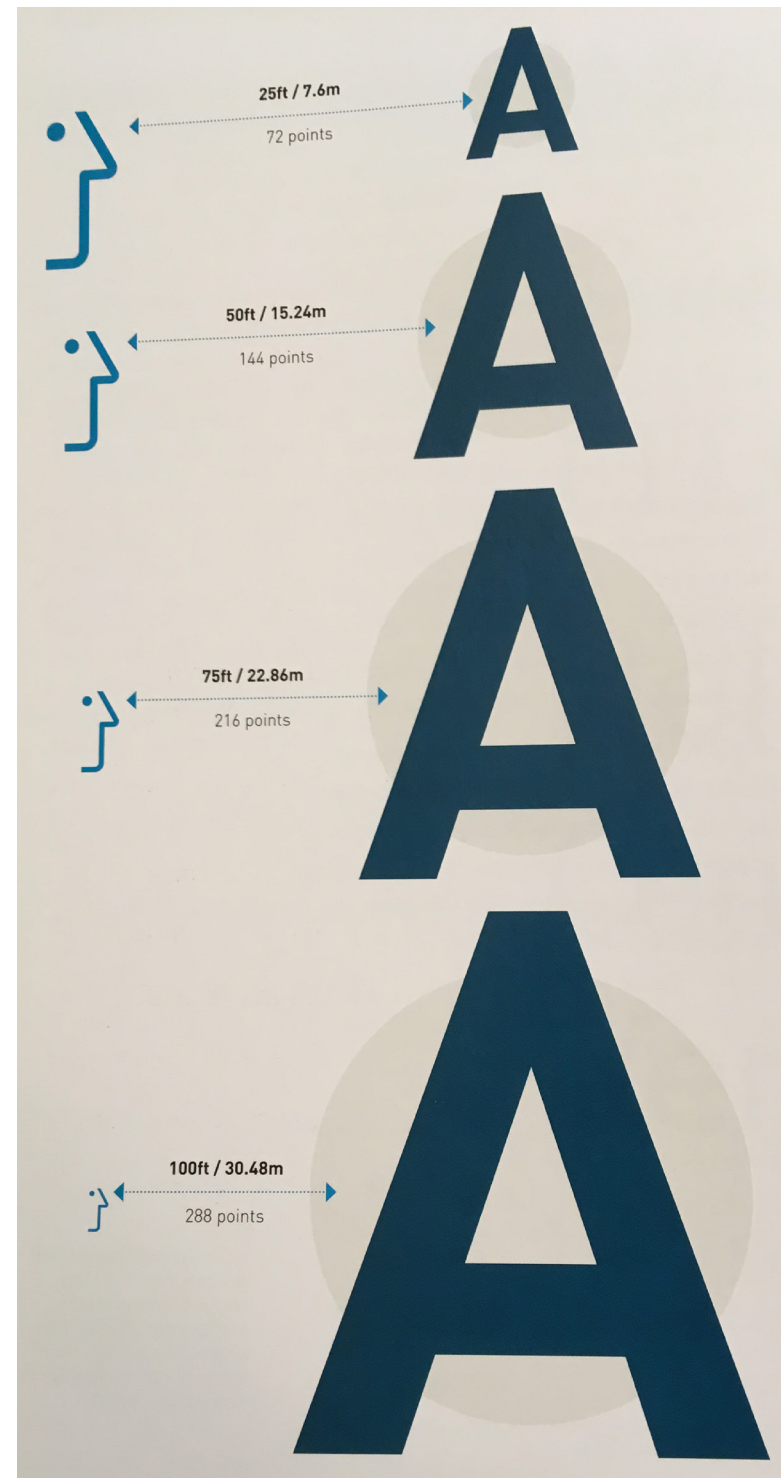
TYPE SIZE

ADA suggests an increase of **72 points** for **every 25 feet** of viewing distance.

Characters on signs should possess a **width-to-height ratio** between **3:5** and **1:1**.

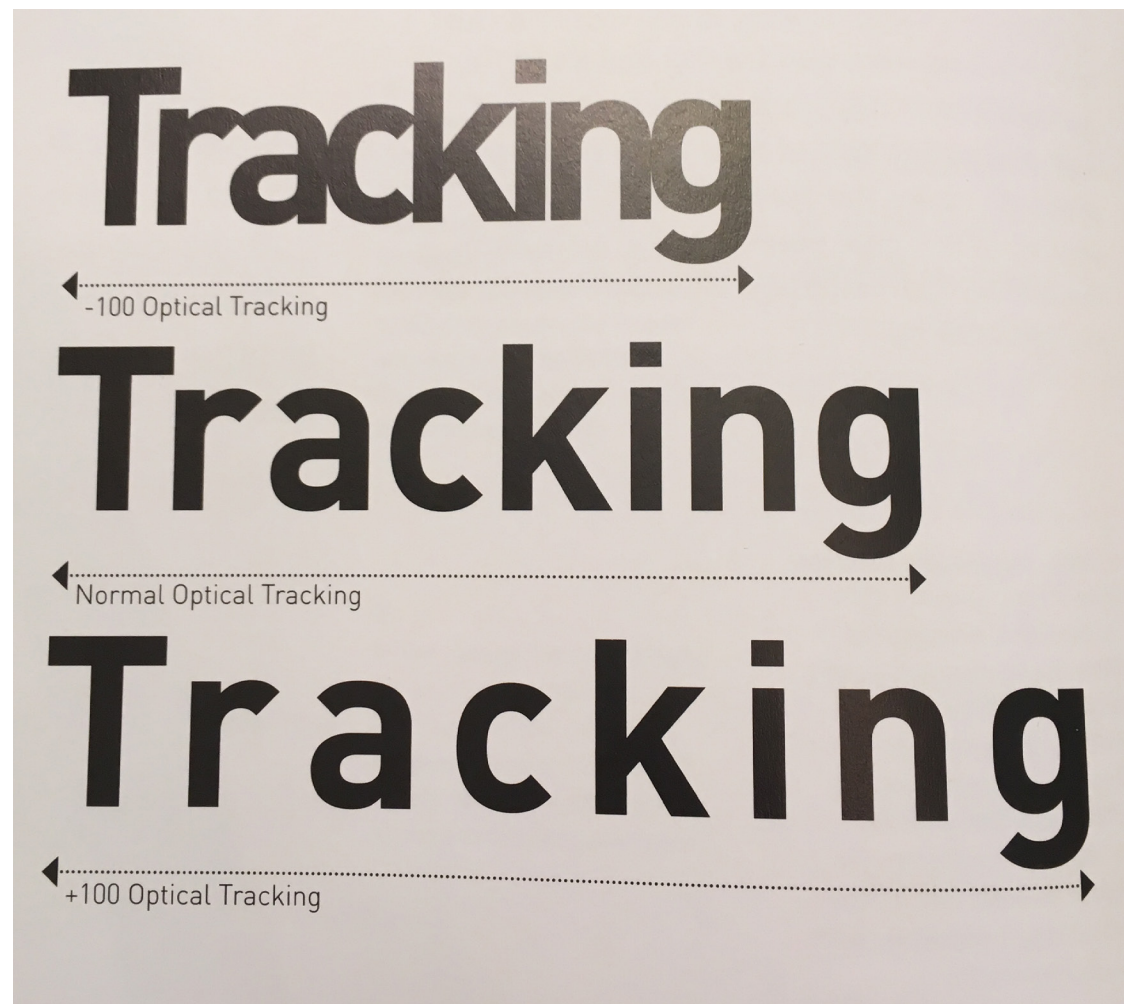
Choosing the correct type size is driven by variables of font design, application, and audience. When designing for the elderly or visually impaired, special provision should be made.

Always consider the distance between the viewer and the content. Additional factors may be lighting and atmosphere.



TRACKING

When tracking uppercase letters for signage purposes, the ADA suggests **110 percent** as the optimal amount for legibility.

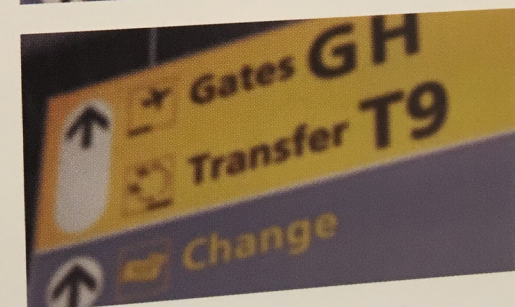


TYPOGRAPHY & OLDER VIEWERS

This airport sign accounts for visual deficiencies by employing dynamic contrast of hue and value, and by using an appropriately legible font.



As we grow older, we begin to lose the ability to differentiate color clearly, and many people suffer from a loss of ocular focus. This airport sign accounts for those visual deficiencies by employing dynamic contrast of hue and value, and by using an appropriately legible font. These images approximate various levels of ocular degeneration.



QUICK TYPE TIPS TO IMPROVE LEGIBILITY

Create perfect match

Pairing a serif with a sans serif creates clear typographic contrast

Don't yell at the reader

Setting type in capital letters makes a word or line stand out but not when setting paragraphs that way.

Make accessible type choices

Serifs with extreme thick/thin stroke contrast like Bodoni can be difficult for some viewers to process. Letters exhibiting a well-balanced proportion of form and counterform are the most legible.

Learn the two-step

To enhance hierarchy, try using two steps of differentiations in your type choices. For example, if body copy is text-sized and black, make captions smaller and italic, or subheads larger and a different color.

CONTRAST

It is important to provide significant contrast between type and its background. The ADA recommends a change of **70% in value** and suggest that for signage, dark type on a light background is more legible.

Contrast can also be achieved in the following ways:

- Orientation
- Position
- Shape
- Size
- Texture
- Weight



COLOR

A thorough understanding of the audience's perception of color is necessary.

Physical Considerations

Visual Deficiencies

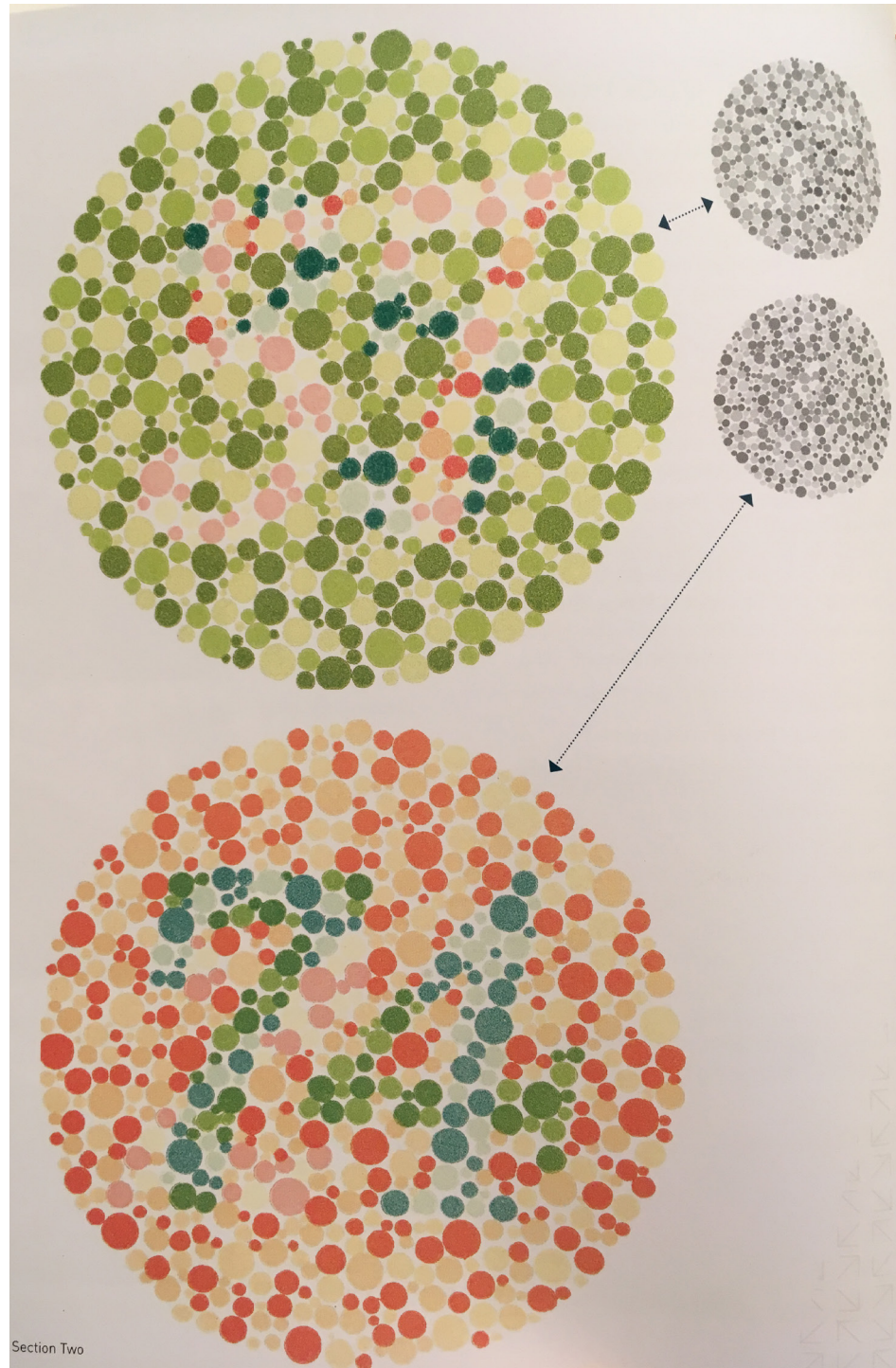
Aging Eyes

May experience difficulty in low light situations, and with differentiation of color.

Color Blindness

One in 20 individuals will exhibit some kind of color deficiency. The term "color blind" generally indicates a difficulty in distinguishing between red and green. Men exhibit color blindness with a much greater frequency than women.





Section Two

COLOR

A thorough understanding of the audience's perception of color is necessary.

Environmental Change

Lighting

It can have a dramatic effect on the perception of color.








It is important to spend time contemplating about where, when, and how your work will be viewed.

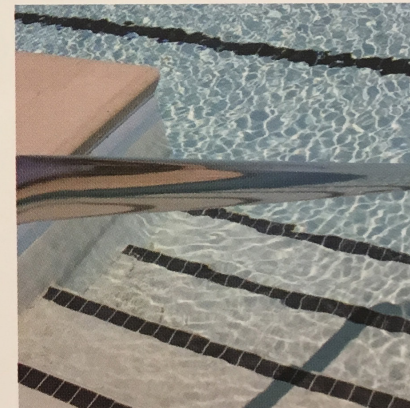
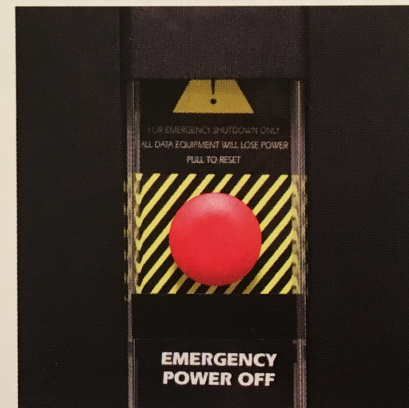
Atmospheric changes

Reading road signs in heavy rain, snow, or fog. Projects that will directly encounter the elements or be in low-light/low visibility situations.

Color/contrast indicate importance in interface

Dramatically contrasting stripes are often used to mark edges or stairs in industrial spaces. Color coding of emergency levers, buttons, switches help workers act quickly in crisis.

Color	Meaning	Application
Safety Red PMS 1797 C	 <i>Stop, Danger</i>	Signifies fire protection equipment, "danger," and "stop."
Safety Orange PMS 165 C	 <i>Warning</i>	Signifies dangerous parts of machinery or electrical components which can crush, cut, or shock.
Safety Yellow PMS 124 C	 <i>Caution</i>	Signifies physical hazards created by non-moving objects which can be fallen over or into, struck against, or between which one may be caught.
Safety Green PMS 341 C	 <i>Safety</i>	Signifies areas and equipment associated with First Aid.
Safety Blue PMS 287 C	 <i>Information</i>	Signifies safety information; used on informational signs and bulletin boards.
Black + White Process Black	 <i>Boundaries</i>	Signifies housekeeping and traffic areas.
Safety Purple PMS Purple C	 <i>Radiation</i>	Signifies x-ray, alpha, beta, gamma, neutron, and proton radiation.



COLOR

A thorough understanding of the audience's perception of color is necessary.

Cultural Conditions

Our interpretations of a color's meaning are highly influenced by culture. Numerous influences mold these interpretations from religion to politics, linguistics to popular trends.

For clear communication and unambiguous information delivery, it is essential to understand the needs, customs, and attitudes of the end user.



SEMIOTICS

Semiotics, the study of signs and symbols as elements of language and communication, informs our ability to interpret images or other sensory input.

Semiotics strives to understand and explain how different meanings are assigned, based on variable of sender, receiver, context, and culture.

Central to semiotics is the concept of the “sign” defined as a word, image, sound, or gesture.

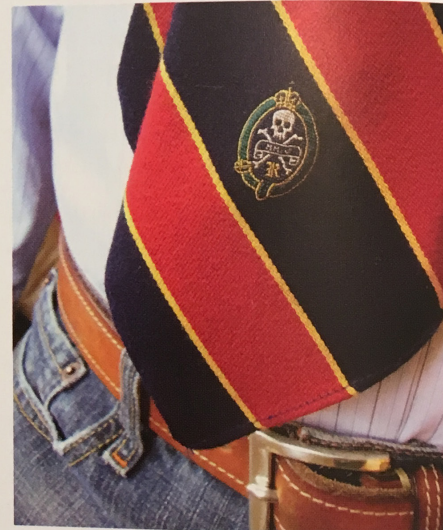
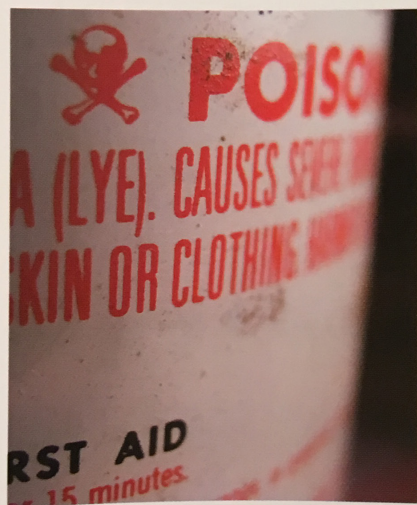
Three types of “signs”

Icon = literal visual representation

Symbol = abstract representation

Index = representation by connection





QUICK TIPS

Don't reinvent the wheel

Use customary icons and symbols to ensure unequivocal communication. Don't waste time or sacrifice clarity for style.

Does this mean something to you?

Be aware of cultural changes to ensure that symbols and icons consistently communicate their message to a broader audience.

Native language

When designing for a foreign market you need to become familiar with the visual language of your audience.



WAYFINDING

How an individual orients themselves within a new environment, and the cognitive processes used to determine and follow a route, traversing from one point to the next.

Provide a map

Some cognitive scientists argue that survey knowledge is the easiest and most efficient method of wayfinding. Including a map helps users orient themselves.

Use well-defined routes

All navigation has a beginning and an end with points along the way. By designating routes that are clear and continuous, with well-defined landmarks, you make a path easy to follow.

Provide help at decision points

Highlight these points along the route. Provide supporting signage in critical spots and make signs within sight lines so people can predict what lies ahead.



WAYFINDING

Create marked destinations

In both physical and virtual environments the user needs to know when they've arrived. This is easily communicated through signage, landmarks, color coding, etc.

Keep it simple

Too many signs equals too many choices and too many choices equals confusion. Minimize the decisions your user has to make to reach the goal destination.