Chapter 7
Items 7-1-12 through 7-26-12
June 14, 2013.

This is one of ten documents containing those proposed changes to the A117.1 Standard, 2009 edition; for which Committee Ballot comments or Proponent Comments were received. Each item will be discussed at the meeting of A117.1 Committee during the week of July 15, 2013, in Washington D.C. This document does not contain proposals for which no comments were received. Those proposals, and the Committee decision on each one, can be viewed in the Committee Action Report (CAR) under the title: First Draft Standard Development at this following location: http://www.iccsafe.org/cs/standards/A117/Pages/default.aspx

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7-1– 12
504.5.1, 701.1.2 (NEW), 703.2.1.1 (New), 703.2.1.2 (New), 703.5.3.1 (New), 703.5.3.2 (New), 703.6.3.1 (New), 703.6.3.2 (New), 705.3

Proposed Change as Submitted

Proponent: Sharon Toji, Access Communication, representing self

Add the following new section

701.1.2 Contrast and Light Reflectance Value. The contrast of surfaces shall be determined in accordance with Equation 7-1.

Contrast = [(B1-B2)/B1] x 100 percent **Equation 7-1**

Where

B1 = light reflectance value (LRV) of the lighter surface,
B2 = light reflectance value (LRV) of the darker surface.

Light Reflectance Value (LRV) shall be determined in accordance with British Standard BS 8493:2008 + A1: 2010 "Light reflectance value (LRV) of a surface. Method of Test."

Revise as follows

703.2.1 General. Visual characters shall comply with the following:

(Balance of section is not changed)

703.2.1.1 Nonglare Finish. Gloss on the finish of characters and their background shall not exceed 19 as measured on a 45-degree gloss meter.

703.2.1.2 Contrast. The Light Reflectance Value (LRV) of characters and their background shall contrast 70 percent minimum as determined in accordance with Equation 7-1. The lighter surface shall have a LRV of not less than 45.

703.5.3 Finish and Contrast. Pictograms and their fields shall have a nonglare finish. Pictograms shall

contrast with their fields, with either light pictograms on a dark field, or dark pictograms on a light field.

703.5.3.1 Nonglare Finish. Gloss on the finish of pictograms and their fields shall not exceed 19 as measured on a 45-degree gloss meter.

703.5.3.2 Contrast. The Light Reflectance Value (LRV) of pictograms and their fields shall contrast 70 percent minimum as determined in accordance with Equation 7-1. The lighter surface shall have a LRV of not less than 45.

703.6.2 Finish and Contrast. Symbols of accessibility and their backgrounds shall have non-glare finish. Symbols of accessibility shall contrast with their backgrounds with either a light symbol on a dark background or a dark symbol on a light background.

703.6.3.1 Nonglare Finish. Gloss on the finish of symbols of accessibility and their backgrounds shall not exceed 19 as measured on a 45-degree gloss meter.

703.6.3.2 Contrast. The Light Reflectance Value (LRV) of symbols of accessibility and their backgrounds shall contrast 70 percent minimum, as determined in accordance with Equation 7-1. The lighter surface shall have a LRV of not less than 45.

705.3 Contrast. Detectable warning surfaces shall contrast visually with adjacent surfaces, either light-on-dark or dark-on-light.

The Light Reflectance Value (LRV) of the surfaces shall contrast 70 percent minimum, as determined in accordance with Equation 7-1r. The lighter surface shall have a LRV of not less than 45.

504.5.1 Visual Contrast. The leading 2 inches (51 mm) of the tread shall have visual contrast of dark-on-light or light-on-dark from the remainder of the tread.

The Light Reflectance Value (LRV) of the 2-inch stripe and tread shall contrast 70 percent minimum, as determined in accordance with Equation 7-1. The lighter surface shall have a LRV of not less than 45.

Reason: Glare: Glare is a very important issue to many people with vision impairments. It is a particular problem to older people, who are often developing cataracts, and who form a very large group of persons with age related vision impairments, in addition to others with vision impairments developed at a much younger age. Glare on sign surfaces makes them virtually unreadable in many cases. Because brushed metals are such a popular architectural material, and there is no measurable standard for glare or gloss, they are used frequently for signs. Unfortunately, such surfaces are almost never non-glare according to the standard previously given in the ADAAG Appendix.

The original ADAAG did have an appendix item that gave a measurement for what is called, technically, in paints, “eggshell” finish, which was one of the suggested terms for non-glare finishes. That finish is measured with a gloss meter, and measures between 9 and 19.

The ANSI Sign Committee, working on the 1998 changes, decided to abandon the term “eggshell” because it is also the name of a color, and usually applies only to paint finishes. It had been confusing to some graphic designers. However, the maximum amount of allowed gloss, 19, is an appropriate limit for gloss or glare for all sign finishes that must be accessible. Manufacturers of various materials and finishes can easily supply the gloss meter reading of their materials, and these readings tend to be made by manufacturers, because they are required for many architectural purposes. Therefore, architects, designers and fabricators can obtain the gloss reading for materials they are specifying, and submit them with their plans.

I am therefore proposing that ANSI add a measurable standard for glare or gloss to standards that have to do with sign surfaces. Because I am proposing a maximum amount of glare, and not tying it to “eggshell” paint, I have omitted the lower number, because I do not believe it is relevant to many sign surfaces, including some non-glare paint finishes.

Contrast: During the last ANSI cycle, a subcommittee composed of individuals, some of whom were acknowledged vision or color experts, worked for a substantial period of time on a specific measurement proposal for contrast. This is a contentious topic, because many designers understandably worry that they will be denied the opportunity to choose from a large array of colors. However, the ANSI A117.1 standard as it now reads, as well as the ADA Standard for Accessible Design, make it very clear that “color,” (known more scientifically as “hue,”) is not the issue when we are dealing with vision impairment. The reason that only “dark”

and “light” are to be considered is that many people with an entire range of vision impairments do not see color, or see only limited colors. Even those individuals that we speak of as “red-green color blind” — perhaps as many as 10 percent of the male population — become visually impaired when they are confronted with black or green contrasted with red or brown, or many shades of those colors in between. These colors appear to them as barely contrasting shades of gray. Older people also often find various colors more difficult to discern as their vision deteriorates. For anyone with impaired color vision — and that is a large percentage of people who are defined as legally blind, and therefore disabled — colors with similar “darkness” or “lightness,” often make signs unreadable.

The contrast standard introduced in the last cycle suffered from the fact that we did not have a recognizable method of measurement that was effective for various material finishes. This was a major objection on the part of the SEGD and ISA. They were concerned about being able to use wood finishes, for instance, since the measurement standard was very limited as to surface type. However, that has now changed, and I think it provides us with the scientific support we need to reintroduce a measurable standard for contrast with a way to measure it uniformly.

The British Standards Institute has done the work we need, and has developed a standard for the measurement of the Light Reflective Values (LRVs) of a variety of architectural finishes. This standard is actually used by another ANSI Committee’s standards, and is available in the ANSI Standards Store, so it is part of an accepted ANSI standard. The standard was developed to use for all kinds of architectural elements where contrast is an issue.

In the United Kingdom, there was been much more research on the needs of vision impaired individuals for dark/light contrast in the environment, than has taken place in this country. An important study called the “Rainbow Project” determined that many architectural elements, such as door handles, and doors on buses and trains, needed to contrast with their surrounding materials.

Just as we proposed in the last cycle, the British Standards uses Light Reflectance Value, or LRV, as the standard of measurement. They turned the 70 percent standard that is normally used, into a requirement for a difference in LRV numbers of 30. I have attached a paper written by an industry member about the standard, and its development.

However, just as with the 70 percent formula, there is an unfortunate flaw caused by the fact that the distances between the points on the scale of 100, used for LRV measurements, are not equal. The “visual” difference between a finish with an LRV of 4 and one of 8 is quite noticeable, whereas the difference between a finish with an LRV of 90 and 94 is barely noticeable. Therefore, if you use the formula and compare two dark finishes, they will show a large percentage of difference, whereas two lighter colors, even though far apart numerically, will fail the percentage test.

Nevertheless, there appears to be general agreement that the LRV is the proper measurement to use if one is comparing darkness and lightness of various surface colors, since it is independent of hue. It remains only to determine a reasonable minimum that will allow the use of a reasonable choice of colors, and still meet the needs of a large group of people who have impaired, though usable vision. Seventy percent minimum contrast appears to be well established, and already is used in some building codes in the United States, including for detectable warning surfaces and the Cleaner Air Symbol, in California.

Our committee agreed with the conclusion drawn by the individuals who prepared a study on contrast in detectable warning surfaces prepared for the Access Board, and cited in the last cycle’s attempt, that the formula included in the original ADAAG Appendix, and some building codes, could only be used successfully if a minimum LRV was established for the lighter of the two numbers. A scientist working at NIST on the light and dark comparison of colored electrical wires for aircraft came to the same conclusion. Accordingly, after much studying of color graphs and formulas, the contrast committee determined on a minimum number of 45.

The contention of the color specialist who spoke on behalf of the SEGD and ISA against the proposed standard during one of the final meetings of the last cycle, that the standard is meaningless without a reference to hue, goes against the entire intent of the accessibility standards not only in the United States, but also other countries that adopt contrast standards for the built environment, and accept the LRV as the standard unit of measurement.

A bright red and white sign was circulated as a sample of a sign that would fail the percentage formula the committee proposed. This was understandably disturbing to committee members. However, it appeared that assessment was actually based on a completely different measurement standard, one that included hue, which would produce different numbers. During the recess, the sign was checked with a Spectrometer that measures LRV and the reading showed a contrast, using the formula, significantly greater than 70 percent. The vote was called before this could be demonstrated to the Committee. Color is admittedly a complicated issue, and it is indeed difficult, particularly among people with adequate color vision, to separate the concept of hue out from the other attributes that make up what we refer to collectively as “color.” I am attaching a document that gives a clear explanation of color terminology.

In preparation for resubmitting a measurable standard for contrast, I went to a single swatch book of just one popular paint manufacturer, Dunn Edwards, and sorted all the colors by LRV. I am attaching the list. I then counted the number of swatches that measure the most extreme, or minimum (darkest) “light” color, LRV 45, and found there were 10 of them. I found that, in order to get a minimum percentage of 70, I needed to choose a dark color with an LRV of 13. There were actually 199 swatches that ranged from 4 (black) up to various shades that measured 13. That means that using the least possible contrast range, and only matching colors in this one swatch book, the designer has 1990 different colors or shades of hues with which to work. It is difficult to imagine the designer who could not be creative within that range. Of course, as lighter colors with higher LRVs are used, different choices are available. If you choose DE “white,” which has an LRV of 93, you can use all the shades with an LRV of 27 or less for the darker color. Note that there are decimals for the LRV measurements, so using the exact numbers, not rounded, may give you slightly different choices.

Unfortunately, I did not have a budget to purchase the actual British Standard, but am attaching the abstract. It should be readily available through ANSI. I believe the abstract along with the discussion in the attached document about the standard makes it clear that it is the appropriate one.

I urge the ANSI A117.1 Committee to give us another opportunity to pass a measurable standard. Code officials do not feel secure in checking contrast and glare, because they have no definition at all of what these terms mean. In some cases, we see signs with “dark” that is only a shade or two darker than “light.”

Contrast may possibly be the issue that affects the largest group of persons with a variety of vision disabilities.

Admittedly, we do not yet have a scientific instrument that would be affordable and convenient for every inspector to carry onto a site. However, there are many elements of construction that are important, such as certification of hidden welds or the composition of concretes and adhesives, that are certified by the designer and required to be stated for plan checkers. There is no way for inspectors to check them on site, even though they are vital to the building structure. There is no reason why the measurements for gloss (glare) and dark/light contrast — items with no structural importance — cannot be listed in the specifications and plans by designers. Then, if there appear to be signs during the actual site check that have too much glare or insufficient contrast, swatches of the materials used can be requested and checked to be sure that they have been provided in compliance with those specifications and plans. I have no doubt that it is only a matter of time before a device can be invented that will measure those attributes on site.

I plan to submit additional materials to support the standard as I am able to gather them. Several people, such as a professor I met who does research on light, have recently expressed interest in the topic. It may even be possible to get some focus groups together of individuals with impaired color vision, who can look at some of the combinations from specific distances to determine if they are visible. Attachments will be provided as separate pdf documents.

703.2.1.1(New)-TOJI.doc

Committee Action

Approved

Committee Reason: The Committee has considered the issues surrounding signage for many years. This proposal provides a measurable standard based on the cited British standard. The Committee debated again the importance that contrast of the sign itself, the amount of light available and the role of glare of the surface. While sign materials fade over time and the contrast can be lost, that was judged to be an issue of maintaining a building (facility) in compliance and not a definitive concern for the Standard at new construction/installation. The Committee discussed whether the provision results in a measureable standard. It considered the concern that some measurement devices are costly and that many sign providers are smaller businesses with few employees - making the requirement of costly equipment problematic. The Committee concluded that better standards helped all, regardless the size of the providers or enforcement organizations.

BALLOT COMMENTS

7-1.1

Commenter: Todd Andersen
Ballot: Negative with comment:

Comment: We are buying a pig in a poke. We heard from the signage industry that these required meters are expensive, we heard from the regulators that they would rely on representations made to them by licensed professionals, and we heard from everybody that post construction changes to lamps, wall colors etc may change readings. I imagine this is what litigators will come to call a target rich environment.

7-1.2

Commenter: David S. Collins, Representing AIA
Ballot: Negative with comment:

Comment: The wording “Gloss on” should be deleted from Nonglare. Whatever the finish, the gloss meter will measure it. This language implies that only finishes that have a gloss must be measured. Glare can be caused by various finishes, not only glossy ones. If the finish is flat, but a glass covering placed over it does it become gloss on the finish? The language should be clear.

7-1.3

Commenter: Ann Makowski, Representing SEGD
Ballot: Negative with comment:

Comment: We would like to divide the question and consider the proposed changes related to contrast and glare separately as additional research is needed on both subjects.

The proponent made a math error claiming that in one paint book, they found 10 color swatches with an LRV of 45 (darkest of

the light end) and 199 color swatches with an LRV of 13 or less (the dark end). They then state that that these swatches give the designer "1990 different colors" to work with. The correct statement would be that the designer has 209 colors (10 light colors + 199 dark colors) that can be paired in 1990 combinations (10 light colors x 199 dark colors).

Other reasons to divide the question and address contrast separately include:

- Differences in LRV contrast readings under different lighting conditions either in a controlled environment (e.g., a manufacturing facility or a testing body facility) and what will actually be present in the field under which the products will be used
- Even with the required contrast level, restricted light color LRV, and a defined formula for calculating contrast, there are still results that would not be recommended for good visual contrasts, such as a yellow on white example.
- The unavailability of LRV values on all coatings and material substrates, which could curtail the use of such elements within a program that would otherwise still achieve the contrasts levels but that would not have the ability to be formally tested to meet a "required" contrast level
- The prevalence of multi-colored signs that address various functional reasons such as color coding (e.g., trying to make all adjacent colors on NYC subway signs or on a multi-color orientation map contrast at 70% will be almost impossible)

7-1.4

Commenter: Kim Paarlberg, Representing ICC
Ballot: Negative with comment:

Comment: The British standard BS 8493:2008 was not provided to the committee. It should be verified that this standard is an open consensus standard and written in enforceable language. If this is approved, the standard needs to be added to Section 105. Not having seen the standard, I am not clear on how this contrast and light reflective value can be determined consistently in the field or be identified as compliant by manufactures. Is this due able with standard signage available on the market. Without this information I believe this proposal should be disapproved.

7-1.5

Commenter: Teresa Cox, Representing ISA
Ballot: Negative with comment:

Comment: We would like to divide the question and consider the proposed changes related to contrast and glare separately. Additional research is needed on both subjects. The proponent also made a mistake in the terminology when recommending a 45 degree measurement for gloss. The LRV is measured with a spectrophotometer at a 45 degree angle, but that is not a function of gloss. While there is a 45 degree measurement for gloss, it is rarely used and not recommended in the paint and coating industry. It is most commonly used in ceramics and textiles. The correct measurement should be 60 degree gloss meter, as referenced by the proponent in 7-8-12, who stated, "An eggshell finish (11 to 19 degree gloss on 60 degree glossimeter) shall be used".

Much of the evidence cited by the proponent was anecdotal in nature, rather than evidence-based. Many references were given regarding the "contrast committee", but this group's research and findings were not made available to the ANSI A117.1 Committee members. There is no record of such a committee in the minutes of previous meetings, nor are the members of this contrast committee listed.

We ask the committee to separate the different issues of contrast and gloss, wait for empirical data & research on the two issues to be presented at the July meeting, and the proponent to make the correction for gloss measurement at 60 degrees.

7-2– 12

This proposal was approved by the committee. No ballot or proponent comments were received. It will be included in the Public Draft.

7-3– 12
702.2 (NEW)

Proposed Change as Submitted

Proponent: Hansel Bauman, Architect, representing National Association of the Deaf

Add new text as follows:

702.2 Alarm Location. Visual alarms and notification appliances shall be located where view of the appliances is unobstructed from anywhere in the space served by the appliance. The appliance shall not be located where exposed to high levels of illumination generated by natural or artificial sources.

Reason: This text is added to mitigate situations where high levels of light fall directly upon strobe lights thus reducing their visual impact. And to further direct designers to carefully select visual alarm locations within rooms to ensure the highest degree of visual impact.

702.2 (NEW)-BAUMAN.doc

Committee Action

Disapproved

Committee Reason: The Committee found the language to be unclear. The important factor for this standard is the visibility of the light from the appliances, not views of the appliance themselves. The proposal doesn't specify where the observer is located, so it would prohibit many installations that adequately light a room. Finally, if the issue is with the interpretation and application of the NFPA 72 standard, the proponent should work through NFPA's process to amend that standard.

BALLOT COMMENTS

7-3.1
Commenter: Allan B. Fraser, Representing NFPA
Ballot: Affirmative with comment:

Comment: The NFPA 72 minimum required light output (effective intensity) provisions for visible alarm appliances were established for indoor spaces. It is reasonable to assume that the performance of visible appliances installed, in compliance with NFPA 72, in an atrium lobby with glass ceiling and glass walls on a sunny day would be less effective than similarly placed appliances in a room with opaque ceiling and walls. NFPA 72 provide advisory annex material explaining: “The application of visible notification appliances in outdoor areas has not been tested and is not addressed in this standard. Visible appliances that are mounted outdoors should be listed for outdoor use and should be located for direct viewing because reflected light will usually be greatly reduced.” NFPA 72 is open for Public Input for its next edition until May 20, 2013. The proponent of 7-3– 12 is encouraged to submit public input on the 18.5.3’s of NFPA 72 even if such input calls out the problem but does not have all the solutions. The technical committee for NFPA 72 might accept the challenge to address the issue with all its technical expertise.

7-3.2
Commenter: Hansel Bauman, Representing NAD
Ballot: Negative with comment:

Comment: The intent is strong and reasonable. The proponent should be given an opportunity to resubmit the proposal coordinated with NFPA 72 and amended language to address committee concerns.

7-3.3

Commenter: Barbara Huelat, Representing ASID
Ballot: Negative with comment:

Comment: Agree with committee.

7-3.4

Commenter: Hope Reed, Representing NMGCD
Ballot: Negative with comment:

Comment: The direction of the flashing alarm in relation to partial walls, shelving, kitchen equipment, desk layout, natural light, and similar are a frequent concern in plan review. This proposal is a good attempt to provide a minimum of useful information for design and enforcement.

PROPONENT COMMENT

7-3.5

Commenter: Hansel Bauman, Representing NAD

Revise the proposal as follows:

702.2 Alarm Location. Visual alarms and notification appliances shall be provided in accordance with NFPA 72 and further be located in such a way the visual signal is detectable from any location during full day-light conditions. ~~located where view of the appliances is unobstructed from anywhere in the space served by the appliance. The appliance shall not be located where exposed to high levels of illumination generated by natural or artificial sources.~~

Reason:
Field experience in recent projects demonstrates that visual strobes can be undetectable under direct daylight conditions that minimizes the light level contrast that makes the devices detectable. Given the importance to ensure visual access to emergency alarms under all conditions the Proponent disagrees with the Committee's action and has provided revised language to address the Committee's Reason statement.

7-4– 12

Withdrawn: The proposal was withdrawn by the proponent. No further action is needed.

7-5– 12

This proposal was disapproved by the committee. No ballot or proponent comments were received. No further action is needed

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7-6– 12

This proposal was approved by the committee. No ballot or proponent comments were received. It will be included in the Public Draft.

7-7– 12

This proposal was disapproved by the committee. No ballot or proponent comments were received. No further action is needed.

7-8– 12

This proposal was disapproved by the committee. No ballot or proponent comments were received. No further action is needed.

7-9– 12

Withdrawn: The proposal was withdrawn by the proponent. No further action is required.

7-10– 12

703.3.11

Proposed Change as Submitted

Proponent: Carroll Lee Pruitt, FAIA, APA, representing Accessibility Professionals Association

Revise as follows:

703.3.11 Location. Where a sign containing raised characters and braille is provided at a door, the sign shall be alongside the door at the latch side. Where a sign containing raised characters and braille is provided at double doors with one active leaf, the sign shall be located on the inactive leaf. Where a sign containing raised characters and braille is provided at double doors with two active leaves, the sign shall be to the right of the right-hand door. The edge of the sign closest to the arc of the door shall be located 9 inches maximum from the edge of the door. . Where there is no wall space on the latch side of a single door, or to the right side of double doors, signs shall be on the nearest adjacent wall. Signs containing raised characters and braille shall be located so that a clear floor area 18 inches (455 mm) minimum by 18 inches (455 mm) minimum, centered on the raised characters is provided beyond the arc of any door swing between the closed position and 45 degree open position.

> **EXCEPTION**: Signs containing raised characters and braille shall be permitted on the push side of doors with closers and without hold-open devices.

Reason: Alongside the door is a vague unenforceable term. The current language could allow the sign to be mounted several inches to several feet from the door. This change sets a maximum distance the sign can be mounted from the door's edge. Similar requirements were used in Texas from 1994 to 2012 (1994 Texas Accessibility Standards 4.30.6, Figure 43(e).

703.3.11-PRUITT.doc

Committee Action

Disapproved

Committee Reason: The Standard could be improved in this area, but the proposal was not the solution needed. The geometry represented by the change proposal doesn't work for doors.

BALLOT COMMENTS

7-10.1

Commenter: Hope Reed, Representing NMGCD
Ballot: Negative with comment:

Comment: The sign location at double doors is a frequent question during plan review. This proposal is a good attempt.

7-10.2

Commenter: Sharon Toji, Representing HLAA
Ballot: Negative with comment:

Comment: Although I agree this proposal is unworkable "as is," I would like an opportunity to try to come up with better language prior to the July meeting and see if it can be modified. This is a constant problem, and the result is that signs are often placed so far away from doors they identify, and in locations that have no reasonable relationship to the doors, that they are useless to everyone, sighted, visually impaired, and functionally blind.

7-11– 12

Withdrawn: This proposal was withdrawn by the proponent. No further action is needed.

7-12– 12

Withdrawn: The proposal was withdrawn by the proponent. No further action is required.

7-13– 12

Withdrawn: This proposal was withdrawn by the proponent. No further action is needed.

7-14– 12

This proposal was approved by the committee. No ballot or proponent comments were received. It will be included in the Public Draft.

7-15– 12

This proposal was approved by the committee. No ballot or proponent comments were received. It will be included in the Public Draft.

7-16– 12

704.8(NEW), 704.8.1 (NEW), 704.8.2 (NEW)

Proposed Change as Submitted

Proponent: Hansel Bauman, Architect, representing National Association of the Deaf

Add new text as follows:

704.8 Visual Relay Service. Where accessible public telephones are required, provide a minimum of one Visual Relay Service interface.

704.8.1 Equipment. Each Visual Relay Service interface shall accommodate one user with seating, a visual monitor, control device, lighting to illuminate sign language privacy enclosure with a muted color back drop for clear visual communication.

704.8.2 Booth Accessibility. Each booth shall be fully accessible in compliance with all applicable dimensions as stipulated in Sections 304, 305, 306, 308 and 309.

Reason: Submitted reasons statement addressed another proposal.

Committee Action

Disapproved

Committee Reason: There was considerable committee discussion on this proposal. There is an explosion of equipment and changing technology surrounding this topic. Sharon Toji encouraged the committee to establish a task force to address these issues. Part of this proposal is scoping which would need to be proposed for the *International Building Code* or other scoping document. The proposal seems to be trying to address a person who is both hard of hearing and using a wheelchair. Historically the Standard hasn't addressed multiple disabilities. Such may be a next step for the standard. This current proposal needs further study and refinement.

BALLOT COMMENTS

7-16.1

Commenter: Gene Boecker, Representing NATO
Ballot: Affirmative with comment:

Comment: I am in agreement with the committee but want to stress that a task force needs to be created to study this item for the next edition.

7-16.2

Commenter: Gina Hilberry, Representing UCP
Ballot: Affirmative with comment:

Comment: Would like confirmation that a task force will be formed to address this and other similar issues.

7-16.3

Commenter: Hansel Bauman, Representing NAD
Ballot: Negative with comment:

Comment: The intent of this proposal is to provide equal communication access for deaf people using sign language that is the same as that provided to hearing individuals. The proponent should be given an opportunity to resubmit the proposal with revisions to address committee concerns.

7-16.4

Commenter: Barbara Huelat, Representing ASID
Ballot: Negative with comment:

Comment: Agree with committee.

7-16.5

Commenter: Sharon Toji, Representing HLAA
Ballot: Negative with comment:

Comment: Although I agree this proposal is not usable “as is,” I hope that a reasonable substitute that will allow the use of video phones and video relay systems to be placed in locations with necessary public phones can be offered prior to the July meeting. The TTY is seldom used now, and we need to make a first attempt to substitute more recent technology in the standard.

PROPONENT COMMENT

7-16.6

Commenter: Hansel Bauman, Representing NAD

Revise the proposal as follows:

704.8 Visual Relay Service. ~~Where accessible public telephones are required, provide a minimum of one Visual Relay Service interface.~~ Telephones intended for public use shall be accompanied with a minimum of one Visual Relay Service interface.

704.8.1 Equipment. Each Visual Relay Service interface shall accommodate one user with seating, a visual monitor, control device, lighting to illuminate sign language privacy enclosure with a muted color back drop for clear visual communication.

704.8.2 Booth Accessibility. Each booth shall be fully accessible in compliance

Reason: The proponent disagrees with the Committee's action on this proposal as it limits fair access to communication. The proposed Standard does not intent to provide scoping but rather to provide Visual Relay Service as an expanded communication option for when telephones are provided. Revised text is provided here to address the Committee's comments. Additionally it is the intent of this Standard to meet the needs of individuals with multiple disabilities—a comprehensive approach in keeping with current Universal Design trends.

7-17– 12

705.5.2

Proposed Change as Submitted

Proponent: Kim Clawson, Clawson Consultants, representing self

Revise as follows:

705.5.2 Height. Truncated domes shall have a height ~~of 0.2 inch (5.1 mm)~~ between 0.125 inch (3 mm) minimum and 0.375 inch (9 mm) maximum.

Reason: Construction and manufacturing tolerance has been acknowledged in nearly all other areas of accessibility codes and standards, except for this provision. Even the subsection immediately preceding this (705.5.1 Size) acknowledges that need. The current criteria in Section 705.5.2 of mandating a single dimension results in criteria for something that is essentially impossible to build or manufacture, and certainly impossible maintain. It is zero tolerance criteria, making it impossible to achieve compliance.

In addition, un-necessarily tight criteria impose costs on projects without any justifiable return on the expense. The criteria need to be broadened and be based on both the science of manufacturing, and the science of human perception (using a cane in this case).

Dimensions should be based on careful scientific experimentation that strives to accommodate the construction tolerances of the broadest range of materials, including plastics, metals concrete, precast concrete, brick and similar fired clay products, stones, and hardwoods. The requirements should not restrain trade by imposing criteria that restrict certain materials by manufacturing and construction tolerances; rather than proven need.

All research regarding the human perception research utilized to regulate the height, size spacing and configuration of truncated domes should be made readily available on the website for A117.1, for public review and evaluation.

705.5.2-CLAWSON.doc

Committee Action

Disapproved

Committee Reason: The dimensions proposed in this submittal are inconsistent with the research conducted in support of this truncated dome requirement. The range proposed isn't supported by the reason statement supplied.

BALLOT COMMENT

7-17.1

Commenter: Barbara Huelat, Representing ASID
Ballot: Negative with comment:

Comment: Agree with committee.

7-18– 12

This proposal was approved by the committee. No ballot or proponent comments were received. It will be included in the Public Draft.

7-19– 12

706.1, 706.3 (New)

Proposed Change as Submitted

Proponent: Sharon Toji, Access Communications, representing Hearing Loss Association of America

Revise as follows:

706.1 General. Accessible assistive listening systems ~~in assembly areas~~, where provided, shall comply with Section 706.

706.3 Inductive Loop Systems. Where inductive loop systems are provided, they shall comply with the following international standard: IEC-60118-4.

(Note: Where existing standards in ANSI A117, 706.4, 5 or 6 conflict or do not comply with the IEC Standard for Inductive Loop Systems, an exception shall be added as follows:)

Exception: Inductive loop systems, where provided, shall comply with 706.3.

Reason: 1. Revision to 706.1: Since accessibility codes in some states require assistive listening systems in occupancies other than assembly areas, the standard should apply to all such systems, in whatever type of occupancy they are installed.

2. Revision to 706.3: Although there are several types of assistive listening systems, and no particular system is required by the ADA Design Standards, the Induction Loop (or T-Coil) System can be used automatically by anyone who has a hearing aid fitted with the technology. We understand that 50 percent or more of the hearing aids sold in the United States have this technology. Also, people who have cochlear implants can use the T-Coil technology. Therefore, so that the many facilities that choose to install an Induction Loop System will install one that will perform satisfactorily for the most users, we recommend that the international performance standard for such systems, the IEC-60118.4, as revised in 2007, be added to the ANSI Standard. This standard is widely adopted internationally, and is recognized by quality manufacturers of these systems, sold both in the United States and abroad. One of the values of the IEC Standard, is that it is applicable to any size room and system.

3. ANSI already adopts this standard for use in AS 60118.4-2007: “Hearing aids – Magnetic field strength in audio-frequency induction loops for hearing aids operating with an induction pickup coil.”

4. IEC, the International Electrochemical Commission, is a nonprofit organization that develops and publishes standards concerning electrical technologies.

Here is the Abstract for the IEC Standard, as it appears on the ANSI Standards Store site, where it may be purchased:
Electroacoustics - Hearing aids - Part 4: Induction loop systems for hearing aid purposes - Magnetic field strength
"Applies to audio-frequency induct ion loop systems producing an alternating magnetic field at audio frequencies and intended to provide an input signal for hearing aids operating with an induct ion pick-up coil . The standard specifies requirements for the field strength in audio-frequency induct ion loops for hearing aid purposes, which will give adequate signal -to-noise ratio without overloading the hearing aid. The standard also specifies the minimum frequency response requirements for acceptable intelligiblity. Methods for measuring the magnetic field strength are specified, and information is given on appropriate measuring equipment (see Annex B), information that should be provided to the operator and users of the system (see Annex C), and other important considerations. "

The following is from a document prepared by a British manufacturer of induction loop systems describing the revised IEC Standard.

New Requirements for Audio Induction Loops in 2007

A major revision of the Audio Induction Loop performance standard means better hearing assistance systems for the hearing impaired. It also changes the way that loop systems are specified, designed, commissioned and maintained.

Providing hearing assistance is a vital way for many organizations to help their customers and staff. With over 10% of the population suffering significant hearing loss, the benefit of hearing assistance systems can be very significant for both the provider and for those who suffer from hearing loss.

However, simply installing a system is not sufficient; a hearing assistance system such as an Audio Induction Loop must provide a genuine benefit to the hearing aid user. A poorly designed or installed hearing assistance system is unlikely to meet legislative requirements as the provider is not giving assistance to the hearing impaired. Standards can provide performance benchmarks that will ensure that systems provide a genuine benefit.

The international standard for audio induction loop systems — IEC60118-4 — sets out requirements and test methods for any loop system. As hearing assistance is increasingly mandated by equal access legislation around the world, IEC60118-4 has become the reference for all loop systems, often appearing in specifications and tenders or directly in hearing assistance legislation.

IEC60118-4 has been revised and republished in 2007. The revised standard is more complex but also sets a clearer performance standard for loops. There are four main requirements:

Field Strength: Sets the output level for the system, ensuring sufficient signal is delivered to the hearing aid to provide enough volume but no distortion.

Test:

• Capable of 400mA/m RMS with 1kHz sine

• Variation ≤ +/-3dB over the required volume of use

Frequency: Sets the requirement for flat frequency response to give good speech intelligibility, the most critical requirement for loop system and the most frequently failed.

Test: Field strength variation ≤ +/-3dB from 100Hz to 5kHz over the required volume of use (reference to the level at 1KHz)

Background Noise: Sets a requirement for a maximum acceptable level of background noise. Suppression of background noise is essential to give the intelligibility required by the hearing impaired.

Test: • A-weighted background noise to be <32dB relative to the signal (400mA/m RMS)

• Ideally <47dB where possible.

Subjective Test: To ensure the system provides an undistorted clear signal to hearing aid users using the actual system sources (microphones etc.)

Test:

• Ideally hearing aid users will validate the system performance

• If not, someone from the service provider must assess the system with suitable receiving equipment.

Here is a document about the new standard submitted by company in the United States

Basic Review of lEe 60118-4 as Revised

The original lEe 60118-4 document was written to establish a standard for the installation of AFIL systems defining required signal levels and installation standards. The required signal strength was chosen to be high enough to produce an acceptable signal to noise ratio over background magnetic noise and yet not so high as to cause overloading of the hearing aid.

In many countries throughout Europe AFILS systems were thought to be required by law. The bad part – many venues installed what was felt to be the minimum system required and much was left up to interpretation. One manufacturer stated that at first they sold only their smallest induction loop drivers and felt many venues had installed marginal systems. In reality some studies indicated that fewer the 50% of the systems in Europe worked properly and often the users were not satisfied with the benefits of AFIL systems. Many of the revisions were meant to better define terms and clarify procedures like commissioning a new system. The desire was to have systems installed where any user could walk into any hearing loop system, sit anywhere and receive a good signal.

Basic points of the revised specification

1. Defines two different types of AFIL systems: large loop or small loop and gives different parameters for each. The small loop is a counter loop, tv loop or cushion loop. In this document we will be dealing with the large loop side of this document.
2. The 0 dB level has now been defined as a 400mA/meter as created by a 1KHz sine wave signal.
3. The useful magnetic field volume now defines the height dimension in detail (the perpendicular distance between the hearing aid pick up coil and the plane of the loop.
4. Suitability of the site is now defined by three items: the magnetic background noise level, the influence of materials in the structure and the presence of other induction loop systems in the area.
5. Background noise levels should be read using an A weighted meter with a.125 sec averaging of the RMSvalue. In a perfect environment the signal tonoise ratio should be 47dB. In other words a noise level reading -47dBA or lower is preferred, however if the actual signal to noise ratio is less than 32dB - it should be analyzed to determine if it is comprised of any undesirable tones and this information shall be reported.
6. The test signals were defined in more detail especially the pink noise signal, which is used often. Sinusoidal signals of 100Hz, 1KHz and 5KHz were defined as the three minimum test frequencies for testing amplifier characteristics and system response.
7. Induction loop system measurements should be taken under conditions deemed to be normal use including other powered sources such slighting. Once the system has been commissioned it recommends that multiple users evaluate the system as a final test.

8. Typical values for the maximum field strengths (peak)(400mA/m) produced by a test signal will vary depending upon the test signal and whether the amplifier uses peak detecting AGe. For a 1KHz sine it would be 400mA/m or OdB, for pink noise it would be 200mAjm or -6dB and for male simulated speech 225mA/m or -5dB. Readings should be taken over at least 60s and the maximum indication read.
9. Commissioning the system requires that the signal levels shall be within ±3dB of the level as indicated in #8 and performed at 100Hz, 1KHz and 5KHz throughout the useful magnetic field volume.
10. Pink noise should be bandwidth limited in a manner similar to speech.
11. Information which should be provided to the hearing aid user and system operators include: signage, instructions on how to use the system, a plan showing the useful magnetic field volume, name and position of the person responsible for proper operation, documented field strength levels, how to monitor the AFIL level and operation, any special audio microphones or other equipment required for proper operation.
12. Appendix E gives a very good overview of induction loop system theory. One major point is the need for a constant loop plane and to keep the loop plane distance from the listening plane consistent and generally in the range of .12 to .16 times the loop width. Also the worst location for the loop plane is at ear height and going up and over doorways should be avoided. It was noted that loops have both resistance and inductance - therefore the amplifier should have sufficient voltage to drive the required current through the loop - especially at the higher frequencies.

We are also sending a letter of support from Listen Technologies, a United States Company that supplies Assistive Listening Systems in the United States.

Don't miss a single sound. Listen

June 28, 2012

TO WHOM IT MAY CONCERN:

Listen Technologies Corporation is a leading supplier of assistive listening systems in North America. As such we support the Hearing Loss Association of America (HLAA) efforts in establishing guidelines and recommendations for induction loops.

We believe that the current version of the IEC-60118-4 standard is the best choice as a referenced standard for the following reasons:

- The product standards included in the IEC-60118-4 standard are comprehensive and have been vetted over many years of use in Europe.
- They are clear and concise and provide a performance standard that applies non-discriminatorily to either large or small venues.
- Induction Loops products are inexpensive enough to be used in facilities such as colleges or movie theaters and houses of worship.
- Induction Loop products are readily available around the world.

Best regards,

LISTEN TECHNOLOGIES CORPORATION

Keldon A. Paxman
VP-Operations.

Listen Technologies Corporation • 14912 Heritagecrest Way • Bluffdale • Utah 84065-4818
T 801.233.8992 • T 800.330.0891 North America • F 801.233.8995 fax

SWBR

SWBR Architects

ROCHESTER NY
387 East Main Street
Rochester NY 14604
Voice 585.232.6300
SYRACUSE NY
200 South Franklin Street
Syracuse NY 13202
Voice 315.422.5325
www.swbr.com

June 29, 2012

SWBR Architects
387 East Main Street
Rochester, NY 14604

To: To Whom It May Concern:

Re: ANSI 117.1, Section 706 Assistive Listening Systems

I am a practicing Architect with SWBR Architects & Engineering, P.C., which is one of the top 250 Architectural firms (Architectural Record, June 2012), directly responsible for the design of Induction Loop Systems for variety of public, educational, and private projects.

I wear (2) behind the ear digital hearing aids that include T-Coil Programs. I am currently the Board President of the Hearing Loss Association of America Rochester Chapter, and have presented workshops on Induction Loop Systems based on IEC-60118-4.

I prepare Induction Loop Design and Specification Documents for small and large areas based on IEC-60118-4 (IEC) and endorse the following proposed adoption of IEC-60118-4 standards:

1. Conformance with the IEC is beneficial because conformance provides a constant field strength level to everyone (within a +/- 3dB level), within the Induction Loop Space.
2. IEC establishes 0 dB as a standard basis, (defined as 400mA/meter created by a 1 kHz sine wave signal), allowing a standard metric and development of measuring equipment.
3. IEC provides performance and commissioning requirements for small or large Induction Loop installations with parameters for each, ensuring that operators have the ability to provide and maintain proper system operation.
4. IEC defines "useful magnetic field volume" level and height dimension beneficial for hearing aid or headphone with pick up T-Coil users.
5. IEC defines (pre-design) area suitability requirements: magnetic background noise level, structure material influence and presence of other induction loops.

Respectfully submitted,

Donald W. Baraffe, AIA, CCS
Architect / Specification Writer

DWB:jmd

PERFECT BALANCE

706.1-TOJI.doc

Committee Action

Disapproved

Committee Reason: The Committee was concerned that this was promoting a technology that has not a proven track record and may be promoting equipment of a single company. There is already an acknowledged standard for this, how would this proposal compare to it. The proposed exception seems unnecessary.

BALLOT COMMENTS

7-19.1

Commenter: Kim Paarlberg, Representing ICC
Ballot: Affirmative with comment:

Comment: The referenced standard, IEC 60118-4 was not provided for the committee. Is the standard developed using a consensus process and written in enforceable language. Are there systems available that can meet this standard?

Revise as follows:

7-19.2

Commenter: Hansel Bauman, Representing NAD
Ballot: Negative with comment:

Comment: The intent of this proposal improves upon existing standards. The proponent should be given an opportunity to re submit the proposal with revisions that address the committee's concerns.

7-19.3

Commenter: Gina Hilberry, Representing UCP
Ballot: Negative with comment:

Comment: The committee's actions relate to 706.3. 706.1 has merit.

7-19.4

Commenter: Melanie Hughes, Representing AERBVI
Ballot: Negative with comment:

Comment: For complex but valid reasons explained by the proponent in an email.

7-19.5

Commenter: Barbara Huelat, Representing ASID
Ballot: Negative with comment:

Comment: For complex but valid reasons explained by the proponent in an email.

7-19.6

Commenter: Cheryl D. Kent, Representing HUD
Ballot: Negative with comment:

Comment: I am voting negative based on the information provided in an email from Sharon Toji, as follows:
For all who have not yet sent in their ballot. I am hoping to get a reconsideration of the item on ALS. (7-19– 12). I found that items that I submitted that were necessary if you wanted to understand the exception, were left out when it was printed, and I unfortunately got very flustered and couldn't figure out myself why it didn't make sense.

Also, I was very shocked when I saw the "reasons" why it was so soundly defeated. This technology (hearing or induction loop) is the oldest of all the technologies for wireless assistive listening, far from being "unproven." Also, although I did include a letter from a well respected company that installs the loop systems, as well as from an architect who is hard of hearing, is an expert in the systems, and consults on them and specifies them, this is hardly anything to do with the equipment manufactured by any one company.

I have finally been able to get many more responses from experts in this field, and the whole point is that induction loop systems, of all the systems listed by the Access Board in their commentary, require very specific installation testing if they are to be useful. That is why the IEC standard was written. I know that many people on the committee are in favor of objective testing standards, and the current ADA/ANSI standard is a "one size fits all" standard for the equipment itself, and does not require testing of the installation. The IEC Standard is specific to induction (hearing) loop systems, and what I am getting from the experts is that it is vital to ending up with a very usable system.

It is possible to purchase components that would comply with ADA/ANSI standards and have a "do-it-yourself" installation by someone who had the proper contractor's license, but did not understand how to test it, and the system would be inferior and would work poorly. That is what I understand, and what was happening in Europe and why they worked on, and passed the standard. The best professional companies here do, I believe, use the standard and they all say that, but it is possible to go a route that does not provide that kind of installation, and it's undoubtedly less expensive.

By the way, small, portable testing kits are available, so this is something that an inspector could probably learn to test.
I would like to be able to present this in more detail, and I think that this time, I will have technical experts to explain things and back it up. Therefore, I am requesting that those who have not yet sent in their ballot will consider putting in a negative ballot on this item.

Sharon Toji

7-19.7

Commenter: R. Duane Wilson, Representing ASTC
Ballot: Negative with comment:

Comment: Having specified these systems in the past, I never had a good way to know they were working satisfactorily. The European standard provides that test.

7-19.8

Commenter: Sharon Toji, Representing HLAA
Ballot: Negative with comment:

Comment: At the July meeting, I believe I will be able to present convincing reasons for the acceptance of this proposal, including a modified “exception” if that is appropriate. The reasons given for the negative vote by the committee are not reasonable, since this is very tried and true technology (inductive loop systems), and is no way confined to one or two manufacturers. These standards are promoted by many experts, consultants, manufacturers, and installers as vital for the needed end result of inductive loop systems that are effective for their users. They add standards for the testing of the systems AFTER installation, which are not in the current standard, which is a “one size fits all” standard for every type of system.

Proponent Comment

7-19.9

Commenter: Sharon Toji, Representing HLAA

Reason: Here are items I would like to submit in support of my negative ballot on the committee action on my item 7-19-12 having to do with the adoption of international standards for installation of Hearing Loop (Induction Loops) types of assistive listening systems. Please distribute this material as per your regular procedure. These letters were all received by me via email.

I would also like to add the following remarks myself:
In support of the adoption of the IEC Standard for Hearing Loop Installation, when that is the system chosen assistive listening system:

I have now been able to speak much more extensively with a number of experts on assistive listening systems. The major flaw in our current standard, in regard to the Hearing Loop, is that the standard relates equally to all kinds of approved systems, and does not take into account the necessity for strict and regulated testing of Loop installations. The installation is the deciding factor in most cases between an excellent outcome for the user of the Loop system, and a substandard one. That was the experience in Europe, where substandard installations gave Loop systems a bad reputation. With the development of the IEC Standard, which includes testing protocol for the installation, Loop systems have become widespread, and very popular.

A major reason for the popularity of the Loop system is that those with hearing aids and cochlear implants with a T-Coil do not have to wear headphones. And yet, someone who does not have a hearing aid, or a T-Coil can get the advantage of the system by using headphones. It is really a universal system, and a system that provides the least effort on the part of the user who does not

need to ask for, or use, cumbersome special equipment. In addition, since the sound comes through the individuals own hearing aid or implant, it is a remarkably clear sound, and does not vary from location to location, when it is correctly installed.

My only concern earlier was that ANSI was not adopting something that would conflict directly with the current standard. That is the reason why I was suggesting, that if anything in the IEC Standard did conflict with the current "one size fits all" standards for assistive listening systems, that we adopt an exception to that part of the standard specifically for Loop systems. I will be submitting a slightly rewritten (amended) standard under the advisement of the technical experts involved with the HLAA to be sure that the standard we adopt is clear, and not in conflict with ADA Standards, but supplements them, to the advantage of those with hearing loss.

Sharon Toji

ITEM 1

Dear Sharon,

Thanks so much for writing, and thank you, especially, for your volunteer leadership on behalf of HLAA and all Americans with hearing loss.

Your recommendation—to let the international consensus standard for hearing loops be our national standard—is not just prudent, it is important, and I am very eager to support your effort to propose this to the ANSI committee. As you can see here, the nonprofit informational website that advocates hearing aid compatible assistive listening (via hearing loops) *strongly* encourages that installations meet the standard for strength and evenness of coverage. This is in response to reports of inferior installations, sometimes done by well-intentioned people and sometimes by less-than-scrupulous installers who get jobs by placing low bids and then doing slapdash, inferior installations and pocketing the profit.

Mandating the international standard would help level the playing field for would-be installers, and would also incentivize installers to become trained to do such installations. As HLAA executive director Brenda Battat surely has indicated to you, she and others associated with the HLAA/American Academy of Audiology “Get in the Hearing Loop” joint initiative strongly support respecting people with hearing loss via a mandate for installations that serve their needs.

To help your fellow ANSI committee members appreciate what effective hearing aid compatible assistive listening means to those of us with hearing loss, see here for one example (from this week) and here for a synopsis of accelerating progress in our efforts to transform the way America provides listening assistance to people with hearing loss. (I will also attach a couple items that provide further information, including my remarks to hearing industry leader Oticon, this past Thursday, on accepting an award that salutes our grassroots effort to make American assistive listening hearing aid compatible.)

FYI (to assure you and others that I have no financial interest in any hearing-related product or service) I have just been appointed by HHS Secretary Janet Sebelius as Brenda Battat’s replacement (representing Americans with hearing loss) on the National Deafness and Other Communication Disorders Advisory Council (which advises NIDCD on its priorities and grantmaking).

Please feel free to forward this to your fellow ANSI committee members, with my gratitude for their efforts to define national standards that make America accessible to all, including to those of us in the biggest sensory-challenged group—the 36 million Americans with the invisible disability of hearing loss.

Cordially,

David Myers

STAFF NOTE: Ms. Toji’s supporting documentation can be viewed under the Agendas tab; July 15-19, 2013; Supporting Documentation at the following link: http://www.iccsafe.org/cs/standards/A117/Pages/default.aspx

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7-20– 12

This proposal was approved by the committee. No ballot or proponent comments were received. It will be included in the Public Draft.

7-21– 12

This proposal was approved by the committee. No ballot or proponent comments were received. It will be included in the Public Draft.

7-22– 12
703.2.4

Proposed Change as Submitted

Proponent: Ann Makowski, representing Society for Environmental Graphic Design (SEGD)

Revise as follows:

703.2.4 Character Height for the Primary Message of a Sign. The uppercase letter "I" shall be used to determine the allowable height of all characters of a font. The uppercase letter "I" of the font used for primary messages shall have a minimum height complying with Table 703.2.4. Secondary or support messages provided in addition to primary messages, to the maximum extent practicable, shall comply with Section 703.2.4. Viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign.

> **EXCEPTION:** In assembly seating where the maximum viewing distance is 100 feet (30.5 m) or greater, the height of the uppercase "I" of fonts shall be permitted to be 1 inch (25.4 mm) for every 30 feet (9.1 m) of viewing distance, provided the character height is 8 inches (205 mm) minimum. Viewing distance shall be measured as the horizontal distance between the character and where someone is expected to view the sign.

Reason: The purposed addition of language to this section to provide differentiation between "primary" and "secondary" or "support" message to the primary message are provided in order to allow variations of character sizes for such messages that will permit more appropriate hierarchies of messaging without creating sign sizes that will become intrusive and unmanageable.

The representation of various character heights in the delineations of message hierarchies, including supportive or secondary messages, help convey the relative and respective importance of these elements in the message and add effectiveness to message communication. Utilizing the minimum character heights as defined in Table 703.2.4 for required character heights of secondary or supportive messages to the primary message will reduce or eliminate the use of such supportive or secondary copy due to the large message panels that would be required. Failure to provide the proposed variance in character sizes could potentially reduce the overall effectiveness of sign message communication by eliminating secondary and supportive messages to primary messages of a sign.

Use of 5/8 inch character height as the minimum size for secondary and supportive messages to primary sign messages would require proportionately increased sizes of the primary message characters to create the referenced visual hierarchy of information and the most effective message communication. This increase in size of primary messaging will then require increasing sizes of the physical sign itself and begin to create architectural encumbrances that will either limit the content or even use of standard sign messaging.

703.2.4-MAKOWSKI.doc

Committee Action

Disapproved

Committee Reason: The Committee was concerned that it requires someone to make a judgment call regarding the importance of some information. The building owner may feel one message is primary, the sign provider another and the person with a disability yet another message is more important that either one chosen by the building owner or sign provider. And then one would need to ask the enforcing agency what is the primary message.

BALLOT COMMENTS

7-22.1

Commenter: Teresa Cox, Representing ISA
Ballot: Negative with comment:

Comment: The proposal will be modified and resubmitted to address the Committee's concerns.

7-23– 12

703.3.8

Proposed Change as Submitted

Proponent: Ann Makowski, representing Society for Environmental Graphic Design (SEGD)

Revise as follows:

703.3.8 Character Spacing. Character spacing shall be measured between the two closest points of adjacent raised characters within a message, excluding word spaces. Spacing between individual raised characters shall be ~~$^{4}/_{8}$ inch (3.2 mm)~~ 15 percent minimum and 35 percent maximum of the character height measured at the top surface of the raised character. ~~minimum measured at the top surface of the characters, $^{1}/_{16}$ inch (1 .6 mm) minimum measured at the base of the characters, and four times the raised character stroke width maximum.~~ Characters shall be separated from raised borders and decorative elements $^{3}/_{8}$ inch (9.5 mm) minimum.

Reason: The proposed changes to the language of this section are provided in order to allow for a proportionate minimum and maximum raised character spacing to be achieved as opposed to a measurement based requirement that will be difficult to administer, produce and confirm. The language proposed to be removed regarding variations of measurement in spacing of characters from the top or base is proposed to eliminate confusion and provide a single measurement point at the tope surface of a raised character, which is where it is read.

Uniform dimensionally based spacing between character pairs is not recommended for use at is perceived to impair legibility of words. Proper spacing between characters varies based on the shape of the specific character, for example there should be more space between "AC" than "CO". Character spacing is understood by the graphics design profession to be most effective and legible when created in proportion to character height.

It is understood that the objective of creating minimum and maximum character spacing of raised characters is to enhance the ability for raised characters to serve their tactile reading function and creating standards to achieve the maximum effectiveness of this purpose is supported. However, in the majority of applications a raised character is also acting in function as a visual character and the effectiveness of this purpose should not be sacrificed. It is proposed that the necessary restrictions on spacing be maintained but in a measurement protocol that will allow for proper proportional spacing to ensure both tactile and visual function is most effectively achieved.

703.3.8-MAKOWSKI.doc

Committee Action

Disapproved

Committee Reason: The Committee felt that additional research was needed. There was concern that the 15% would be difficult and time consuming to accomplish. Of further concern is equal spacing isn't required and could be visually confusing.

BALLOT COMMENTS

7-23.1

Commenter: Gene Boecker, Representing NATO
Ballot: Affirmative with comment:

Comment: The proposal has merit and should be researched. Kerning is the concern of spacing between adjacent letters and is a part of every font layout. It relies on proportional spacing for better reading. The 15-30 percent is reasonable. In fact, for certain types of fonts, a zero (0) spacing would be preferred. If you compare the spacing between the letters "A" and "W" when used next to one another as in "AWFUL," the space between them is actually a negative number for some fonts. Whether the specific range should be 15-30 should be the focus. Arbitrarily relying on a particular dimension as is done in the existing standard will not improve readability.

7-23.2

Commenter: Teresa Cox, Representing ISA
Ballot: Negative with comment:

Comment: The proposal will be modified and resubmitted to address the Committee's concerns.

7-23.3

Commenter: Edward Steinfeld, Representing RESNA
Ballot: Negative with comment:

Comment: This was a good proposal that came from a knowledgeable proponent. The current requirements are far too restrictive and lead to poor legibility for all as demonstrated in the presentation. Moreover, they were developed with little research also, demonstrated by the fact that they violate principles of good graphic design. So, the argument for disapproval is not valid.

7-24– 12

Withdrawn: The proposal was withdrawn by the proponent. No further action is needed.

7-25– 12

Withdrawn: The proposal was withdrawn by the proponent. No further action is needed.

7-26– 12

703.6.3.1

Proposed Change as Submitted

Proponent: Ann Makowski, representing Society for Environmental Graphic Design (SEGD)

Revise as follows:

703.6.3.1 International Symbol of Accessibility. The International Symbol of Accessibility shall comply with the basic format of Figure 703.6.3.1.

Reason: Provide language in the standard that will provide for appropriate stylistic variations of the ISA to conform to aesthetic and décor needs of respective projects while still maintaining a level of consistent size, placement and use of the ISA in unique environments.

Allowing minor stylistic variations in the ISA will allow more aesthetically complimentary symbols to be utilized on projects which will in turn encourage architects and end users to promote their more plentiful use and prominent location on architectural

finishes. This will enhance the use and visibility of this important accessible entrance and pathways wayfinding and identification device.

Building architects, designers, developers and owners will inherently be opposed to use of any elements that are not complimentary to the architecture and décor of their facilities and will be drawn to applying only minimal requirements for such use of generic symbol. If provided the ability to produce designs that will meet the requirements of the ISA for identification and wayfinding purpose but in a slightly stylized design that will compliment architecture and décor it is anticipated that increased use and more prominent display of such symbols will be achieved.

703.6.3.1-MAKOWSKI.doc

Committee Action

Approval as Modified

Modification

703.6.3.1 International Symbol of Accessibility. The International Symbol of Accessibility shall comply with ~~the basic format of~~ Figure 703.6.3.1.

703.6.3.1.1. Alternative Symbols. The symbols of accessibility complying with Figures 703.6.3.1.1(a) and 703.6.3.1.1(b) are acceptable as equivalent compliance alternatives to the International Symbol of Accessibility.

Committee Reason: The additional symbols provide more modern versions of the official ISA and should be available and recognized as equivalent facilitation.

Staff Note: Only one of the 2 symbols was available at the time the ballot was prepared.

BALLOT COMMENTS

7-26.1

Commenter: Todd Andersen
Ballot: Affirmative with comment:

Comment: I request that the reason statement be expanded to cover the committee discussion of copyright concerns. By this I mean, that should ICC not be presented with copyright permissions as it deems adequate, our vote is nullified.

7-26.2

Commenter: Teresa Cox, Representing ISA
Ballot: Affirmative with comment:

Comment: Only one of the 2 proposed stylistic variants of the ISA symbol was available at the time of the meeting. Both are available now through SEGD.

7-26.3

Commenter: Christopher Bell, Representing ACB
Ballot: Negative with comment:

Comment: Introducing alternative symbols will cause unnecessary confusion and questions such as, do different symbols indicate bathrooms or entrances with different features or services? The current icon is widely recognized, accepted and useful as it is; there is no pressing need to match the decor. It is just not a good practice to have many different symbols for the same thing.

Another concern is the specific symbols. If the Committee persists in the direction of diversifying the ISA, there should be a more deliberative process to select the symbols that incudes other designers, various stakeholders in the disability community, etc.

Further, there may have been some mention in the Committee discussion of one or more of the symbols in the diagram being proprietary, which is inappropriate for the standard.

(Co-written with Michael Tierney, BHMA)

7-26.4

Commenter: Marilyn Golden, Representing DREDF
Ballot: Negative with comment:

Comment: Introducing alternative symbols will cause unnecessary confusion and questions such as, do different symbols indicate bathrooms or entrances with different features or services? The current icon is widely recognized, accepted and useful as it is; there is no pressing need to match the decor. It is just not a good practice to have many different symbols for the same thing.

Another concern is the specific symbols. If the Committee persists in the direction of diversifying the ISA, there should be a more deliberative process to select the symbols that incudes other designers, various stakeholders in the disability community, etc.

Further, there may have been some mention in the Committee discussion of one or more of the symbols in the diagram being proprietary, which is inappropriate for the standard.

(Co-written with Michael Tierney, BHMA)

7-26.5

Commenter: Marsha K. Mazz, Representing Access Board
Ballot: Negative with comment:

Comment: We request the committee to DISAPPROVE this proposal. The proposal allows two “alternate” accessibility symbols but illustrates only one. We cannot approve as “equivalent” a symbol not presented in the ballot. In any case, the International Symbol of Accessibility (ISA) as depicted in the current Standard is the only symbol recognized by the Access Board guidelines and the U.S. Department of Justice ADA Standards. Use of alternate symbols defeats the purpose of the symbols and potentially adds confusion for people with vision impairments who depend on consistently in order to decipher the environment. The ISA is a recognized ISO symbol. The symbol was formally adopted by the World Congress in 1969 and, in 1974, Rehabilitation International organized a United Nation’s Experts meeting where a resolution (see http://www.riglobal.org/wp-content/uploads/2010/04/symbol-of-access-resolution-.pdf) was adopted ensuring that the symbol would be properly used and protected from any changes.

7-26.6

Commenter: Kim Paarlberg, Representing ICC
Ballot: Negative with comment:

Comment: I want to see all three graphic options. If this is acceptable, then we should say so, not offer it up as equivalent compliance – that is permitted as an option under Section 103. Just say use one of the three.

Further modify the proposal as follows:

703.6.3.1 International Symbol of Accessibility. The International Symbol of Accessibility shall comply with Figure 703.6.3.1(a), (b) or (c).

~~**703.6.3.1.1. Alternative Symbols.** The symbols of accessibility complying with Figures 703.6.3.1.1(a) and 703.6.3.1.1(b) are acceptable as equivalent compliance alternatives to the International Symbol of Accessibility.~~

7-26.7

Commenter: Michael Tierney, Representing BHMA
Ballot: Negative with comment:

Comment: Introducing alternative symbols will cause unnecessary confusion and questions such as, do different symbols indicate bathrooms or entrances with different features or services? The current icon is widely recognized, accepted and useful as it is; there is no pressing need to match the decor. It is just not a good practice to have many different symbols for the same thing.

Another concern is the specific symbols. If the Committee persists in the direction of diversifying the ISA, there should be a more deliberative process to select the symbols that incudes other designers, various stakeholders in the disability community, etc.

Further, there may have been some mention in the Committee discussion of one or more of the symbols in the diagram being proprietary, which is inappropriate for the standard.
(Co-written with Marilyn Golden, DREDF)

7-26.8

Commenter: Sharon Toji, Representing HLAA
Ballot: Negative with comment:

Comment: Although I actually support the ability of local officials to approve symbols with slight alterations, such as the "SEGD" wheelchair pictogram, and particularly support the use of left facing symbols when coupled with left directional arrows as more accessible, I nevertheless question having an ANSI standard that clearly violates an ADA standard. Perhaps this is best left up to local judgment as to whether it is equivalent facilitation. I am afraid it will open up the possibility of lawsuits based on the ADA in states that use the ANSI standard. Also, the acceptance of only two symbols precludes the design of other symbols that may be even closer to the original.

STAFF NOTE: After the Ballot was distributed, Ann Makowski of SEGD supplied a copy of the second alternate symbol.