



**PUBLIC COMMENTS REPORT
ON
ICC A117.1 STANDARD
SECOND PUBLIC REVIEW DRAFT**

JANUARY 2, 2015

**ICC/ANSI A117.1 STANDARD
DEVELOPMENT - 2015 EDITION**

ICC A117.1 Standard – Accessible and Usable Buildings and Facilities Second Public Review Draft Public Comment Report – January 2, 2015

In October of 2013, the First Public Review Draft of the ICC A117.1 Standard was published and available for public comment. Approximately 200 public comments were received. During 2014, the A117.1 Committee considered each public comment and took action on each. Of those actions, 61 resulted in additional changes to the draft A117.1 standard. Those 61 changes were assembled and published as the Second Public Review Draft.

The proponents of the 200 public comments were asked if they considered the issues raised by their public comment to be resolved. If not, they could have requested further consideration by the committee. Outside of the public comments received on the Second Public Review Draft, no comment proponent provided communication that their issue was unresolved. Therefore there is no unresolved issues report at this stage of the process.

The Second Public Review Draft of the ICC A117.1 Standard – 2015 edition was published on November 7, 2014. The public was afforded through December 22, 2014 the opportunity to submit comments on the changes contained in the Second Public Review Draft.

Fifty-three distinct public comments were received addressing the substantive changes contained in the Second Public Review draft. Those 53 comments are found in this report. Each comment is considered as a separate agenda item. They are also numbered according to the original comment number system for the purposes of keeping a consistent record of the proposals and the subsequent actions affecting each. These 53 comments address 37 of the changes published in the Second Public Review Draft.

No public comments were received on 24 changes published in the Second Public Review Draft. These 24 changes are now complete and will be reflected in the next edition of the standard. They are not subject to further public review as individual items. In addition to the 53 comments on the agenda, comments were received which suggested amendments to provisions of the standard which are not currently open to comment. Such comments are outside the scope of the current review. Finally a few comments were purely editorial in nature and will be addressed as such.

This report provides each public comment in the following format:

Number of change as published in Second Public Review Draft	
Agenda Item Number	
Tracking number	Name and representation of person submitting comment
	The specific comment made
Reason supplied by the commenter for their comment	
Number of change as published in Second Public Review Draft	
The text of the change published in the Second Public Review draft	

The A117.1 Committee will review and take action on the 53 comments. If any of the actions result in further amendment to the standard (changes to the 37 items on which the comments were received), those changes will be published as a Third Public Review Draft.

If you have questions, please direct them to Kermit Robinson, krobinson@iccsafe.org

Chapter 1

No public comments were received which were specific to the 3 changes shown in Chapter 1.

Chapter 2

There are no changes proposed for Chapter 2.

Chapter 3

3-5-12	
Agenda Item #1	
Comment No: 3-5-12 PC1.1	Submitted by: Marilyn Golden – DREDF Jim Pecht – Access Board
	<p>Revise further as follows:</p> <p>304 Turning Space</p> <p>304.2 Floor Surface. Floor surfaces of a turning space shall have a slope not steeper than 1:48 and shall comply with Section 302. Changes in level exceeding that permitted by Section 303.3 are not permitted within the turning space.</p> <p>305 Clear Floor or Ground Space</p> <p>305.2 Floor Surfaces. Floor surfaces of a clear floor space shall have a slope not steeper than 1:48 and shall comply with Section 302. Changes in level exceeding that permitted by Section 303.3 are not permitted within the clear floor space.</p> <p>404.2 Manual doors</p> <p>404.2.3.1 Floor Surface. Floor surface within the maneuvering clearances shall have a slope not steeper than 1:48 and shall comply with Section 302. Changes in level exceeding that permitted by Section 303.3 are not permitted within the maneuvering clearances.</p> <p>405 Ramps</p> <p>405.7.1 Slope. Landings shall have a slope not steeper than 1:48 and shall comply with Section 302. Changes in level exceeding that permitted by Section 303.3 are not permitted within the landings.</p> <p>502 Parking spaces</p> <p>502.5 Floor Surfaces. Parking spaces and access aisles shall comply with Section 302 and have surface slopes not steeper than 1:48. Access aisles shall be at the same level as the parking spaces they serve. Changes in level exceeding that permitted by Section 303.3 are not permitted within the parking spaces and access aisles.</p> <p>503 Passenger loading zones</p> <p>503.4 Floor Surfaces. Vehicle pull-up spaces and access aisles serving them shall comply with Section 302 and shall have slopes not steeper than 1:48. Access aisles shall be at the same level as the vehicle pull-up space they serve. Changes in level exceeding that permitted by Section 303.3 are not permitted within the vehicle pull-up spaces and access aisles.</p> <p>802 Wheelchair spaces</p> <p>802.2 Floor Surfaces. The floor surface of wheelchair space locations shall have a slope not steeper than 1:48 and shall comply with Section 302. Changes in level exceeding that permitted by Section 303.3 are not permitted within the floor surface of wheelchair space</p>

locations:

Reason:

Golden: This change restores the original concept in each of these sections.

Redundant references to Section 303.3 have been removed. Section 303.3, which details what changes in level are permitted, continues to apply to each of these sections, regardless of whether it is explicitly referenced in each Section or not. This proposal returns the text to the ANSI A117's standard convention of not including redundant references to other sections that may happen to apply.

Had this proposal simply returned the text to what it was prior to this cycle, two of the sections, 304.2 and 305.2, would still include the language "Changes in level are not permitted within the turning space [or clear floor space]." While this language is important for accessibility, it has garnered objections due to the difficulty in complying with a ban on any level change. So, the deletion of this language represents a compromise. It will benefit builders and enforcers to remove any blanket bans on changes in level from the standard. And it will benefit accessibility to remove the redundant, unnecessary references to Section 303.3 which were added by proposal 3-5 during this cycle, but which are of great concern to the disability community by virtually inviting designers to insert the maximum level changes allowed in the parts of the building most sensitive for accessibility, such as turning spaces, clear floor spaces, maneuvering clearances at doors, on ramps, in wheelchair space locations, etc.

Pecht: While there is an advisory in the ADA Standards that was the basis for this harmonization issue, advisories are not substitutes for requirements. It should be noted that the Department of Justice chose not to adopt the advisories in the Board's Guidelines into their enforceable Standard. After reconsideration, we feel that this issue needs to be more fully deliberated by the Committee during the next cycle and recommend that the language be returned to the language in the current standard. Several issues need to be considered in the Committee's deliberation, for instance small inconsistencies in a surface such as tile grout line, while possible changes in level, may be more appropriately discussed with regard to the openings requirement in 302.2 and not in this section. Changes in level up to ½ inch may adversely affect mobility aid maneuvering and should be considered in more detail. Also if certain changes in level are to be allowed on these surfaces, what distance should be maintained between multiple level changes?

3-5-12 AS PUBLISHED 2ND PUBLIC REVIEW DRAFT

Revise as follows:**304 Turning Space**

304.2 Floor Surface. Floor surfaces of a turning space shall have a slope not steeper than 1:48 and shall comply with Section 302. Changes in level exceeding that permitted by Section 303.3 are not permitted within the turning space.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

305 Clear Floor or Ground Space

305.2 Floor Surfaces. Floor surfaces of a clear floor space shall have a slope not steeper than 1:48 and shall comply with Section 302. Changes in level exceeding that permitted by Section 303.3 are not permitted within the clear floor space.

EXCEPTION: Slopes not steeper than 1:48 shall be permitted.

404.2 Manual doors

404.2.3.1 Floor Surface. Floor surface within the maneuvering clearances shall have a slope not steeper than 1:48 and shall comply with Section 302. Changes in level exceeding that permitted by Section 303.3 are not permitted within the maneuvering clearances.

405 Ramps

405.7.1 Slope. Landings shall have a slope not steeper than 1:48 and shall comply with Section 302. Changes in level exceeding that permitted by Section 303.3 are not permitted within the landings.

502 Parking spaces

502.5 Floor Surfaces. Parking spaces and access aisles shall comply with Section 302 and have surface slopes not steeper than 1:48. Access aisles shall be at the same level as the parking spaces they serve. Changes in level exceeding that permitted by Section 303.3 are not permitted within the parking spaces and access aisles.

503 Passenger loading zones

503.4 Floor Surfaces. Vehicle pull-up spaces and access aisles serving them shall comply with Section 302 and shall have slopes not steeper than 1:48. Access aisles shall be at the same level as the vehicle pull-up space they serve. Changes in level exceeding that permitted by Section 303.3 are not permitted within the vehicle pull-up spaces and access aisles.

802 Wheelchair spaces

802.2 Floor Surfaces. The floor surface of wheelchair space locations shall have a slope not steeper than 1:48 and shall comply with Section 302. Changes in level exceeding that permitted by Section 303.3 are not permitted within the floor surface of wheelchair space locations.

3-6-12 PC2	
Agenda Item #2	
Comment No: 3-6-12 PC2.1	Submitted by: Kim Paarlberg - ICC
	<p>Further revise as follows:</p> <p>308.2 Forward Reach.</p> <p>308.2.1 Unobstructed.</p> <p>308.2.1.1 New Buildings. In new buildings, where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 23 inches (585 mm) minimum above the floor.</p> <p>308.2.1.2 Existing Buildings and Within New Type B Units. In existing buildings and within new Type B units, where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the floor.</p> <p>502 Parking Spaces</p> <p>502.4.2.1 New Buildings. In new buildings, access aisles serving car and van parking spaces shall be 67 inches (1700 mm) minimum in width.</p> <p>502.4.2.2 Existing Buildings and Within New Type B Units. In existing buildings and serving new Type B units, access aisles serving car and van parking spaces shall be 60 inches (1525 mm) minimum in width.</p> <p>804.2.2 U-Shaped Kitchens.</p> <p>804.2.2.1 New Buildings. In new buildings, in kitchens enclosed on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 67 inches (1700 mm) minimum.</p> <p>EXCEPTION: U-shaped kitchens with an island shall be permitted to comply with Section 804.2.1.</p> <p>804.2.2.2 Existing Buildings. In existing buildings, in kitchens enclosed on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 60 inches (1525 mm) minimum.</p> <p>EXCEPTION: U-shaped kitchens with an island shall be permitted to comply with Section 804.2.1.</p>
<p>REASON: Three sections went back to the 2009 A117.1 numbers. If those proposals stand, then the language for existing buildings is not needed. This is an editorial coordination only.</p> <p>3-13-12 PC4 restored the current reach range requirements 3-6C-12 PC3-PC10 restored the 60" access aisle 3-6E-12 PC4-PC6 restored the 60" space between counters in a U-shaped kitchen.</p>	

Agenda Item #3	
Comment No: 3-6-12 PC2.3	Submitted by: Gene Boecker – NATO Cheryl Kent - HUD Laurel Wright – NCOSFM Marilyn Golden – DREDF Marsha Mazz – Access Board
	<p>Further revise as follows:</p> <p>106.5 Defined terms - Add new definition as follows:</p> <p>Existing building. A building erected prior to the date of adoption of this standard, or one for which a legal building permit has been issued.</p> <p>Major alteration. <u>Any alteration, as defined by the construction documents, where the work area exceeds 50 percent of the aggregate area of the building. Alterations solely to windows, hardware, controls, reroofing, painting or wallpapering, asbestos removal, changes to mechanical and electrical systems, and signage shall not be considered when determining a major alteration.</u></p> <p>Revise as follows:</p> <p>304.3.1 Circular Space.</p> <p>304.3.1.1 New Buildings. In new buildings <u>and major alterations</u>, the turning space shall be a circular space with a 67 inch (1700 mm) minimum diameter. The turning space shall be permitted to include knee and toe clearance complying with Section 306. Where the turning space includes knee and toe clearances under an obstruction, the overlap shall comply with all of the following:</p> <ol style="list-style-type: none"> 1. The depth of the overlap shall not be more than 10 inches (255 mm), and 2. The depth shall not exceed the depth of the knee and toe clearances provided, and 3. The overlap shall be permitted only within the turning circle area shown shaded in Figure 304.3.1. <p>304.3.1.2 Existing buildings. In existing buildings without a major alteration, the turning space shall be a circular space with a 60 inch (1525 mm) minimum diameter. The turning space shall be permitted to include knee and toe clearance complying with Section 306.</p> <p>304.3.2 T-Shaped Space.</p> <p>304.3.2.1 New Construction. In new buildings <u>and major alterations</u>, the turning space shall be a T-shaped space complying with one of the following:</p> <ol style="list-style-type: none"> A T-shaped space, clear of obstruction, that fits within an area 68 inches (1725 mm) wide and 60 inches (1525 mm) deep, with two arms and one base that are all 36 inches (915 mm) minimum in width. Each arm shall extend 16 inches (405 mm) minimum from each side of the base located opposite the other, and the base shall extend 24 inches (610 mm) minimum from the arms. At the intersection of each arm and the base, the interior corners shall be chamfered for 8 inches (205 mm) minimum along both the arm and along the base. 2. A T-shaped space, clear of obstruction, that fits within an area 64 inches (1625 mm) wide and 60 inches (1525 mm) deep, with two arms 38 inches (965 mm) minimum in width and a base 42 inches (1065 mm) minimum in width. Each

<p>Agenda Item #3 continued</p>	<p>arm shall extend 11 inches (280 mm) minimum from each side of the base, located opposite the other, and the base shall extend 22 inches (560 mm) minimum from each arm.</p> <p>1. A T-shaped space, clear of obstruction, that fits within an area 64 inches (1625 mm) wide and 60 inches (1525 mm) deep, with two arms and one base 40 inches (1015 mm) minimum in width. Each arm shall be 16 inches (405 mm) minimum in each direction from the base and the base shall extend 24 inches (610 mm) minimum from each arm.</p> <p>304.3.2.2 Existing Buildings. In existing buildings <u>without a major alteration</u>, the turning space shall be a T-shaped space within a 60-inch (1525 mm) minimum square, with arms and base 36 inches (915 mm) minimum in width. Each arm of the T shall be clear of obstructions 12 inches (305 mm) minimum in each direction, and the base shall be clear of obstructions 24 inches (610 mm) minimum. The turning space shall be permitted to include knee and toe clearance complying with Section 306 only at the end of either the base or one arm.</p> <p>305.3 Size.</p> <p>305.3.1 New Buildings. In new buildings <u>and major alterations</u>, the clear floor space shall be 52 inches (1320 mm) minimum in length and 30 inches (760 mm) minimum in width.</p> <p>305.3.2 Existing Buildings and Within New Type B Units. In existing construction and within new Type B units, the clear floor space shall be 48 inches (1220 mm) minimum in length and 30 inches (760 mm) minimum in width.</p> <p>305.7.2 Forward Approach.</p> <p>305.7.2.1 New Buildings. In new buildings <u>and major alterations</u>, where the clear floor space is positioned for a forward approach, the alcove shall be 36 inches (915 mm) minimum in width where the depth exceeds 20 inches (510 mm).</p> <p>305.7.2.2 Existing Buildings and Within New Type B Units. In existing buildings and within new Type B units, where the clear floor space is positioned for a forward approach, the alcove shall be 36 inches (915 mm) minimum in width where the depth exceeds 24 inches (610 mm).</p> <p>308.2 Forward Reach.</p> <p>308.2.1 Unobstructed.</p> <p>308.2.1.1 New Buildings. In new buildings <u>and major alterations</u>, where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 23 inches (585 mm) minimum above the floor.</p> <p>308.2.1.2 Existing Buildings and Within New Type B Units. In existing buildings and within new Type B units, where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the floor.</p> <p>403.5.1 General. The clear width of an accessible route shall be 36 inches (915 mm) minimum. The clear width of an exterior accessible route shall be 48 inches (1220 mm) minimum.</p>
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<p>Agenda Item #3 continued</p>	<p>EXCEPTIONS:</p> <ol style="list-style-type: none"> 1. In new buildings <u>and major alterations</u>, the clear width shall be permitted to be reduced to 32 inches (815 mm) minimum for a length of 24 inches (610 mm) maximum provided the reduced width segments are separated by segments that are 52 inches (1320 mm) minimum in length and 36 inches (915 mm) minimum in width. 2. In existing buildings <u>without a major alteration</u> and within new Type B units, the clear width shall be permitted to be reduced to 32 inches (815 mm) minimum for a length of 24 inches (610 mm) maximum provided the reduced width segments are separated by segments that are 48 inches (1220 mm) minimum in length and 36 inches (915 mm) minimum in width. 3. The clear width of an exterior ramp shall comply with Section 405.5. <p>403.5.2 Clear Width at 180 Degree Turn.</p> <p>403.5.2.1 New Buildings. In new buildings <u>and major alterations</u>, where an accessible route makes a 180 degree turn around an object that is equal to or greater than 52 inches (1320 mm) in width, the clear widths in the turn shall comply with Section 405.5.1. Where an accessible route makes a 180 degree turn around an object that is less than 52 inches (1320 mm) inches in width, the clear widths approaching the turn, during the turn and leaving the turn, shall be one of the following sets of dimensions:</p> <ol style="list-style-type: none"> 1. Approaching width is 36 inches (915 mm) minimum, during width is 60 inches (1525 mm) minimum, and leaving width is 36 inches (915 mm) minimum. 2. Approaching width is 42 (1065 mm) inches minimum, during width is 48 inches (1220 mm) minimum, and leaving width is 42 (1065 mm) inches minimum. 3. Approaching width is 43 inches (1090 mm) minimum, during width is 43 inches (1090 mm) minimum, and leaving width is 43 inches (1090 mm) minimum. <p>403.5.2.2 Existing Buildings and Within New Type B Units. In existing buildings <u>without a major alteration</u> and within new Type B units, where an accessible route makes a 180 degree turn around an object that is less than 48 inches (1220 mm) in width, clear widths shall be 42 inches (1065 mm) minimum approaching the turn, 48 inches (1220 mm) minimum during the turn and 42 (1065 mm) inches minimum leaving the turn.</p> <p>EXCEPTION: Section 403.5.1 shall not apply where the clear width during the turn is 60 inches (1525 mm) minimum.</p> <p>403.5.3 Clear Width at 90 Degree Turn.</p> <p>403.5.3.1 New Buildings. In new buildings <u>and major alterations</u>, where an accessible route makes a 90 degree turn the clear widths approaching the turn and leaving the turn shall be one of the following sets of dimensions:</p> <ol style="list-style-type: none"> 1. Both legs of the turn shall be 40 inches (1016 mm) minimum in width. The width of each leg of the turn shall be maintained for 28 inches minimum from the inner corner. 2. Where the interior corners of the turn are chamfered for 8 inches minimum
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<p>Agenda Item #3 continued</p>	<p>(205 mm) along both walls, both legs of the turn shall be 36 inches (915 mm) minimum in width.</p> <p>EXCEPTIONS:</p> <ol style="list-style-type: none"> 1. Where one leg of the turn is 42 inches (1065 mm) minimum in width, the other shall be permitted to be 38 inches (965 mm) minimum in width. 2. Where one leg of the turn is 44 inches (1115 mm) minimum in width, the other shall be permitted to be 36 inches (915 mm) minimum in width. <p>403.5.3.2 Existing Buildings and Within Type B Units. In existing buildings <u>without a major alteration</u> and within new Type B units, where an accessible route makes a 90 degree turn the clear widths approaching the turn and leaving the turn shall be 36 inches (915 mm) minimum.</p> <p>403.5.4 Passing Space.</p> <p>403.5.4.1 New Buildings. In new buildings <u>and major alterations</u>, an accessible route with a clear width less than 60 inches (1525 mm) shall provide passing spaces at intervals of 200 feet (61 m) maximum. Passing spaces shall be either a 60-inch (1525 mm) minimum by 60-inch (1525 mm) minimum space, or an intersection of two walking surfaces that provide a T-shaped turning space complying with Section 304.3.2, provided the base and arms of the T-shaped space extend 52 inches (1320 mm) minimum beyond the intersection.</p> <p>403.5.4.2 Existing Buildings and Within New Type B Units. In existing buildings <u>without a major alteration</u> and within new Type B units, an accessible route with a clear width less than 60 inches (1525 mm) shall provide passing spaces at intervals of 200 feet (61 m) maximum. Passing spaces shall be either a 60-inch (1525 mm) minimum by 60-inch (1525 mm) minimum space, or an intersection of two walking surfaces that provide a T-shaped turning space complying with Section 304.3.2, provided the base and arms of the T-shaped space extend 48 inches (1220 mm) minimum beyond the intersection.</p> <p>404.2.3.2 Swinging Doors and Gates. Swinging doors and gates shall have maneuvering clearances complying with Table 404.2.3.2.</p> <p style="text-align: center;">Table 404.2.3.2 Maneuvering Clearances at Manual Swinging Doors and Gates (((Table remains unchanged)))</p> <p>Footnotes</p> <ol style="list-style-type: none"> 1. Add 6 inches (150 mm) if closer and latch provided. 2. Add 6 inches (150 mm) if closer provided. 3. Add 12 inches (305 mm) beyond latch l if closer and latch provided. 4. Beyond hinge side. 5. In existing buildings <u>without a major alteration</u> and within new Type B buildings the dimension perpendicular to the door for the front direction on the push side shall be 48 inches (122 mm) minimum. <p>404.2.3.3 Sliding and Folding Doors. Sliding doors and folding doors shall have maneuvering clearances complying with Table 404.2.3.3.</p>
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<p>Agenda Item #3 continued</p>	<p style="text-align: center;">Table 404.2.3.3 Maneuvering Clearances at Sliding and Folding Doors (((Table remains unchanged)))</p> <p>Footnotes</p> <ol style="list-style-type: none"> 1. Beyond pocket or hinge side. 2. In existing buildings <u>without a major alteration</u> and within new Type B buildings the dimension perpendicular to the door for the front direction shall be 48 inches (122 mm) minimum. <p>404.2.3.4 Doorways without Doors or Gates. Doorways without doors or gates that are less than 36 inches (915 mm) in width shall have maneuvering clearances complying with Table 404.2.3.4.</p> <p style="text-align: center;">Table 404.2.3.4 Maneuvering Clearances for Doorways without Doors (((Table remains unchanged)))</p> <p>Footnote</p> <ol style="list-style-type: none"> 1. In existing buildings <u>without a major alteration</u> and within new Type B buildings the dimension perpendicular to the doorway for the front direction shall be 48 inches (122 mm) minimum. <p>408 Limited-Use/Limited-Application Elevators</p> <p>408.4.1 Inside Dimensions. Elevator cars shall provide a clear floor width of 42 inches (1065 mm) minimum. The clear floor area shall not be less than 15.75 square feet (1.46 m²). The elevator car shall provide a clear floor space complying with Section 305.3.</p> <p>EXCEPTIONS:</p> <ol style="list-style-type: none"> 1. For installations in existing buildings, elevator cars that provide a clear floor area of 15 square feet (1.4 m²) minimum, and provide a clear inside dimension of 36 inches (915 mm) minimum in width and 54 inches (1370 mm) minimum in depth, shall be permitted. This exception shall not apply to cars with doors on adjacent sides. 2. For installations in existing buildings, cars that provide a clear width 51 inches (1295 mm) minimum shall be permitted to provide a clear depth 51 inches (1295 mm) minimum provided that car doors provide a clear opening 36 inches (915 mm) wide minimum. <p>409 Private Residence Elevators</p> <p>409.4.1 Inside Dimensions.</p> <p>409.4.1.1 New Buildings. In new buildings, elevator cars shall provide a clear floor area 36 inches (915 mm) minimum in width and 52 inches (1322 mm) minimum in depth.</p> <p>409.4.1.2 Existing Buildings and Within New Type B Units. In existing buildings and within new Type B units, elevator cars shall provide a clear floor area 36 inches (915 mm) minimum in width and 48 inches (1220 mm) minimum in depth.</p> <p>410 Platform Lifts</p> <p>410.5.1 Lifts with Single Doors or Doors on Opposite Ends.</p> <p>410.5.1.1 New Buildings. In new buildings <u>and major alterations</u>, platform lifts with a single door or doors on opposite ends shall provide a clear floor width of 36 inches</p>
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<p>Agenda Item #3 continued</p>	<p>(915 mm) minimum and a clear floor depth of 52 inches (1322 minimum).</p> <p>Exception: Incline platform lifts with passenger restraining arms, shall be permitted to provide a clear floor width of 36 inches (915 mm) minimum and a clear floor depth of 48 inches (1220) mm.</p> <p>410.5.1.2 Existing Buildings and Within New Type B Units. In existing buildings <u>without a major alteration</u> and within new Type B units, platform lifts with a single door or doors on opposite ends shall provide a clear floor width of 36 inches (915 mm) minimum and a clear floor depth of 48 inches (1220 minimum).</p> <p>502.4.2 Width.</p> <p>502.4.2.1 New Buildings. In new buildings, access aisles serving car and van parking spaces shall be 67 inches (1700 mm) minimum in width.</p> <p>502.4.2.2 Existing Buildings and Within New Type B Units. In existing buildings and serving new Type B units, access aisles serving car and van parking spaces shall be 60 inches (1525 mm) minimum in width. (3-6-12 PC 3-PC-10)</p> <p>503 Passenger Loading Zones</p> <p>503.3.2 Width.</p> <p>503.3.2.1 New Buildings. In new buildings, access aisles serving vehicle pull-up spaces shall be 67 inches (1700 mm) minimum in width.</p> <p>503.3.2.2 Existing Buildings and Within New Type B Units. In existing buildings and serving new Type B units, access aisles serving vehicle pull-up spaces shall be 60 inches (1525 mm) minimum in width.</p> <p>608.2.1.2 Clearance.</p> <p>608.2.1.2.1 New Buildings. In new buildings <u>and major alterations</u>, a clearance of 52 inches (1320 mm) minimum in length measured perpendicular from 12 inches beyond the seat wall, and 36 inches (915 mm) minimum in depth shall be provided adjacent to the open face of the compartment.</p> <p>608.2.1.2.2 Existing Buildings and Within New Type B Units. In existing buildings <u>without a major alteration</u> and within new Type B units, a clearance of 48 inches (1220 mm) minimum in length measured perpendicular from the control wall, and 36 inches (915 mm) minimum in depth shall be provided adjacent to the open face of the compartment.</p> <p>802 Assembly Areas</p> <p>802.4 Depth.</p> <p>802.4.1 New Buildings. In new buildings <u>and major alterations</u>, where a wheelchair space can be entered from the front or rear, the wheelchair space shall be 52 inches (1320 mm) minimum in depth. Where a wheelchair space can only be entered from the side, the wheelchair space shall be 60 inches (1525 mm) minimum in depth.</p> <p>802.4.2 Existing Buildings. In existing buildings <u>without a major alteration</u>, where a wheelchair space can be entered from the front or rear, the wheelchair space shall be 48 inches (1220 mm) minimum in depth. Where a wheelchair space can only be entered from the side, the wheelchair space shall be 60 inches (1525 mm) minimum in depth.</p>
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<p>Agenda Item #3 continued</p>	<p>802.5 Approach. The wheelchair space shall adjoin an accessible route. The accessible route shall not overlap the wheelchair space.</p> <p>802.5.1 Overlap. A wheelchair space location shall not overlap the required width of an aisle.</p> <p>Exception: In new buildings <u>and in major alterations to existing buildings</u>, the depth of the wheelchair space shall be permitted to overlap the required aisle width a maximum of 4 inches (100 mm).</p> <p>802.7.2 Companion Seat Alignment. In row seating, the companion seat shall be located to provide shoulder alignment with the wheelchair space occupant. The floor surface for the companion seat shall be at the same elevation as the wheelchair space floor surface.</p> <p>EXCEPTION: Companion seat alignment is not required in tiered seating that includes dining surfaces or work surfaces.</p> <p>802.7.2.1 New Buildings. In new buildings <u>and major alterations</u>, the shoulder of the wheelchair space occupant is considered to be 36 inches (915 mm) from the front or 16 inches (405 mm) from the rear of the wheelchair space.</p> <p>802.7.2.2 Existing Buildings. In existing buildings <u>without a major alteration</u>, the shoulder of the wheelchair space occupant is considered to be 36 inches (915 mm) from the front or 12 inches (305 mm) from the rear of the wheelchair space.</p> <p>804 Kitchens and Kitchenettes</p> <p>804.2.2 U-Shaped Kitchens.</p> <p>804.2.2.1 New Buildings. In new buildings, in kitchens enclosed on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 67 inches (1700 mm) minimum.</p> <p>EXCEPTION: U-shaped kitchens with an island shall be permitted to comply with Section 804.2.1.</p> <p>804.2.2.2 Existing Buildings. In existing buildings, In kitchens enclosed on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 60 inches (1525 mm) minimum. (3-6E-12 PC 4-PC6)</p> <p>EXCEPTION: U-shaped kitchens with an island shall be permitted to comply with Section 804.2.1.</p> <p>805 Transportation Facilities</p> <p>805.2.2 Dimensions.</p> <p>805.2.2.1 New Buildings and Sites. In new buildings <u>with major alterations and new sites</u>, bus stop boarding and alighting areas shall have a 100-inch (2540 mm) minimum clear length, measured perpendicular to the curb or vehicle roadway edge, and a 60-inch (1525 mm) minimum clear width, measured parallel to the vehicle roadway.</p> <p>805.2.2.2 Existing Buildings and Sites. In existing buildings <u>without a major</u></p>
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<p>Agenda Item #3 continued</p>	<p><u>alteration and existing sites</u>, bus stop boarding and alighting areas shall have a 96 - inch (2540 mm) minimum clear length, measured perpendicular to the curb or vehicle roadway edge, and a 60-inch (1525 mm) minimum clear width, measured parallel to the vehicle roadway.</p> <p>1107.3.2 Golf Club Reach Range Area.</p> <p>1107.3.2.1 New Buildings. In new buildings <u>and new miniature golf facilities</u>, all areas within holes where golf balls rest shall be within 36 inches (915 mm) maximum of a clear floor space 36 inches (915 mm) minimum in width and 52 inches (1320 mm) minimum in length complying with Section 305 having a running slope not steeper than 1:20. The clear floor space shall be served by an accessible route.</p> <p>1107.3.2.2 Existing Buildings. In existing buildings <u>and existing miniature golf facilities</u>, all areas within holes where golf balls rest shall be within 36 inches (915 mm) maximum of a clear floor space 36 inches (915 mm) minimum in width and 48 inches (1220 mm) minimum in length complying with Section 305 having a running slope not steeper than 1:20. The clear floor space shall be served by an accessible route.</p> <p>1109.2.3 Clear Deck Space.</p> <p>1109.2.3.1 New Buildings Facilities. In new buildings <u>swimming pools, hot tubs and spas</u>, on the side of the seat opposite the water, a clear deck space shall be provided parallel with the seat. The space shall be 36 inches (915 mm) minimum in width and shall extend forward 52 inches (1320 mm) minimum from a line located 12 inches (305 mm) behind the rear edge of the seat. The clear deck space shall have a slope not steeper than 1:48.</p> <p>1109.2.3.2 Existing Buildings Facilities. In existing buildings <u>swimming pools, hot tubs and spas</u>, on the side of the seat opposite the water, a clear deck space shall be provided parallel with the seat. The space shall be 36 inches (915 mm) minimum in width and shall extend forward 48 inches (1220 mm) minimum from a line located 12 inches (305 mm) behind the rear edge of the seat. The clear deck space shall have a slope not steeper than 1:48.</p>
<p>Reason:</p> <p>During the last ANSI committee meeting, it was agreed that the possible imposition of the larger dimensions for accessibility may cause problems in existing facilities. Therefore, the public comment was approved by the committee. It was also agreed that it seems unfair to exempt every existing building regardless of the amount of alterations taking place. To address the concern, the proposal seeks to add in a definition and use the words "major alteration."</p> <p>The definition begins by addressing the scope similar to that for a Level 3 Alteration according to the ICC Existing Building Code; the work area exceeds 50 percent of the aggregate building area. However, to make the definition specific certain types of activities are not intended to be included when considering an alteration as a major one. These items were taken from the text of the ADA in Sections 35.151(a)(4)(i)(B) and 36.402(b)(1) to encompass both Title II and Title III entities.</p> <p>These are reasonable limitations. It makes no sense to exempt a building that is being gutted and the entire interior reconstructed. At the same time, it makes no sense to require compliance where the scope of work is limited to the installation of a new HVAC system.</p> <p>Existing buildings were noted either with major alterations or without a major alteration to distinguish between the two conditions. For elevators, the blanket exception was allowed to continue due to the fact that the alterations may be to the top 3 floors but the bottom two floors and the basement may not be altered. In such a case, it would be difficult to alter the existing hoistway shaft to allow the larger size car. In all cases the allowance for Type B units whether existing or not was intended to continue due to the FHA compliance intent of the requirements.</p> <p>No change was offered for Section 502.4.2 Width because the committee actions for 3-6-12 PC 3 through PC 10 returned the width of the access aisle to 60 inches for new construction.</p>	

The text for 503.3.2 left the proposed text unchanged for the width of the passenger loading zone access aisle. Because this aspect of accessibility is typically outside the building and independent of what scope of alteration would take place within the building.

The provisions of 807.2 (shoulder alignment) is conditional upon whether the new space is required or not to comply with the requirements for the larger wheelchair space. Therefore, for this section, the reference is made back to the prior section rather than to the major alteration itself.

Section 804.2.2 is shown above based on the committee actions on 3-6E-12 PC 4 through PC6. Because the turning space can be accomplished within 60 inches (T-turn), the text is shown with that language regardless of new or existing condition.

The provisions in Section 1107.3.2 were not included with the “major alteration” line because those are specific facilities which may or may not be involved in the major alteration. The language here was changed to also include new and existing miniature golf facilities. As the original proposal only addressed new and existing “buildings” the question remained what to do with miniature golf facilities that were outside. Also, by adding the reference to facilities, if a new miniature golf facility was built into an existing building, the revised text would make it clear that the new facility would need to meet the new requirements regardless of whether the surrounding building was new or existing.

In Section 1109.2.3 the title was changed to reflect the various types of aquatic facilities that could be included. Also, similar to the miniature golf requirements, the term “building” could be confusing if the swimming pool was located outside on the grounds and not within or on a building. The added aquatic facilities provisions are taken from the scoping section but did not include wading pools because the access to wading pools must be by sloped entry.

During the last committee meeting, the committee indicated this proposal needed additional work. Hopefully the proposals noted above will address the committee’s concerns.

Agenda Item #4

Comment No: 3-6-12 PC2.3	Submitted by: Edward Steinfeld - RESNA
	<p>All sections listed in 3-6-12 PC2 ... 106.5, 304.3.1, 304.3.2, 305.3, 305.7.2, 308.2, 403.5.1, 403.5.2, 403.5.3, 403.5.4, 404.2.3.2, 404.2.3.3, 404.2.3.4, 408.4.1, 409.4.1, 410.5.1, 502.4.2, 503.3.2, 608.2.1.2, 802.4, 802.5.1, 802.7.2, 804.2.2, 805.2.2, 1107.3.2, 1109.2.3</p> <p>Delete all differences between existing and new buildings in these paragraphs (2nd public review draft) and revert solely to the new building requirements (1st public review draft).</p>

Reason:

The IBC as well as state and local codes for existing buildings require compliance with new building standards for accessibility when making alterations to specific elements and spaces unless it is technically infeasible. Exceptions are also specified which differ based on the extent of alterations being completed (Levels 1-3). If the work is classified as substantial improvement, more extensive requirements for accessibility for the building are triggered. Where complying with new building construction codes is technically infeasible, alterations have to comply to the maximum extent feasible. These provisions not only should be sufficient to provide waivers when the new clearances are not possible to achieve but they also include blanket exceptions for specific items that can be difficult to make completely compliant with new construction standards, e.g. emergency stairs and elevators.

Thus, adding specific paragraphs on existing buildings directly into the A117.1 standard for these paragraphs is inappropriate since there already is a mechanism to handle situations when meeting the requirements is technically infeasible. We have examined the plans of several existing buildings and find that the new requirements are not difficult to meet, especially in “substantial improvement”.

There are three reasons why we should let the existing IBC approach apply to these new requirements just like they do for the older items:

1. The addition of specific exceptions for existing buildings treats these newly adopted requirements differently than other newly adopted requirements. It could be that other changes warrant special treatment in existing buildings but we are ignoring them. If we agree to go ahead and add such scoping items to the standard, we should do it in a comprehensive manner, which would mean including similar exceptions to many other items.

2. If these requirements are maintained, we actually are providing a “short circuit” to the IBC Existing Building requirements and similar local and state building codes as well as government agencies that refer to this standard in their regulations. There are two ways that this will result in a lower standard of accessibility during alterations. First, without addressing the different types of alterations, as in the IBC EB, we are treating all projects the same. An alteration to a doorway or a toilet stall is treated the same as a gut rehab in which all the interior partitions are completely removed. Second, unlike the IBC EB (and local and state codes), the paragraphs added do not require compliance to the maximum extent feasible when the new requirements cannot be met entirely. This is a serious limitation that amounts to a blanket exception.
3. If local and state code authorities and government agencies want to maintain the current approach based on technical infeasibility, they would have to create a specific regulation to delete these sections from their code and the result would be a very confusing situation across the country where different states and agencies would have different requirements. The IBC mechanism would keep everything standardized.

It should be noted that in the second public review draft, the mailbox provisions we added previously were deleted since the committee agreed that they were scoping requirements and are inappropriate for this standard. Why are we taking the reverse position in this case? A mechanism for granting exceptions is already provided for by existing codes. If members believe that the additional blanket exceptions are necessary, they should focus on including them in the next version of the IBC EB, not the A117.1 Standard.

We think that, if the Committee concludes that these new requirements could be a universal problem, then a more comprehensive approach to existing buildings should be developed based on evidence rather than an arbitrary decision based on assumptions that may not be true. Since there is already a mechanism in place to address existing buildings in the IBC and state codes, there is no rush to address existing buildings now, just for this set of items. We could wait until after this cycle is done and address the problems of existing buildings in a comprehensive way, including all the issues related to existing construction, not just wheelchair clearances.

3-6-12 PC2 AS PUBLISHED 2ND PUBLIC REVIEW DRAFT

106.5 Defined terms - Add new definition as follows:

Existing building. A building erected prior to the date of adoption of this standard, or one for which a legal building permit has been issued.

Revise as follows:

304.3.1 Circular Space.

304.3.1.1 New Buildings. In new buildings, the turning space shall be a circular space with a 67 inch (1700 mm) minimum diameter. The turning space shall be permitted to include knee and toe clearance complying with Section 306. Where the turning space includes knee and toe clearances under an obstruction, the overlap shall comply with all of the following:

1. The depth of the overlap shall not be more than 10 inches (255 mm), and
2. The depth shall not exceed the depth of the knee and toe clearances provided, and
3. The overlap shall be permitted only within the turning circle area shown shaded in Figure 304.3.1.

304.3.1.2 Existing buildings. In existing buildings, the turning space shall be a circular space with a 60 inch (1525 mm) minimum diameter. The turning space shall be permitted to include knee and toe clearance complying with Section 306.

304.3.2 T-Shaped Space.

304.3.2.1 New Construction. In new buildings, the turning space shall be a T-shaped space complying with one of the following:

1. A T-shaped space, clear of obstruction, that fits within an area 68 inches (1725 mm) wide and 60 inches (1525 mm) deep, with two arms and one base that are all 36 inches (915 mm) minimum in width. Each arm shall extend 16 inches (405 mm) minimum from each side of the base located opposite the other, and the base shall extend 24 inches (610 mm) minimum from the arms. At the intersection of each arm and the base, the interior corners shall be chamfered for 8 inches (205 mm) minimum along both the arm and along the base.
2. A T-shaped space, clear of obstruction, that fits within an area 64 inches (1625 mm) wide and 60 inches (1525 mm) deep, with two arms 38 inches (965 mm) minimum in width and a base 42 inches (1065 mm) minimum in width. Each arm shall extend 11 inches (280 mm) minimum from each side of the base, located opposite the other, and the base shall extend 22 inches (560 mm) minimum from each arm.
2. A T-shaped space, clear of obstruction, that fits within an area 64 inches (1625 mm) wide and 60 inches (1525 mm) deep, with two arms and one base 40 inches (1015 mm) minimum in width. Each arm shall be 16 inches (405 mm) minimum in each direction from the base and the base shall extend 24 inches (610 mm) minimum from each arm.

304.3.2.2 Existing Buildings. In existing buildings, the turning space shall be a T-shaped space within a 60-inch (1525 mm) minimum square, with arms and base 36 inches (915 mm) minimum in width. Each arm of the T shall be clear of obstructions 12 inches (305 mm) minimum in each direction, and the base shall be clear of obstructions 24 inches (610 mm) minimum. The turning space shall be permitted to include knee and toe clearance complying with Section 306 only at the end of either the base or one arm.

305.3 Size.

305.3.1 New Buildings. In new buildings, the clear floor space shall be 52 inches (1320 mm) minimum in length and 30 inches (760 mm) minimum in width.

305.3.2 Existing Buildings and Within New Type B Units. In existing construction and within new Type B units, the clear floor space shall be 48 inches (1220 mm) minimum in length and 30 inches (760 mm) minimum in width.

305.7.2 Forward Approach.

305.7.2.1 New Buildings. In new buildings, Where the clear floor space is positioned for a forward approach, the alcove shall be 36 inches (915 mm) minimum in width where the depth exceeds 20 inches (510 mm).

305.7.2.2 Existing Buildings and Within New Type B Units. In existing buildings and within new Type B units, where the clear floor space is positioned for a forward approach, the alcove shall be 36 inches (915 mm) minimum in width where the depth exceeds 24 inches (610 mm).

308.2 Forward Reach.

308.2.1 Unobstructed.

308.2.1.1 New Buildings. In new buildings, where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 23 inches (585 mm) minimum above the floor.

308.2.1.2 Existing Buildings and Within New Type B Units. In existing buildings and within new Type B units, where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the floor.

403.5.1 General. The clear width of an accessible route shall be 36 inches (915 mm) minimum. The clear width of an exterior accessible route shall be 48 inches (1220 mm) minimum.

EXCEPTIONS:

4. In new buildings, the clear width shall be permitted to be reduced to 32 inches (815 mm) minimum for a length of 24 inches (610 mm) maximum provided the reduced width segments are separated by segments that are 52 inches (1320 mm) minimum in length and 36 inches (915 mm) minimum in width.
5. In existing buildings and within new Type B units, the clear width shall be permitted to be reduced to 32 inches (815 mm) minimum for a length of 24 inches (610 mm) maximum provided the reduced width segments are separated by segments that are 48 inches (1220 mm) minimum in length and 36 inches (915 mm) minimum in width.
6. The clear width of an exterior ramp shall comply with Section 405.5.

403.5.1 403.5.2 Clear Width at 180 Degree Turn.

403.5.2.1 New Buildings. In new buildings, where an accessible route makes a 180 degree turn around an object that is equal to or greater than 52 inches (1320 mm) in width, the clear widths in the turn shall comply with Section 405.5.1. Where an accessible route makes a 180 degree turn around an object that is less than 52 inches (1320 mm) in width, the clear widths approaching the turn, during the turn and leaving the turn, shall be one of the following sets of dimensions:

1. Approaching width is 36 inches (915 mm) minimum, during width is 60 inches (1525 mm) minimum, and leaving width is 36 inches (915 mm) minimum.
2. Approaching width is 42 (1065 mm) inches minimum, during width is 48 inches (1220 mm) minimum, and leaving width is 42 (1065 mm) inches minimum.
3. Approaching width is 43 inches (1090 mm) minimum, during width is 43 inches (1090 mm) minimum, and leaving width is 43 inches (1090 mm) minimum.

403.5.2.2 Existing Buildings and Within New Type B Units. In existing buildings and within new Type B units, where an accessible route makes a 180 degree turn around an object that is less than 48 inches (1220 mm) in width, clear widths shall be 42 inches (1065 mm) minimum approaching the turn, 48 inches (1220 mm) minimum during the turn and 42 (1065 mm) inches minimum leaving the turn.

EXCEPTION: Section 403.5.1 shall not apply where the clear width during the turn is 60 inches (1525 mm) minimum.

403.5.3 Clear Width at 90 Degree Turn.

403.5.3.1 New Buildings. In new buildings, where an accessible route makes a 90 degree turn the clear widths approaching the turn and leaving the turn shall be one of the following sets of dimensions:

2. Both legs of the turn shall be 40 inches (1016 mm) minimum in width. The width of each leg of the turn shall be maintained for 28 inches minimum from the inner corner.
2. Where the interior corners of the turn are chamfered for 8 inches minimum (205 mm) along both walls, both legs of the turn shall be 36 inches (915 mm) minimum in width.

EXCEPTIONS:

1. Where one leg of the turn is 42 inches (1065 mm) minimum in width, the other shall be permitted to be 38 inches (965 mm) minimum in width.
2. Where one leg of the turn is 44 inches (1115 mm) minimum in width, the other shall be permitted to be 36 inches (915 mm) minimum in width.

403.5.3.2 Existing Buildings and Within Type B Units. In existing buildings and within new Type B units, where an accessible route makes a 90 degree turn the clear widths approaching the turn and leaving the turn shall be 36 inches (915 mm) minimum.

403.5.4 403.5.2 Passing Space.

403.5.4.1 New Buildings. In new buildings, An accessible route with a clear width less than 60 inches (1525 mm) shall provide passing spaces at intervals of 200 feet (61 m) maximum. Passing spaces shall be either a 60-inch (1525 mm) minimum by 60-inch (1525 mm) minimum space, or an intersection of two walking surfaces that provide a T-shaped turning space complying with Section 304.3.2, provided the base and arms of the T-shaped space extend 52 inches (1320 mm) minimum beyond the intersection.

403.5.4.2 Existing Buildings and Within New Type B Units. In existing buildings and within new Type B units, an accessible route with a clear width less than 60 inches (1525 mm) shall provide passing spaces at intervals of 200 feet (61 m) maximum. Passing spaces shall be either a 60-inch (1525 mm) minimum by 60-inch (1525 mm) minimum space, or an intersection of two walking surfaces that provide a T-shaped turning space complying with Section 304.3.2, provided the base and arms of the T-shaped space extend 48 inches (1220 mm) minimum beyond the intersection.

404.2.3.2 Swinging Doors and Gates. Swinging doors and gates shall have maneuvering clearances complying with Table 404.2.3.2.

**Table 404.2.3.2
Maneuvering Clearances at Manual Swinging
Doors and Gates**

TYPE OF USE		MINIMUM MANEUVERING CLEARANCES	
Approach Direction	Door or Gate Side	Perpendicular to Doorway	Parallel to Doorway (beyond latch unless noted)
From front	Pull	60 inches (1525 mm)	18 inches (455 mm)
From front	Push	52 inches ⁵ (1320 mm)	0 inches (0 mm) ³
From hinge side	Pull	60 inches (1525 mm)	36 inches (915 mm)
From hinge side	Push	54 inches (1370 mm)	42 inches (1065 mm)
From hinge side	Push	42 inches (1065 mm) ¹	22 inches (560 mm) ^{3&4}
From latch side	Pull	48 inches (1220 mm) ²	24 inches (610 mm)
From latch side	Push	42 inches (1065 mm) ²	24 inches (610 mm)

1. Add 6 inches (150 mm) if closer and latch provided.
2. Add 6 inches (150 mm) if closer provided.
3. Add 12 inches (305 mm) beyond latch I if closer and latch provided.
4. Beyond hinge side.
5. In existing buildings and within new Type B buildings the dimension perpendicular to the door for the front direction on the push side shall be 48 inches (122 mm) minimum.

404.2.3.3 Sliding and Folding Doors. Sliding doors and folding doors shall have maneuvering clearances complying with Table

404.2.3.3.

**Table 404.2.3.3
Maneuvering Clearances at Sliding and Folding Doors**

Approach Direction	MINIMUM MANEUVERING CLEARANCES	
	Perpendicular to Doorway	Parallel to Doorway (beyond stop or latch side unless noted)
From front	52 inches ² (1320 mm)	0 inches (0 mm)
From nonlatch side	42 inches (1065 mm)	22 inches (560 mm) ¹
From latch side	42 inches (1065 mm)	24 inches (610 mm)

3. Beyond pocket or hinge side.
4. In existing buildings and within new Type B buildings the dimension perpendicular to the door for the front direction shall be 48 inches (122 mm) minimum.

404.2.3.4 Doorways without Doors or Gates. Doorways without doors or gates that are less than 36 inches (915 mm) in width shall have maneuvering clearances complying with Table 404.2.3.4.

**Table 404.2.3.4
Maneuvering Clearances for Doorways without Doors**

Approach Direction	MINIMUM MANEUVERING CLEARANCES Perpendicular to Doorway
From front	52 inches (1320 mm) ¹
From side	42 inches (1065 mm)

2. In existing buildings and within new Type B buildings the dimension perpendicular to the doorway for the front direction shall be 48 inches (122 mm) minimum.

408 Limited-Use/Limited-Application Elevators

408.4.1 Inside Dimensions. Elevator cars shall provide a clear floor width of 42 inches (1065 mm) minimum. The clear floor area shall not be less than 15.75 square feet (1.46 m²). The elevator car shall provide a clear floor space complying with Section 305.3.

EXCEPTIONS:

1. For installations in existing buildings, elevator cars that provide a clear floor area of 15 square feet (1.4 m²) minimum, and provide a clear inside dimension of 36 inches (915 mm) minimum in width and 54 inches (1370 mm) minimum in depth, shall be permitted. This exception shall not apply to cars with doors on adjacent sides.
2. For installations in existing buildings, cars that provide a clear width 51 inches (1295 mm) minimum shall be permitted to provide a clear depth 51 inches (1295 mm) minimum provided that car doors provide a clear opening 36 inches (915 mm) wide minimum.

409 Private Residence Elevators

409.4.1 Inside Dimensions.

409.4.1.1 New Buildings. In new buildings, elevator cars shall provide a clear floor area 36 inches (915 mm) minimum in width and 52 inches (1322 mm) minimum in depth.

409.4.1.2 Existing Buildings and Within New Type B Units. In existing buildings and within new Type B units, elevator cars shall provide a clear floor area 36 inches (915 mm) minimum in width and 48 inches (1220 mm) minimum in depth.

410 Platform Lifts

410.5.1 Lifts with Single Doors or Doors on Opposite Ends.

410.5.1.1 New Buildings. In new buildings, platform lifts with a single door or doors on opposite ends shall provide a clear floor width of 36 inches (915 mm) minimum and a clear floor depth of 52 inches (1322 mm) minimum.

Exception: Incline platform lifts with passenger restraining arms, shall be permitted to provide a clear floor width of 36 inches

(915 mm) minimum and a clear floor depth of 48 inches (1220) mm.

410.5.1.2 Existing Buildings and Within New Type B Units. In existing buildings and within new Type B units, platform lifts with a single door or doors on opposite ends shall provide a clear floor width of 36 inches (915 mm) minimum and a clear floor depth of 48 inches (1220 minimum).

502.4.2 Width.

502.4.2.1 New Buildings. In new buildings, access aisles serving car and van parking spaces shall be 67 inches (1700 mm) minimum in width.

502.4.2.2 Existing Buildings and Within New Type B Units. In existing buildings and serving new Type B units, access aisles serving car and van parking spaces shall be 60 inches (1525 mm) minimum in width.

503 Passenger Loading Zones

503.3.2 Width.

503.3.2.1 New Buildings. In new buildings, access aisles serving vehicle pull-up spaces shall be 67 inches (1700 mm) minimum in width.

503.3.2.2 Existing Buildings and Within New Type B Units. In existing buildings and serving new Type B units, access aisles serving vehicle pull-up spaces shall be 60 inches (1525 mm) minimum in width.

608.2.1.2 Clearance.

608.2.1.2.1 New Buildings. In new buildings, a clearance of 52 inches (1320 mm) minimum in length measured perpendicular from 12 inches beyond the seat wall, and 36 inches (915 mm) minimum in depth shall be provided adjacent to the open face of the compartment.

608.2.1.2.2 Existing Buildings and Within New Type B Units. In existing buildings and within new Type B units, a clearance of 48 inches (1220 mm) minimum in length measured perpendicular from the control wall, and 36 inches (915 mm) minimum in depth shall be provided adjacent to the open face of the compartment.

802 Assembly Areas

802.4 Depth.

802.4.1 New Buildings. In new buildings, where a wheelchair space can be entered from the front or rear, the wheelchair space shall be 52 inches (1320 mm) minimum in depth. Where a wheelchair space can only be entered from the side, the wheelchair space shall be 60 inches (1525 mm) minimum in depth.

802.4.2 Existing Buildings. In existing buildings, where a wheelchair space can be entered from the front or rear, the wheelchair space shall be 48 inches (1220 mm) minimum in depth. Where a wheelchair space can only be entered from the side, the wheelchair space shall be 60 inches (1525 mm) minimum in depth.

802.5 Approach. The wheelchair space shall adjoin an accessible route. The accessible route shall not overlap the wheelchair space.

802.5.1 Overlap. A wheelchair space location shall not overlap the required width of an aisle.

Exception: In new buildings, the depth of the wheelchair space shall be permitted to overlap the required aisle width a maximum of 4 inches (100 mm).

802.7.2 Companion Seat Alignment. In row seating, the companion seat shall be located to provide shoulder alignment with the wheelchair space occupant. The shoulder of the wheelchair space occupant is considered to be 36 inches (915 mm) from the front or 16 inches (405 mm) from the rear of the wheelchair space. The floor surface for the companion seat shall be at the same elevation as the wheelchair space floor surface.

EXCEPTION: Companion seat alignment is not required in tiered seating that includes dining surfaces or work surfaces.

802.7.2.1 New Buildings. In new buildings, the shoulder of the wheelchair space occupant is considered to be 36 inches (915 mm) from the front or 16 inches (405 mm) from the rear of the wheelchair space.

802.7.2.2 Existing Buildings. In existing buildings, The shoulder of the wheelchair space occupant is considered to be 36 inches (915 mm) from the front or 12 inches (305 mm) from the rear of the wheelchair space.

804 Kitchens and Kitchenettes

804.2.2 U-Shaped Kitchens.

804.2.2.1 New Buildings. In new buildings, in kitchens enclosed on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 67 inches (1700 mm) minimum.

EXCEPTION: U-shaped kitchens with an island shall be permitted to comply with Section 804.2.1.

804.2.2.2 Existing Buildings. In existing buildings, in kitchens enclosed on three contiguous sides, clearance between all opposing base cabinets, countertops, appliances, or walls within kitchen work areas shall be 60 inches (1525 mm) minimum.

EXCEPTION: U-shaped kitchens with an island shall be permitted to comply with Section 804.2.1.

805 Transportation Facilities

805.2.2 Dimensions.

805.2.2.1 New Buildings and Sites. In new buildings and sites, bus stop boarding and alighting areas shall have a 100-inch (2540 mm) minimum clear length, measured perpendicular to the curb or vehicle roadway edge, and a 60-inch (1525 mm) minimum clear width, measured parallel to the vehicle roadway.

805.2.2.2 Existing Buildings and Sites. In existing buildings and sites, bus stop boarding and alighting areas shall have a 96 - inch (2540 mm) minimum clear length, measured perpendicular to the curb or vehicle roadway edge, and a 60-inch (1525 mm) minimum clear width, measured parallel to the vehicle roadway.

1107.3.2 Golf Club Reach Range Area.

1107.3.2.1 New Buildings. In new buildings, all areas within holes where golf balls rest shall be within 36 inches (915 mm) maximum of a clear floor space 36 inches (915 mm) minimum in width and 52 inches (1320 mm) minimum in length complying with Section 305 having a running slope not steeper than 1:20. The clear floor space shall be served by an accessible route.

1107.3.2.2 Existing Buildings. In existing buildings, all areas within holes where golf balls rest shall be within 36 inches (915 mm) maximum of a clear floor space 36 inches (915 mm) minimum in width and 48 inches (1220 mm) minimum in length complying with Section 305 having a running slope not steeper than 1:20. The clear floor space shall be served by an accessible route.

1109.2.3 Clear Deck Space.

1109.2.3.1 New Buildings. In new buildings, on the side of the seat opposite the water, a clear deck space shall be provided parallel with the seat. The space shall be 36 inches (915 mm) minimum in width and shall extend forward 52 inches (1320 mm) minimum from a line located 12 inches (305 mm) behind the rear edge of the seat. The clear deck space shall have a slope not steeper than 1:48.

1109.2.3.2 Existing Buildings. In existing buildings, on the side of the seat opposite the water, a clear deck space shall be provided parallel with the seat. The space shall be 36 inches (915 mm) minimum in width and shall extend forward 48 inches (1220 mm) minimum from a line located 12 inches (305 mm) behind the rear edge of the seat. The clear deck space shall have a slope not steeper than 1:48.

3-13-12 PC4	
Agenda Item #5	
Comment No: 3-13-12 PC4.1	Submitted by: Edward Steinfeld - RESNA
	<p>Further revised as follows:</p> <p>305.7.2 Forward Approach. Where the clear floor space is positioned for a forward approach, the alcove shall be 36 inches (915 mm) minimum in width where the depth exceeds 20 inches (508 mm) <u>24 inches (610 mm)</u>.</p> <p>Exception: Alcoves in a kitchen or bathroom, formed by cabinets or appliances and providing for access to a sink, lavatory or accessible work surface, shall be 36 inches (915 mm) minimum in width where the depth exceeds 24 inches (610 mm).</p>
<p>Reason: Kitchens have the greatest need for accessibility so if we agree that the depth trigger can be 4 in. deeper there, we should allow it everywhere. The proposed change would result in a more consistent standard that is easier to use and administer.</p>	
3-13-12 PC4 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT	
<p>Revise as follows:</p> <p>305.7.2 Forward Approach. Where the clear floor space is positioned for a forward approach, the alcove shall be 36 inches (915 mm) minimum in width where the depth exceeds 20 inches (508 mm).</p> <p>Exception: <u>Alcoves in a kitchen or bathroom, formed by cabinets or appliances and providing for access to a sink, lavatory or accessible work surface, shall be 36 inches (915 mm) minimum in width where the depth exceeds 24 inches (610 mm).</u></p>	

3-21-12 PC2	
Agenda Item #6	
Comment No: 3-21-12 PC2.1	Submitted by: Edward Steinfeld - RESNA
	<p>Further revised as follows:</p> <p>308.2.2 Obstructed High Reach. Where a high forward reach is over an obstruction, the clear floor space complying with Section 305 and knee and toe clearance complying with Section 306 shall extend beneath the element for a distance not less than the reach depth over the obstruction. The high forward reach shall be 48 inches (1220 mm) maximum above the floor where the reach depth over the obstruction is 20 inches (510 mm) maximum. The high forward reach shall be 44 inches (1120 mm) maximum above the floor where the reach depth over the obstruction is greater than 20 inches (510 mm) <u>and not more than 25 inches (635 mm).</u> The obstruction depth shall be 25 in. (635 mm) <u>maximum.</u></p>
<p>Reason: The proposed wording does not clearly convey the intent. The new wording is much clearer.</p>	
3-21-12 PC2 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT	
<p>Revise as follows:</p> <p>308.2.2 Obstructed High Reach. Where a high forward reach is over an obstruction, the clear floor space complying with Section 305 and knee and toe clearance complying with Section 306 shall extend beneath the element for a distance not less than the reach depth over the obstruction. The high forward reach shall be 48 inches (1220 mm) maximum above the floor where the reach depth over the obstruction is 20 inches (510 mm) maximum. Where the reach depth over the obstruction is more than 20 inches (510 mm) and 25 inches (635 mm) or less, the high forward reach shall be 44 inches (1120 mm) maximum above the floor. <u>The high forward reach shall be 44 inches (1120 mm) maximum above the floor where the reach depth over the obstruction is greater than 20 inches (510 mm) and not more than 25 inches (635 mm).</u></p>	

5-24-12 PC1	
Agenda Item #7	
Comment No: 5-24-12 PC1.1	Submitted by: Gene Boecker - NATO
	<p>Further revise as follows:</p> <p>309.1 General. Operable parts required to be accessible shall comply with Section 309.</p> <p>Exception: Firefighting <u>Emergency Aid</u> devices, such as <u>fire department</u> hose connections, valve controls, gauges, <u>police call boxes</u> and annunciator panels shall not be required to comply with Section 309 provided that they are used only for emergencies by emergency personnel acting in their official capacity.</p>
<p>Reason:</p> <p>The exemption should not be limited to only firefighting devices. Two additional examples are included to help with this understanding. Police call boxes which are used by the police department to communicate with a substation are not accessed by the public or employees and should be outside the requirement for operable parts although the box may be installed as part of the scope of work. The text in the last line approved in the prior public comment makes it clear that the exception only applies where the devices are ONLY used by emergency responders and not available for use by employees such as AED's.</p>	
5-24-12 PC1 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT	
<p>309.1 General. Operable parts required to be accessible shall comply with Section 309.</p> <p>Exception: Equipment <u>Firefighting</u> devices, such as hose connections, valve controls, gauges, and annunciator panels shall <u>not be required to comply with Section 309 provided that they are</u> used only for emergencies by emergency responders or emergency personnel shall not be required to comply with Section 309 <u>acting in their official capacity.</u></p>	

Chapter 4

4-23-12	
Agenda Item #8	
Comment No. 4-23-12 PC1.1	Submitted by: Jim Pecht – Access Board
	<p>Further revised as follows:</p> <p>404.2.6 Door Hardware. Handles, pulls, latches, locks, and other operable parts on accessible doors shall comply with 309.4 have a shape that is easy to grasp with one hand and does not require tight grasping, pinching, or twisting of the wrist to operate. The operational force to retract latches or disengage devices that hold the door in a closed position shall be as follows:</p> <ol style="list-style-type: none"> 1. Hardware operation by a forward, pushing or pulling motion: 15 pounds (66.7 N) maximum 2. Hardware operation by a rotational motion: 28 inch-pounds (315 N-cm) maximum <p>Operable parts of such hardware shall be 34 inches (865 mm) minimum and 48 inches (1220 mm) maximum above the floor. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.</p> <p>EXCEPTIONS: <u>1. Locks used only for security purposes and not used for normal operation are permitted in any location.</u></p> <p><u>2. Panic hardware, delayed egress devices or fire-rated door hardware shall be permitted to exceed the 5 lb requirement.</u></p>
<p>Reason: The original provision approved by the Committee limited the provision to the 5 pounds of force for door hardware to “panic hardware, delayed egress devices, or fire rated hardware.” The two new provisions to 404.2.6 apply to all doors including interior door hardware that are not “panic hardware, delayed egress devices, or fire rated hardware.” The two provisions should be deleted and a new exception should be inserted to allow these types of door hardware to exceed the maximum lbf requirement.</p>	
Agenda Item #9	
Comment No. 4-23-12 PC2.1	Submitted by: Kim Paarlberg – ICC
	<p>Further Revise as follows:</p> <p>404.2.8 Door-Opening Force. Fire doors shall have the minimum opening force allowable in scoping provisions adopted by the appropriate administrative authority. For other doors the force for pushing or pulling open doors shall be as follows:</p> <ol style="list-style-type: none"> 1. Interior hinged door: 5.0 pounds (22.2 N) maximum 2. Interior sliding or folding door: 5.0 pounds (22.2 N) maximum 3. Exterior sliding door: 10.0 pounds (45 N) maximum <p>Opening forces for exterior sliding doors shall be determined in accordance with AAMA 513.</p>
<p>Reason:</p>	

<p>Exterior doors are not required to have an opening force by the IBC, NFPA or ADA. The reason is that pressure differences due to climate controls within the building, weather outside the building and wind direction can result in an exterior door having different force to open on different days. An exterior force should not be specified her for sliding doors. While there is not some of the same issues as swinging doors, exterior doors shrink or swell based on temperature and humidity.</p>	
<p>Agenda Item #10</p>	
<p>Comment No. 4-23-12 PC2.2</p>	<p>Submitted by: Julie Ruth – JRuth Code Consulting representing American Architectural Manufacturers Association (AAMA)</p>
	<p>Further Revised as follows:</p> <p>106.2.13 Standard Laboratory Test Method for Determination of Forces and Motions Required to Activate Operable Parts of CW and AW Class Operable Windows, Sliding Glass Doors and Terrace Doors in Accessible Spaces, AAMA 513 – 14-12(AAMA, 1827 Walden Office Square, Suite 550, Schaumburg, IL 60173-4268)</p>
<p>Reason: During the development of the second Public Review Draft the ANSI A117 committee approved 4-23 PC2, which added reference to AAMA 513 - 12 for the determination of the opening force for exterior sliding doors.</p> <p>In response to comments received from the ANSI A117 committee with regards to referencing AAMA 513 - 12 for operable windows (5-23 PC4), AAMA 513 has been revised.</p> <p>The new edition, with revised title, is indicated in this comment. It updates the previously approved edition of the proposed referenced standard to the recently revised edition. The committee will be asked to consider this recent edition via a separate comment on 5-23 PC4. If approved, approval of this comment would be appropriate for consistency.</p>	
<p>4-23-12 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT</p>	
<p>4-23-12 PC1</p> <p>Revise as follows:</p> <p>404.2.6 Door Hardware. Handles, pulls, latches, locks, and other operable parts on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, pinching, or twisting of the wrist to operate. <u>The operational force to retract latches or disengage devices that hold the door in a closed position shall be as follows:</u></p> <ol style="list-style-type: none"> 1. <u>Hardware operation by a forward, pushing or pulling motion: 15 pounds (66.7 N) maximum</u> 2. <u>Hardware operation by a rotational motion: 28 inch-pounds (315 N-cm) maximum</u> <p>Operable parts of such hardware shall be 34 inches (865 mm) minimum and 48 inches (1220 mm) maximum above the floor. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.</p> <p>EXCEPTION: Locks used only for security purposes and not used for normal operation are permitted in any location.</p> <p>404.2.8 Door-Opening Force. Fire doors shall have the minimum opening force allowable <u>in scoping provisions adopted</u> by the appropriate administrative authority. For other doors, the The force for pushing or pulling open doors other than fire doors shall be as follows:</p> <ol style="list-style-type: none"> 1. Interior hinged door: 5.0 pounds (22.2 N) maximum 2. Sliding or folding door: 5.0 pounds (22.2 N) maximum <p>These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position.</p>	
<p>4-23-12 PC2</p> <p>Revise as follows:</p> <p>404.2.8 Door-Opening Force. Fire doors shall have the minimum opening force allowable in scoping provisions adopted by the appropriate administrative authority. For other doors the force for pushing or pulling open doors shall be as follows:</p>	

1. Interior hinged door: 5.0 pounds (22.2 N) maximum
2. Interior Sliding or folding door: 5.0 pounds (22.2 N) maximum
3. Exterior sliding door: 10.0 pounds (45 N) maximum

Opening forces for exterior sliding doors shall be determined in accordance with AAMA 513.

Add new reference standard as follows:

105.2.XX Standard Laboratory Test Method for Determination of Forces and Motions Required to Activate Operable Parts of CW and AW Class Operable Windows, Sliding Glass Doors and Terrace Doors in Accessible Spaces, AAMA 513 - 12 (AAMA, 1827 Walden Office Square, Suite 550, Schaumburg, IL 60173-4268.)

4-33-12	
Agenda Item #11	
Comment No. 4-33-12 PC1.1	Submitted by: Gene Boecker - NATO
	<p>Further revises as follows:</p> <p>404.3.1 Public Entrances. Where an automatic door is required <u>provided</u> at a building or facility public entrance, it shall be a full powered automatic door or a low-energy door. Where the entrance includes a vestibule that has exterior and interior entrance doors, at least one exterior door and one interior door in the vestibule shall be either a full powered automatic door or a low-energy door.</p>
<p>Reason: This discussion began during the prior committee meeting whether the technical criteria herein should be applied where the automatic doors are provided or if it would only be applicable if the automatic doors are required by some outside scoping document. If the latter is intended then the requirement that automatic doors be operable for both the exterior and interior vestibule would only be applicable in limited jurisdictions. In the rest of the country, one door could be full power automatic and the other could be manual or power-assist. If that is the intent, then defeat the public comment. If the intent is that both sets of vestibule doors should be operated by either full automatic or low energy, then approve the proposal.</p>	
4-33-12 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT	
<p>Add new section as follows:</p> <p><u>404.3.1 Public Entrances. Where an automatic door is required at a building or facility public entrance, it shall be a full powered automatic door or a low-energy door. Where the entrance includes a vestibule that has exterior and interior entrance doors, at least one exterior door and one interior door in the vestibule shall be either a full powered automatic door or a low-energy door.</u></p>	

4-31-12	
Agenda Item #12	
Comment No. 4-31-12 PC1.1	Submitted by: Hope Reed - NMGCD
	<p>Further revise as follows:</p> <p>404.3.4 Two Doors or Gates in Series. Doors or gates in series shall comply with Section 404.2.5.</p> <p>EXCEPTION: In existing buildings or facilities where Where both doors or gates in a series are power assist doors, low energy automatic doors or full power automatic doors, the two doors and gates in a series shall not be required to provide a turning space between the doors.</p>
<p>Reason: Automatic doors frequently malfunction. In existing buildings this exception makes sense, but In new construction we do not want to trap a person with disabilities between the doors.</p>	
4-31-12 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT	
<p>Revise as follows:</p> <p>404.3 Automatic Doors <u>and</u> Power-Assisted Doors <u>and</u> Gates. Automatic doors and automatic gates shall comply with Section 404.3. Full powered automatic doors <u>and gates</u> shall comply with ANSI/BHMA A156.10 listed in Section 105.2.4. Power-assist doors <u>and gates</u> and low-energy automatic doors <u>and gates</u> shall comply with ANSI/BHMA A156.19 listed in Section.105.2.7.</p> <p>EXCEPTION: Doors, doorways, and gates designed to be operated only by security personnel shall not be required to comply with Sections 404.3.2, 404.3.4, and 404.3.5.</p> <p>404.3.2 Maneuvering Clearances. Maneuvering clearances at power-assisted doors <u>and gates</u> shall comply with Section 404.2.3. Maneuvering clearances <u>complying with Section 404.2.3</u> shall be provided on the egress side of low-energy automatic doors <u>and gates</u> and full power automatic doors <u>and gates</u> that serve as part of the accessible means of egress.</p> <p>EXCEPTIONS:</p> <ol style="list-style-type: none"> 1. Low-energy automatic doors <u>and gates</u> and full power automatic doors <u>and gates</u> that have standby power or battery back-up shall not be required to comply with this section. 2. Low-energy automatic doors <u>and gates</u> and full power automatic doors <u>and gates</u> that remain open in the power-off condition shall not be required to comply with this section. 3. Full power automatic sliding doors <u>and gates</u> that include a break-away feature shall not be required to comply with this section. <p>404.3.4 Two Doors <u>or</u> Gates in Series. Doors <u>or gates</u> in series shall comply with Section 404.2.5.</p> <p>EXCEPTION: Where both doors <u>or gates in series</u> are power assist doors, low energy automatic doors or full power automatic doors, <u>the two doors and gates</u> in a series shall not be required to provide a turning space between the doors.</p>	

4-34-12	
Agenda Item #13	
Comment No. 4-34-12 PC1.1	Submitted by: Kim Paarlberg - ICC
	<p>Further revise as follows:</p> <p>404.3.4 Two Doors or Gates in Series. Doors or gates in series shall comply with Section 404.2.5.</p> <p><u>EXCEPTION:</u> Full power automatic doors or gates in a series are not required to provide a turning space complying with Section 304.</p>
<p>Reason: I was the original proponent of the code change that added the turning space in a vestibule. The concern was possible entrapment when a person was not strong enough to open an exterior door. Providing an automatic door to address that concern is a preferred option. They should not lose the allowance for a smaller vestibule when they are offering a higher level of accessibility.</p>	
4-34-12 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT	
<p>Revise as follows:</p> <p>404.3.4 Two Doors in Series. Doors in series shall comply with Section 404.2.5.</p> <p><u>EXCEPTION:</u> Full power automatic doors in a series are not required to provide a turning space complying with Section 304.</p>	

4-54-12	
Agenda Item #14	
Comment No. 4-54-12 PC1.1	Submitted by: Andy Cid – Amherst NH
	<p>Further revise as follows:</p> <p>407.4.10 Emergency Communications. <u>An emergency two-way communication systems system shall be present and consist of a visual text-based and a video-based live interactive system and be fully accessible by the Deaf and Hard of Hearing and Speech Impaired between the elevator car and local emergency authorities at a point outside the hoistway and shall comply with Section 407.4.10 and ASME A17.1/CSA B44 listed in Section 105.2.5.</u></p>
<p>Reason:</p> <p>To Implement An: Emergency Elevator Communication System For The Deaf & Hard of Hearing (EECDHOH)</p> <p style="text-align: center;">The Problem with the Current Code under Building Elevators – Section 407.4.10</p> <p>Current code under Section 407.4.10 does not permit nor provide two-way live interactive visual and total accessibility for the Deaf / Hard of Hearing community in the United States and internationally. Current code requires only one or two-way audible, auditory or telephone / push button response communication systems for the hearing community.</p> <p style="text-align: center;">What Needs To Be Accomplished</p> <p>Current code needs to be amended to reflect the needs of the Deaf / Hard of Hearing community and of the speech impaired community in the U.S. and internationally. Simply stated, the ultimate goal is to have local, state, federal laws amend current building code in accordance with ICC codes to mandate all commercial, residential and public buildings install live interactive two-way real time communication systems in passenger elevators that are fully accessible to all individuals within the Deaf / HOH community. Currently, all commercial, public and residential elevators in the world are not accessible for these particular individuals.</p> <p style="text-align: center;">Rationale of Amending Current Code</p> <p>The rationale behind this proposal to amend code 407.4.10 is to permit the Deaf / Hard of Hearing and the Speech Impaired to, efficiently and seamlessly, utilize an emergency communication system in the event of an emergency (e.g., regional black outs, local power outage, “a national event”, brown outs, etc.). Health and safety concerns are also severely compromised in the event of an elevator mechanical breakdown of this nature. Without accessible two-way communication assistance equipment installed, an elevator can be a dangerous place for a single occupant who happens to be Deaf / HOH. This is especially perilous if the individual happens to have a heart condition or a medical condition. Without knowing what is taking place beyond those doors, an individual in this circumstance may suffer a panic attack or a heart attack. This common form of transport could cause serious harm to the health and safety of the people who ride them. Elderly and disabled passengers who happen to be Deaf / HOH suffer most when elevators malfunction. They can become entrapped for hours. <u>Please note that an incident occurred in October 2014 in Norfolk, Virginia when two Deaf adults were trapped in a hotel elevator due to a local power outage. Hotel personnel did not know they were in there. The occupants had to text a friend via smartphone who lived nearby and ask them to alert hotel management. They were eventually rescued by the local fire department by passing handwritten notes through the cab doors.</u></p> <p style="text-align: center;">What Is Currently Being Done</p> <p>Various committees, elevator advisory groups, and a task force have already been formed to study this deficiency. The parties above include various representatives from: federal agencies, American Society of Mechanical Engineers (ASME), national Deaf / Hard of Hearing advocacy organizations, architects, state, local and federal first-responder emergency authorities, elevator industry consultants, Deaf activists, etc. It is expected that an agreement or MOU will be prepared outlining the steps that need to be taken to accomplish this goal. An unofficial general consensus is that amended code is needed to address this deficiency. The issue of communication responsibilities between emergency authorities and building owners need to be clarified. This proposal hopefully serves notice to the various telecommunications firms in the U.S. and globally to commence work on a working and competitive design and, possibly, a prototype between 2015 and 2018. The MOU will be an example of what can be accomplished when diverse groups work together to achieve a common goal. The</p>	

result in this case will benefit literally millions of individuals globally.

Social Media is being utilized to create awareness of this issue and to garner global support. A public Facebook (FB) page was set up to support this endeavor. In the FB search bar, type in: Emergency Elevator Communication System for The Deaf / Hard of Hearing

The page has daily or weekly updates or posts entered by the moderator to keep the community apprised of progress.

Benefits

The Deaf / Hard of Hearing and the Speech Impaired communities will benefit greatly from increased access and an assurance of safety. Subsequent beneficiaries of code change success are the various large and small businesses that will be created and the thousands of jobs in support of these businesses.

Other beneficiaries of job creation will be the various firms within the socio-economic categories under the Small Business Administration's (SBA) definition of disadvantaged businesses, such as: Small Disadvantaged Business (SDB), Women-Owned Small Business (WOSB), Veteran-Owned Small Business (VOSB), Small Disabled Veteran-Owned (SDVO), Hub-Zone businesses, and American Native-Owned businesses. Sourcing work out to these small firms will inevitably have a trickle effect among the communities in which they are located. By fostering competition among all of these various firms, local, state, and federal tax revenue will increase exponentially. Unemployment rates will also be reduced, as well.

New Construction / Existing Buildings

It is recommended that the amended code will need to be applied to all new construction of buildings over three floors. In addition, existing buildings will need to comply with the amended code at the next major elevator repair or alteration. Accessible communication systems for the Deaf/HOH must be installed during all Level 1 and Level 2 alterations for all existing and historic buildings because the International Existing Building Code (IEBC) will need to comply with A117.1. These communication systems will not change the SF or space configuration of existing buildings. Also, in accordance with IEBC 705.1.2 Elevators - Altered elements of existing elevators shall comply with ASME A17.1/CSA B44 and ICC A117.1.

What Type of Communication Systems are Recommended?

Some possible alternatives for sources of interactive two-way systems are, but not limited to: Pre-programmed, vandal-proof (flush into the wall) Wi-Fi tablets for emergency communication use, and / or LCD screens typed by remote contract CART or contract Captioners listening to emergency authority personnel, or through Live-interactive video-conferencing screens, etc. Placement of these systems is not considered to be a major deterrent as there is ample space in an elevator cab via the front or side panel walls. Several private firms were contacted for research purposes for this initiative. A general consensus declares that the technology is already out there but just have not been implemented into elevators as of yet because there is no market for it or demand for it, per se, for this type of device because code does not call for it. These are all high-technology driven firms and may require design and consulting input from electrical design engineers in the federal and private sectors in order to obtain a working consensus on a functional design prototype that enables all users to contact the authorities for emergency assistance. They are ready to work on a design if code requires it.

What Are The Costs To Building Owners and Operators?

The owners and operators can apply cost upgrades and retrofits to the various cost incentives and Tax write-offs available from local, state or Federal Governments for complying with this amended code. In view of this approach, there is no need for dissent to this code proposal among the public, commercial, industrial, residential building owners/operators and the hotel / lodging industries.

Win-Win

The Deaf / HOH and Speech Impaired communities are not the only parties who will benefit from the amended code. All building owners / operators will benefit with the knowledge that their facilities are up to code and may avoid litigation stemming from potential lawsuits from said parties trapped in inaccessible elevators and who are unable to communicate with building or external emergency personnel.

Conclusion

Approval of this code amendment proposal is essential and long overdue. If the ICC adopts the code change proposal to 407.4.10 as part of the 2015 ICC Standard Code, the updated code would provide the global Deaf / Hard of Hearing and Speech impaired communities an assurance of safety, which is a higher standard than mere safety. In addition, as stated previously, this will be a win-win for both building owners and the people who visit, live and work in these buildings, and this will create thousands of new jobs.

4-54-12 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT**Revise as follows:**

407.4.10 Emergency Communications. ~~Visual and audible emergency two-way communication systems between the elevator car and a point outside the hoistway shall comply with Section 407.4.10 and ASME A17.1/CSA B44 listed in Section 105.2.5 and provide a two-way visual communication device.~~

407.4.10.1 ~~Visual Display Device shall be provided for two-way visual communication to be activated by the elevator occupant. Visual communication devices shall consist of a key pad and monitor to enable text based or sign language communication provided through a certified Visual relay Service.~~

Chapter 5

5-11-12	
Agenda Item #15	
Comment No. 5-11-12 PC1.1	Submitted by: David W. Cooper - SMA
	<p>Further revise as follows:</p> <p>504.5 Nosings. All nosings shall comply with 504.5.1 through 504.6.3 <u>504.5.4</u></p> <p>504.5.1 All nosings within a stairway shall be uniform.</p> <p>504.5.2 The extent of rounding or beveling of the top surface at the leading edge of the tread shall be limited to within a distance of 1/2 inch (13 mm) maximum from the leading edge. If rounded, the radius of curvature at the leading edge shall be 1/2 inch (13 mm) maximum.</p> <p>504.5.3 If beveled, the bevel shall slope at 45 degrees to the plane of the top surface of the tread and landing and extend for a horizontal distance of 1/2 inch (13 mm) maximum.</p> <p>504.5.4 504.5.3 Nosings that project beyond the risers shall have the underside of the leading edge curved or beveled.</p> <p>504.5.5 504.5.4 Risers shall be permitted to slope under the tread at an angle of 30 degrees maximum from vertical. The permitted projection of the nosing shall be 1 1/2 inches (38 mm) <u>1 1/4 inches (32 mm)</u> maximum over the tread or floor below.</p>
<p>Reason: The modification approved at the July meeting uses terminology that is not consistent with the standard, provides absolute specifications that would be impractical to enforce, e.g. 45 degrees is absolute, and increases the allowed projection beyond the limits established in the building codes. The committee should adopt the following additional modifications offered in correction.</p>	
5-11-12 and 5-13-12 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT	
5-11-12	
Revise as follows:	
<p>504.5 Nosings. Rounding or beveling at the leading edge of the tread shall not exceed the limit of a 1/2 inch (13 mm) radius. Nosings that project beyond risers shall have the underside of the leading edge curved or beveled. Risers shall be permitted to slope under the tread at an angle of 30 degrees maximum from vertical. The permitted projection of the nosing shall be 1 1/2 inches (38 mm) maximum over the tread or floor below.</p> <p>504.5 Nosings. Nosings shall comply with 504.5.1 through 504.6.3.</p> <p>504.5.1 <u>Nosings within a stairway shall be uniform.</u></p> <p>504.5.2 <u>If rounded, the radius of curvature at the leading edge shall be 1/2 inch (13 mm) maximum.</u></p> <p>504.5.3 <u>If beveled, the bevel shall slope at 45 degrees to the plane of the top surface of the tread and landing and extend for a horizontal distance of 1/2 inch (13 mm) maximum.</u></p> <p>504.5.4 <u>Nosings that project beyond the risers shall have the underside of the leading edge curved or beveled.</u></p> <p>504.5.5 <u>Risers shall be permitted to slope under the tread at an angle of 30 degrees maximum from vertical. The permitted projection of the nosing shall be 1 1/2 inches (38 mm) maximum over the tread or floor below.</u></p>	

5-13-12**Revise as follows:**

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

504.5.6 Visual contrast. Visual contrast shall comply with either Sections 504.5.6.1 and 504.5.6.2, or Section 504.5.6.3

504.5.6.1 The leading 1 to 2 inches (51 mm) of every tread and landing, measured horizontally from the leading edge of the nosing, shall consist of a solid color having visual contrast of dark-on-light or light-on-dark from the remainder of the tread.

504.5.6.2 The contrasting marking shall be durable, and shall extend from one side of each tread to the other side of each tread.

504.5.6.3 Durable distinctive warning markings required by the adopted building code or ANSI safety standard.

5-16-12	
Agenda Item #16	
Comment No. 5-16-12 PC1.1	Submitted by: Kim Paarlberg - ICC
	<p>Further revise as follows:</p> <p>504.10 Tactile signage at exits. A sign stating EXIT in raised characters and Braille and complying with Sections 703.3 and 703.4 shall be provided adjacent to each door to <u>an area of refuge providing direct access to a stairway</u>, an exterior area for assisted rescue, an exit stairway, an exit ramp, an exit passageway and the exit discharge.</p>
<p>Reason:</p> <p>I understand that you would not want an exit sign at an area of refuge in front of an elevator with standby power. However, where an area of refuge is in front of a stairway, a person with vision impairment needs to know to go through the area of refuge to get to the exit stairway. This revision should address the concern raised by the committee about the area of refuge at the elevator.</p>	
5-16-12 PC1 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT	
<p>Revise as follows:</p> <p>504.10 Tactile signage at exits. A sign stating EXIT in raised characters and Braille and complying with Sections 703.3 and 703.4 shall be provided adjacent to each door to an area of refuge, an exterior area for assisted rescue, an exit stairway, an exit ramp, an exit passageway and the exit discharge.</p>	

5-22-12 PC2	
Agenda Item #17	
Comment No. 5-22-12 PC2.1	Submitted by: Julie Ruth – JRuth Code Consulting representing American Architectural Manufacturers Association (AAMA)
	<p>Further revise as follows:</p> <p>506.2 Operating force. The operating force for windows includes forces for opening, closing, locking or latching, and unlocking or unlatching. Operable parts shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required for locking or latching and unlocking or unlatching shall be 5 pounds (22.2 N) maximum. The operating force for opening and closing operable windows shall be as follows:</p> <ol style="list-style-type: none"> 1. 8.5 pounds (37.7 N) maximum for casement <u>vertical</u> and horizontal sliding windows 2. <u>5 pounds (22.2 N) maximum for all other types of operable windows.</u>
<p>Reason: The purpose of this comment is to clarify the maximum operable force permitted for ALL operable windows.</p> <p>Through the action by the committee on both PC2 and PC4 to proposal 5-22, Section 506.2 would specify the maximum operating force permitted for casement and horizontal sliding windows, but not the maximum operating force permitted for all other types of operating windows. As such, the maximum permitted operating force for other types of operable windows, such as awning windows, projected windows, single and double hung windows, etc. is not given.</p> <p>Clarification is needed for all types of operable windows. This comment clarifies that the maximum operating force for all types of operable windows shall be either 5 or 8.5 lbs. It also reduces the maximum operating force permitted for casement windows from 8.5 lbs to 5.0 lbs, while establishing the higher operating force of 8.5 lbs for vertical (hung) as well as horizontal sliding windows.</p>	
Agenda Item #18	
Comment No. 5-22-12 PC2.2	Submitted by: Julie Ruth – JRuth Code Consulting representing American Architectural Manufacturers Association (AAMA)
	<p>Further revise as follows:</p> <p>506.2 Operating force. The operating force for windows includes forces for opening, closing, locking or latching, and unlocking or unlatching. Operable parts shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required for locking or latching and unlocking or unlatching shall be 5 pounds (22.2 N) maximum. The operating force for opening and closing operable windows shall be as follows:</p> <p>4. 8.5 pounds (37.7 N) maximum, for casement and horizontal sliding windows .</p>
<p>Reason: The purpose of this comment is to establish a maximum opening force of 8.5 lbs for ALL accessible windows, regardless of operator type.</p> <p>Through the action by the committee on both PC2 and PC4 to proposal 5-22, Section 506.2 would specify the maximum opening force permitted for casement and horizontal sliding windows as 8.5 lbs, but not the maximum opening force permitted for all other types of operating windows. Therefore, the maximum opening force permitted for other operator types,</p>	

such as awning windows, projected windows, single and double hung windows, etc. is not defined.	
Establishing the same maximum opening force for all operable, accessible windows would provide consistency in the windows that are serving an accessible space.	
Agenda Item #19	
Comment No. 5-22-12 PC4.1	Submitted by: Julie Ruth – JRuth Code Consulting representing American Architectural Manufacturers Association (AAMA)
	<p>Further revise as follows:</p> <p>506.2 Operating force. The operating force for windows includes forces for opening, closing, locking or latching, and unlocking or unlatching, <u>and shall be determined in accordance with AAMA 513</u>. Operable parts shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required for locking or latching and unlocking or unlatching shall be 5 pounds (22.2 N) maximum. The operating force for opening and closing operable windows shall be as follows:</p> <p>1. 8.5 pounds (37.7 N) maximum for casement and horizontal sliding windows</p> <p>Add reference standard as follows:</p> <p><u>106.2.13 Standard Laboratory Test Method for Determination of Forces and Motions Required to Activate Operable Parts of Operable Windows and Doors in Accessible Spaces, AAMA 513 - 14(AAMA, 1827 Walden Office Square, Suite 550, Schaumburg, IL 60173-4268)</u></p>
<p>Reason:</p> <p>The purpose of this comment is to establish a standard test method to be used to determine the operating force of operable, accessible windows.</p> <p>The first edition of AAMA 513 (AAMA 513-12 <i>Standard Laboratory Test Method for Determination of Forces and Motions Required to Activate Operable Parts on CW and AW Class Operable Windows, Sliding Glass Doors and Terrace Doors in Accessible Spaces</i>) was specifically developed to specify how the operating force of Commercial and Architectural grade windows and specialty glass doors was to be determined. The ANSI A117 committee was asked to approve the use of this standard for doors through PC2 to proposal 4-23, and for operable windows through PC4 to proposal 5-22.</p> <p>Although the committee accepted the use of AAMA 513 for doors by approving PC2 to proposal 4-23, some concerns were raised when it was considered for operable windows. AAMA 513 has been revised in response to the concerns raised by the committee members. Through this comment the committee is asked to consider accepting reference to this newly revised edition of this standard for the determination of operating force of accessible windows.</p> <p>AAMA 513-14 responds to the committee's concerns in the following manner:</p> <p>Concern #1: The scope of the standard is too narrow.</p> <p>Response: The scope of the standard has been expanded to include all operable, accessible windows (including residential) and doors.</p> <p>Concern #2: Since AAMA 513 only provides for laboratory testing of operating force, the language proposed in 5-22 PC4 would require the use of operable windows that had already been tested for operating force in a laboratory. There were no provisions to field test operable windows that had not already been tested in a laboratory.</p> <p>Response: Appendix A has been added to AAMA 513-14 for Field Testing Applications.</p> <p>Concern #3: A disclaimer in Section 8.3.2 of AAMA 513-12 placed the burden of determining compliance of the installation entirely upon the building's Architect or Engineer of Record.</p> <p>Response: The provision causing concern has been removed, and does not occur in AAMA 513-14.</p> <p>AAMA believes a standard method for measuring operating force of fenestration is needed in ANSI A117. The committee</p>	

appeared to be in agreement when it approved the use of AAMA 513, through the approval of our PC2 to 4-23. During its discussion of PC4 to 5-22 AAMA was encouraged to revise the standard to address the committee's concerns, and bring it back for reconsideration by the committee. AAMA believes they have now addressed the committee's concerns, and asks the committee to approve this important addition to the next edition of ICC/ANSI A117.

Agenda Item #20

Comment No: 5-22-12 PC4.2	Submitted by: Edward Steinfeld - RESNA
	<p>Further revise as follows:</p> <p>506.2 Operating force. The operating force for windows, includes forces for opening, and closing, locking or latching, and unlocking or unlatching windows shall be 8.5 pounds (37.7 N) maximum. Operable parts shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required for locking or latching and unlocking or unlatching shall be 5 pounds (22.2 N) maximum. The operating force for opening and closing operable windows shall be as follows:</p> <ol style="list-style-type: none"> 1. 8.5 pounds (37.7 N) maximum for casement or horizontal sliding windows. 2. 25 pounds (111 N) maximum for double hung windows. <p>Exception: <u>The maximum operating force for double hung windows shall be 25 pounds (111 N).</u></p>

Reason:

There is at least one other type of window missing here...awning. The general rule is incorrectly stated as an alternative. In fact, there is only one exception to the rule...double hung windows. The wording suggested also simplifies the paragraph by deleting the statement that does not include a rule.

5-22-12 PC2 and PC4 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT

5-22-12 PC2

Revise as follows:

506.2 Opening force. The opening force for opening operable windows shall be as follows:

1. 8.5 pounds (37.7 N) maximum for casement or horizontal sliding windows
- ~~2. 25 pounds (111 N) maximum for double hung windows.~~

5-22-12 PC4

506.2 Opening Operating force. The operating force for windows includes forces for opening, closing, locking or latching, and unlocking or unlatching. Operable parts shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. The force required for locking or latching and unlocking or unlatching shall be 5 pounds (22.2 N) maximum. The opening operating force for opening and closing operable windows shall be as follows:

1. 8.5 pounds (37.7 N) maximum for casement or horizontal sliding windows.
2. 25 pounds (111 N) maximum for double hung windows.

5-23-12	
Agenda Item #21	
Comment No: 5-23-12 PC1.1	Submitted by: Kim Paarlberg - ICC
	<p>Further revise as follows:</p> <p>507 Accessible Routes through Parking. Where <u>a required accessible connects elements on a site or provides access from a site arrival point to an accessible entrance and that routes pass through parking facilities</u>, the routes shall be physically separated from vehicular traffic.</p> <p>EXCEPTIONS:</p> <ol style="list-style-type: none"> 1. Accessible routes crossing-drive aisles shall not be required to comply with Section 507. 2. Accessible routes only from <u>accessible parking spaces and access aisles</u> complying with Section 502 and passenger loading zones complying with Section 503 to accessible entrances shall not be required to comply with Section 507.
<p>Reason: Accessible routes are everywhere on a flat site. It is important to differentiate that only required accessible routes must be separated from vehicular traffic. The proposed language provides a higher level of specificity as to where this is required. The revision to exception 2 is also clarification. The route is for accessible parking, not all parking. The reference to Section 502 will pick up the access aisles, so this language is not needed.</p>	
Agenda Item #22	
Comment No: 5-22-12 PC1.2	Submitted by: Karen Gridley – Target Corporation
	<p>Further revise as follows:</p> <p>507 Accessible Routes through Parking. [unchanged]</p> <p>EXCEPTIONS:</p> <ol style="list-style-type: none"> 1. [unchanged] 2. Accessible routes <u>that originate at or provide passage along or through accessible only from</u> parking spaces and access aisles complying with Section 502 and passenger loading zones complying with Section 503 to accessible entrances, shall not be required to comply with Section 507.
<p>Reason: Adding the word “only” will mean this exception can only be applied to isolated parking areas where the route to the public way does not pass at the accessible stalls. Which means that if a route from the public way happens to pass at the head of accessible parking spaces, the route at those parking stalls will need to include this new additional physical separation and we will end up with an undulating and difficult to navigate route at the head of those accessible stalls due to raised sidewalks and curb ramps needing to be cut in at each access aisle, or other difficult to navigate separation such as truncated domes in the entire path, as might be determined by individual jurisdictions due to the subjective nature of this new language. Not only will it lead to difficult to navigate front-of-car routes, it will lead to inconsistent and confusing installations.</p> <p>The front of car paths, when provided, are already considered a safe and designated accessible route due to being separated naturally by the parking stalls, wheel stops and sign bollards.</p>	

With a little more work to the proposed language, it may be possible for this new separation language to be applied only to the portion of the route leading from the public way to where the accessible parking area or loading zone begins. So that where the accessible parking stall area begins, the exception is permitted to apply regardless of whether or not the route is only from the accessible parking area or is also from the public way and happens to pass through the accessible parking area.

Alternate revised language for the Committee's consideration:

Where accessible routes from the public way pass accessible parking spaces and access aisles complying with Section 502 and passenger loading zones complying with Section 503, the accessible route from these parking spaces, access aisles and passenger loading zones to accessible entrances shall not be required to comply with Section 507.

This would allow the route to be flush at the accessible parking stalls, and the raised or separated portion of the route from the public way would simply ramp down to the parking surface when it reaches the accessible parking area.

5-23-12 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT

Revise as follows:

507 Accessible Routes through Parking. Where accessible routes pass through parking facilities, the routes shall be physically separated from vehicular traffic.

EXCEPTIONS:

1. Accessible routes crossings at drive aisles shall not be required to comply with Section 507.
2. Accessible routes only from parking spaces and access aisles complying with Section 502 and passenger loading zones complying with Section 503 to accessible entrances shall not be required to comply with Section 507.

Chapter 6

6-14-12 PC2	
Agenda Item #23	
Comment No: 6-14-12 PC2.1	Submitted by: Gene Boecker - NATO
	<p>Further revise as follows:</p> <p>604.7 Dispensers. Toilet paper dispensers shall comply with Section 309.4. Dispensers shall comply with Section 609.3. Dispensers shall not be of a type that control delivery, or do not allow continuous paper flow.</p> <p>604.7.1 Location. Where the dispenser is located above the grab bar, the outlet of the dispenser shall be located within an area 24 inches (610 mm) minimum and 36 inches (915 mm) maximum from the rear wall. Where the dispenser is located below the grab bar, the outlet of the dispenser shall be located within an area 24 inches (610 mm) minimum and 42 inches (1065 mm) maximum from the rear wall. The outlet of the dispenser shall be located 18 inches (455 mm) minimum and 48 inches (1220 mm) maximum above the floor. Dispensers shall comply with Section 609.3.</p> <p>EXCEPTION: 604.7.1.1 Multiple Roll Dispensers. Where toilet paper dispensers that accommodate <u>more than a single roll</u>, a maximum of 2 toilet paper rolls of not more than 5 inch (125 mm) diameter each shall be permitted to be located 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front the of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 15 inches (380 mm) minimum and 48 inches (1220 mm) maximum above the floor.</p> <p>604.11.7 Dispensers. Toilet paper dispensers primarily for children's use shall comply with Section 309.4. There shall be a clearance of 1 1/2 inches (38 mm) minimum below the grab bar. Dispensers shall not be of a type that control delivery or do not allow continuous paper flow.</p> <p>604.11.7.1 Location. The outlet of toilet paper dispensers primarily for children's use shall be located within an area 24 inches (610 mm) minimum and 42 inches (1065 mm) maximum from the rear wall. The outlet of the dispenser shall be 14 inches (355 mm) minimum and 19 inches (485 mm) maximum above the floor.</p> <p>EXCEPTION: 604.11.7.1.1 Multiple Roll Dispensers. Where toilet paper dispensers that accommodate <u>more than a single roll</u>, a maximum of 2 toilet paper rolls of not more than 5 inch (125 mm) diameter each shall be permitted to be located 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front the of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 14 inches (355 mm) minimum and 19 inches (485 mm) maximum above the floor.</p>
<p>Reason: The exceptions for 604.7 and 604.11.7.1 are not an exceptions as written. Exception can be used or not because they are exceptions. If the choice is made to only follow the charging section, there is no guidance on how to address the multiple roll condition. The intent is that where multiple rolls are provided, a requirement on that application must be applied. If so, then a requirement exists and a separate subsection is needed.</p> <p>The language in the two exceptions makes it clear that when multiple toilet paper rolls are provided, only two, of a particular dimension, are allowed. Although this requires an additional decimal indent, it addresses the concern at the proper section, in the proper manner.</p>	

6-14-12 PC2 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT

Revise as follows:

604.7 Dispensers. Toilet paper dispensers shall comply with Section 309.4. Dispensers shall comply with Section 609.3. Dispensers shall not be of a type that control delivery, or do not allow continuous paper flow.

604.7.1 Location. Where the dispenser is located above the grab bar, the outlet of the dispenser shall be located within an area 24 inches (610 mm) minimum and 36 inches (915 mm) maximum from the rear wall. Where the dispenser is located below the grab bar, the outlet of the dispenser shall be located within an area 24 inches (610 mm) minimum and 42 inches (1065 mm) maximum from the rear wall. The outlet of the dispenser shall be located 18 inches (455 mm) minimum and 48 inches (1220 mm) maximum above the floor. Dispensers shall comply with Section 609.3. ~~Dispensers shall not be of a type that control delivery, or do not allow continuous paper flow.~~

EXCEPTION: Toilet paper dispensers that accommodate a maximum of 2 toilet paper rolls of not more than 5 inch (125 mm) diameter each shall be permitted to be located 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front the of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 15 inches (380 mm) minimum and 48 inches (1220 mm) maximum above the floor.

604.11.7 Dispensers. Toilet paper dispensers primarily for children's use shall comply with Section 309.4. There shall be a clearance of 1 1/2 inches (38 mm) minimum below the grab bar. Dispensers shall not be of a type that control delivery or do not allow continuous paper flow.

604.11.7.1 Location. The outlet of toilet paper dispensers primarily for children's use shall be located within an area 24 inches (610 mm) minimum and 42 inches (1065 mm) maximum from the rear wall. The outlet of the dispenser shall be 14 inches (355 mm) minimum and 19 inches (485 mm) maximum above the floor. ~~There shall be a clearance of 1 1/2 inches (38 mm) minimum below the grab bar. Dispensers shall not be of a type that control delivery or do not allow continuous paper flow.~~

EXCEPTION: Toilet paper dispensers that accommodate a maximum of 2 toilet paper rolls of not more than 5 inch (125 mm) diameter each shall be permitted to be located 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front the of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 14 inches (355 mm) minimum and 19 inches (485 mm) maximum above the floor.

6-20-12 PC2

Agenda Item #24

Comment No: 6-20-12 PC2.1 **Submitted by:** Kim Paarlberg - ICC

Further revise as follows:

Table 604.9.3.1 – Door Opening Locations

Door Opening Location	Measured From	Dimension
Front Wall or Partition	From the side wall or partition closest to the water closet	56 inches (1420 mm) minimum
	<u>Or</u>	
	From the side wall or partition farthest from the water closet	4 5 inches (125 mm) maximum
Side Wall or Partition - Wall-Hung Water Closet	From the rear wall	52 inches (1320 mm) minimum
	<u>Or</u>	
	From the front wall or partition	4 5 inches (125 mm) maximum
Side Wall or Partition - Floor-Mounted Water Closet	From the rear wall	55 inches (1395 mm) minimum
	<u>Or</u>	
	From the front wall or partition	4 5 inches (125 mm) maximum

Reason:

The language that was approved by the committee will require the partitions to be placed at 61 inches apart for the accessible stall while the clear floor space for the water closet is still 60 inches. This will be very confusing for the user. There is no technical reason provided that this was needed to improve accessibility. In existing building where the bathrooms were being brought up to new accessibility provision, if the accessible stall is the end stall, this could literally require all the stall walls to be moved over 1 inch.

The proposal that switched this from 4 inches (2009 A117.1) to 5 inches stated that stall builders needed to have a 5 inch station. That option was already available to them in the 2009 A117.1 – they could just have provided the larger stall.

To leave the ‘or’ in and leave the 5 inch dimension would be a violation of the ADA.

This proposal restores the requirements found in 2009 A117.1 for a minimum stall that is required by ADA and matches the toilet clearance requirements. Where the designer wants or needs large supports, they can exceed this requirement and provide larger stalls.

6-20-12 PC2- AS PUBLISHED 2ND PUBLIC REVIEW DRAFT

Revise as follows:

Table 604.9.3.1 – Door Opening Locations

Door Opening Location	Measured From	Dimension
Front Wall or Partition	From the side wall or partition closest to the water closet	56 inches (1420 mm) minimum

	Or	
	From the side wall or partition farthest from the water closet	5 inches (125 mm) maximum
Side Wall or Partition - Wall-Hung Water Closet	From the rear wall	52 inches (1320 mm) minimum
	Or	
	From the front wall or partition	5 inches (125 mm) maximum
Side Wall or Partition - Floor-Mounted Water Closet	From the rear wall	55 inches (1395 mm) minimum
	Or	
	From the front wall or partition	5 inches (125 mm) maximum

6-37-12 PC1	
Agenda Item #24	
Comment No: 6-37-12 PC1.1	Submitted by: Matt Sigler - PMI
	<p>Further revise as follows:</p> <p>606.5 Basin Location. The interior edge of the rim of the lavatory basin shall be located $3\frac{1}{2}$ inches (90 <u>150</u> mm) maximum from the front edge of the fixture or countertop.</p>
<p>Reason: PMI is very much against the original proposal of 3 inches, and this public comment that revises the dimension to 3-1/2 inches for the following reasons:</p> <ol style="list-style-type: none"> 1. There are many lavatories in the market that have been acceptable for years with setbacks of up to 5 or more inches to gain the required knee clearance as stated in Section 306.3. 2. According to studies conducted by Kohler, lavatories can be very uncomfortable even painful to use when the rims are moved so far forward on the counter as would be the case with the proposed language. People would be resting their forearms or wrists on the rims of the lavatories that can cause a pinching sensation of the wrists and soreness of the underside of the forearms. 3. The further forward a lavatory is set there is greater propensity for splashing because of the angle of discharge from the faucet. 4. There is no known study that supports the proposed setbacks. Therefore, a task group should be formed to review this proposal before being considered by the committee for inclusion into the standard. <p>As it is too late in the process to eliminate this new requirement, we are offering a dimension that should be appropriate for the fixtures that are available on the market and provides that the original issue is still addressed. We are still researching with our member manufacturers as to what would be the best distance. We will bring out findings to the February 2015 meeting and may suggest a distance different than 6 inches.</p>	
6-37-12 PC1 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT	
<p>Revise as follows:</p> <p>606.5 Basin Location. The interior edge of the rim of the lavatory basin shall be located $3\frac{1}{2}$ inches (75 <u>90</u> mm) maximum from the front edge of the fixture or countertop.</p>	

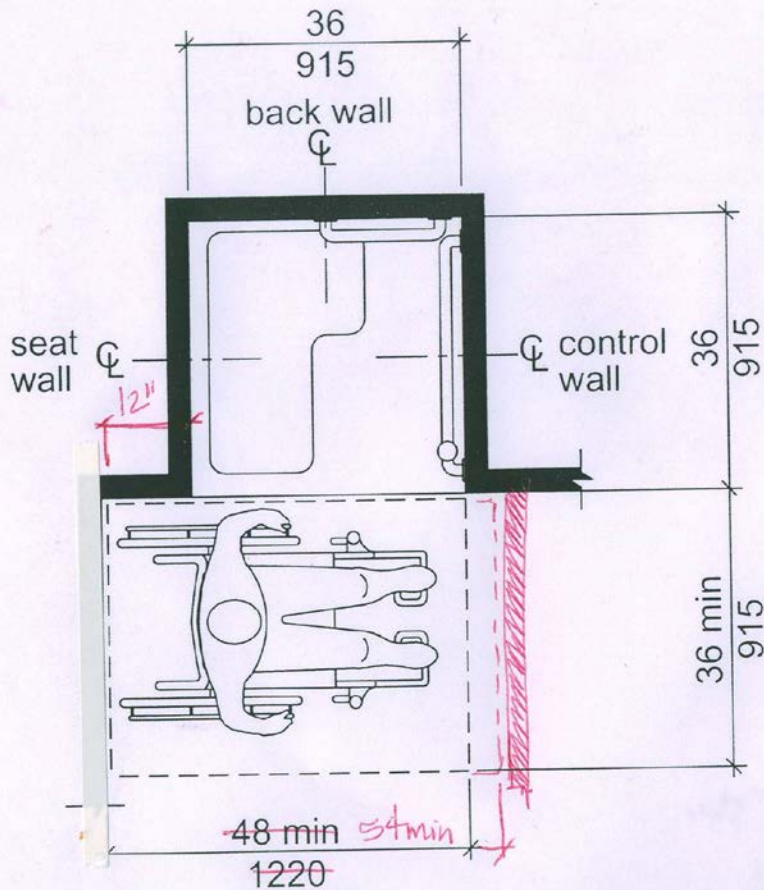
6-46-12	
Agenda Item #25	
Comment No: 6-46-12 PC2.1	Submitted by: Edward Steinfeld - RESNA
	<p><i>Further revise as follows:</i></p> <p>608.2.1.2 Clearance. A clearance of 52 inches (1320 mm) minimum in length measured perpendicular from 12 inches (305 mm) beyond the seat wall, and 36 inches (915 mm) minimum in depth shall be provided adjacent to the open face of the compartment. <u>The seat wall shall align with the wheelchair seat back as per 305.8 Seat Back Location, or be 4 inches (100 mm) maximum behind the seat wall.</u></p> <p>305.8 Seat Back Location. For the purposes of this standard, the seat back of a <u>wheelchair within the clear floor space shall be considered 40 inches (1015 mm) from the front or 12 inches (305mm) from the rear of the wheelchair space.</u></p>
<p>Reason: We support the PC3 option over PC2 since it better aligns the seat back of wheelchairs with the back of the shower seat. However, consistent with my comments on 3-13E-12 PC3, the seat back should be part of the clear floor space section because it can be used for many purposes. Designers should learn about seat back location because it plays a role in reachability. The IDeA Center can prepare an illustration that will be useful for many purposes. The current alignment in the standard is 12 inches and there is insufficient evidence to increase this to 16 inches. Thus, the general rule should remain 12 inches from the rear; and exceptions provided to address specific concerns where they arise. In this case, there is disagreement as to whether 12 or 16 should be allowable. While I support leaving the 12 and believe this would provide better access, I do understand the concerns of those opposed. The solution I am proposing reaffirms 12 as the rule (as it is currently), but gives designers the flexibility to choose 16 if they wish, thereby addressing the concerns of those who wish to provide more flexibility.</p>	
Agenda Item #26	
Comment No: 6-46-12 PC3.1	Submitted by: Kim Paarlberg - ICC
	<p><i>Further revise as follows:</i></p> <p>608.2.1.2 Clearance. A clearance of 52 inches (1320 mm) minimum in length measured perpendicular from 12 inches (305 mm) beyond the seat control wall, and 36 inches (915 mm) minimum in depth shall be provided adjacent to the open face of the compartment.</p>
<p>Reason: The increased clear floor space, combined with the change to measure from the seat wall instead of the control wall now prohibits the transfer shower from ever being located in the corner. The shower has to have at least 4" offset (see figure). The study information provided for the increase in clear floor space did not include information on acceptable transfers. The plumbing industry has done these studies. They should be investigated before revising this measurement.</p> <p>It appears that the additional length in Dr. Steinfeld' s study is based on scooters or wheelchairs with additional equipment behind the chair. There is no information on the location of the back of the seat in the development of the additional clearance. Without information on the orientation of the wheelchair space and the seat location this allowance for transfer showers to be installed in a corner should not be eliminated.</p>	

In addition, the transfer location in an alternate roll-in shower does not include the same offset. Therefore, the standard is inconsistent in application.

608.2.3 Alternate Roll-in-Type Shower Compartments. Alternate roll-in-type shower compartments shall comply with Section 608.2.3.

608.2.3.1 Size. Alternate roll-in shower compartments shall have a clear inside dimension of 60 inches (1525 mm) minimum in width, and 36 inches (915 mm) in depth, measured at the center point of opposing sides. An entry 36 inches (915 mm) minimum in width shall be provided at one end of the 60-inch (1525 mm) width of the compartment. A seat wall, 24 inches (610 mm) minimum and 36 inches (915 mm) maximum in length, shall be provided on the entry side of the compartment.

The committee was correct when they approved PC2, which is the language proposed above.



Note: inside finished dimensions measured at the center points of opposing sides

FIG. 608.2.1
TRANSFER-TYPE SHOWER

6-46-12 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT

Staff note: The committee approved both PC2 and PC3 for Proposal number 6-46-12. The two revised provisions conflict with each other. The conflict will be resolved by the committee based on comments received.

6-46-12 PC2

Revise as follows:

608.2.1.2 Clearance. A clearance of 52 inches (1360 mm) minimum in length measured perpendicular from ~~12 inches (305 mm) beyond~~ the control seat wall, and 36 inches (915 mm) minimum in depth shall be provided adjacent to the open face of the compartment.

6-46-12 PC3

Revise as follows:

608.2.1.2 Clearance. A clearance of ~~48~~ 52 inches (~~1220~~ 1320 mm) minimum in length measured perpendicular from 12 inches (305 mm) beyond the ~~control~~ seat wall, and 36 inches (915 mm) minimum in depth shall be provided adjacent to the open face of the compartment.

6-55-12	
Agenda Item #27	
Comment No: 6-55-12 PC1.1	Submitted by: Gene Boecker - NATO
	<p>Further revise as follows:</p> <p>608.3.2 Standard Roll-in-Type Showers. Grab bars in standard roll-in showers shall comply with Section 608.3.2.</p> <p>608.3.2.1 Back wall grab bar. In standard roll-in type showers, a grab bar shall be provided on the back wall beginning at the edge of the seat. The grab bars shall not be provided above the seat. The back wall grab bar shall extend the length of the wall and extend within 6 inches (150 mm) maximum from the adjacent side wall opposite the seat.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> 1. The back wall grab bar but shall not be required to exceed 48 inches (1220 mm) in length. 2. The back wall grab bar is not required to extend within 6 inches (150 mm) of the adjacent side wall opposite the seat if it would require the grab bar length to exceed 48 inches (1220 mm) in length. <p>608.3.2.2 Side wall grab bars. Where a side wall is provided opposite the seat within 72 inches (1830 mm) of the seat wall, a grab bar shall be provided on the side wall opposite the seat. The side wall grab bar shall extend the length of the wall and extend within 6 inches (150 mm) maximum from the adjacent back wall <u>and shall not be required to extend closer than 2 inches (50 mm) from the opening of the shower.</u></p> <p>Exception: The side wall grab bar shall not be required to exceed 30 inches (760 mm) in length.</p>
<p>Reason: The one issue that did not get resolved on this during the last committee meeting was the constructability of the grab bar close to the opening. As was noted, close to the opening, the surface materials that enclose the shower meet the surface materials that cover the adjoining wall. To properly anchor the grab bar into the wall structure, the fasteners should be far enough from the edge such that they are placed in the wall structure and are not placed in the finish material. As was testified, the 2-inch dimension would make sure that where a standard grab bar ends, the fasteners of the flange would be embedded in the wall structure and the escutcheon cover would not lap past the end of the shower.</p> <p>If only the provisions noted are addressed, a standard roll-in shower which is 30 inches in depth would require a grab bar or the "length of the wall." Because the minimum side wall is only 30 inches in length, although the exception says that the grab bar is not required to exceed 30 inches, it can still be construed that the grab bar, if less than 30 inches, is not extending the "length of the wall." If the grab bar must be installed to extend to the very edge, it would not be capable of being fastened with the proper structural stability. The added language allows for the constructability of the grab bar.</p>	
Agenda Item #28	
Comment No: 6-55-12 PC3.1	Submitted by: Edward Steinfeld - RESNA
	<p>Further revise as follows:</p> <p>608.3.2.1 Back wall grab bar. In standard roll-in type showers, a grab bar shall be provided on the back wall beginning at the edge of the seat. The grab bars shall not be</p>

provided above the seat. The back wall grab bar shall extend the length of the wall and extend within 6 inches (150 mm) maximum from the adjacent side wall opposite the seat.

Exceptions:

1. ~~The back wall grab bar but shall not be required to exceed 48 inches (1220 mm) in length.~~
2. ~~The back wall grab bar is not required to extend within 6 inches (150 mm) of the adjacent side wall opposite the seat if it would require the grab bar length to exceed 48 inches (1220 mm) in length.~~

Option # 1- Proposed Change

608.3.2.1. Back Wall Grab Bar. In standard roll-in shower stalls, a grab bar shall be provided along the entire length of the back wall from 6 inches (150 mm) maximum of one corner to within 6 inches (150 mm) maximum of the opposite corner.

Exception: If a permanent seat is provided, the grab bar shall terminate at the leading edge of the seat.

... OR ...

Option #2

608.3.2.1. Back Wall Grab Bar. In standard roll-in shower stalls, a grab bar shall be provided along the entire length of the back wall from 6 inches (150 mm) maximum of one corner to within 6 inches (150 mm) maximum of the opposite corner.

Exceptions:

1. If a permanent seat is provided, the grab bar shall terminate at the leading edge of the seat.
2. If the shower stall is longer than 60 inches (1525 mm), and a 48 inches (1220 mm) long grab bar is provided at minimum, then the distance from the end of the grab bar to either corner can exceed 6 inches (150 mm).

Reason:

We are offering two alternatives to the existing proposed change depending on whether the Committee decides that mandating a 48 in. max. bar is necessary: Version 1 (preferred) requires the bar to be long enough to reduce “unprotected” wall length to only 6 in. at either end. Version 2 allows the grab bar to be only 48 in. long if the stall is greater than 60 in.

A roll in shower stall should also be safe for people who are standing while taking a shower. In the 1980 standard, where the roll in shower stall was first introduced, the bar was required along the entire length of the stall, with the exception of 6 in. at each end in recognition that a bar that did not wrap around was not necessary because it was unlikely anyone would grab the bar right in the corner. This ensured that someone standing would always have a bar within reach and that a movable seat could be located at any location within the stall. At that time, a permanent seat was not required in a roll in shower. In the 2009 revisions, the Committee required a folding seat and allowed the bar to max out at 48 in. The length of 48 in. is arbitrary, with no basis in research. It is a legacy of the original illustration showing a 60 in. long shower stall area minus the 6 in. allowances at both corners. The maximum length not only introduces too much complexity in the wording but it also allows very large shower stalls to have back walls that do not have bars along their entire length. Further it specifies a specific location of the bar when that is not always where it might be best, depending on other features of the stall. The language is exceedingly complex and difficult to understand which has been demonstrated by the numerous attempts to adjust it during this cycle. The proposed revision in Alternate #1 above significantly simplifies the text by stating the basic rule in the main paragraph and corrects the oversight related to the 48 in. maximum at the same time, bringing back the original intent. If the Committee still desires to limit the length of the back bar to 48 in. The paragraph could be altered as in Alternate #2 which states the basic rule and allows the designer to put the 48 in. grab bar at the most appropriate location. Moreover, it clearly conveys the intent that it is better to have a longer grab bar for safety.

Note: If approved, this same revision should be applied to the other two sub-sections on different types of stalls.

6-55-12 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT

6-55-12 PC1

Revise as follows:

608.3.2 Standard Roll-in-Type Showers. Grab bars in standard roll-in showers shall comply with Section 608.3.2.

608.3.2.1 Back wall grab bar. In standard roll-in type showers, a grab bar shall be provided on the back wall beginning at the edge of the seat. The grab bars shall not be provided above the seat. The back wall grab bar shall extend the length of the wall and extend within 6 inches (150 mm) maximum from the adjacent side wall opposite the seat.

Exceptions:

1. The back wall grab bar but shall not be required to exceed 48 inches (1220 mm) in length.
2. The back wall grab bar is not required to extend within 6 inches (150 mm) of the adjacent side wall opposite the seat if it would require the grab bar length to exceed 48 inches (1220 mm) in length.

608.3.2.2 Side wall grab bars. Where a side wall is provided opposite the seat within 72 inches (1830 mm) of the seat wall, a grab bar shall be provided on the side wall opposite the seat. The side wall grab bar shall extend the length of the wall and extend within 6 inches (150 mm) maximum from the adjacent back wall.

Exception: The side wall grab bar but shall not be required to exceed 30 inches (760 mm) in length. Grab bars shall be 6 inches (150 mm) maximum from the adjacent wall.

6-55-12 PC3

Staff note: PC3 to 6-55-12 is essentially a further revision to PC1. In it the committee deletes the second exception to 608.3.2.1 which was included in PC1.

Revise as follows:

608.3.2.1 Back wall grab bar. In standard roll-in type showers, a grab bar shall be provided on the back wall beginning at the edge of the seat. The grab bars shall not be provided above the seat. The back wall grab bar shall extend the length of the wall and extend within 6 inches (150 mm) maximum from the adjacent side wall opposite the seat.

Exceptions:

1. The back wall grab bar but shall not be required to exceed 48 inches (1220 mm) in length.
2. ~~The back wall grab bar is not required to extend within 6 inches (150 mm) of the adjacent side wall opposite the seat if it would require the grab bar length to exceed 48 inches (1220 mm) in length.~~

6-61-12	
Agenda Item #29	
Comment No: 6-61-12 PC1.1	Submitted by: Kim Paarlberg - ICC
	<p>Further revise as follows:</p> <p>608 Shower Compartments</p> <p>608.1 General. Accessible shower compartments shall comply with Section 608.</p> <p>608.2 Size, clearance and seat. Shower compartments shall have sizes, clearances and seats complying with Section 608.2.</p> <p>608.2.1 Transfer-type Shower Compartments.....</p> <p>608.2.2 Standard Roll-in-type Shower Compartments.....</p> <p>608.2.3 Alternate Roll-in-type Shower Compartments.....</p> <p><u>608.2.4 Ambulatory Roll-in-type Shower Compartments.</u> <u>Ambulatory roll-in-type shower compartments shall comply with Section 608.2.2.</u></p> <p>608.3 Grab Bars.....</p> <p>608.3.1 Transfer-Type Showers....</p> <p>608.3.2 Standard Roll-in Type Showers. Grab bar for standard roll-in showers shall comply with Section 608.3.2.</p> <p>608.3.2.1 Horizontal Grab Bars. Horizontal grab bars shall be provided on the back wall beginning at the edge of the seat. The grab bars shall not be located above the seat. The back wall grab bar shall extend the length of the wall but shall not be required to exceed 48 inches (1220 mm) in length. Where a side wall is provided opposite the seat within 72 inches (1830 mm) of the seat wall, a grab bar shall be provided on the side wall opposite the seat. The side wall grab bar shall extend the length of the wall but shall not be required to exceed 30 inches (760 mm) in length. Grab bars shall be 6 inches (150 mm) maximum from the adjacent wall.</p> <p>608.3.3 Alternate Roll-in-Type Showers.</p> <p><u>608.3.4 Ambulatory Roll-in Type Showers.</u> <u>Grab bar for ambulatory roll-in showers shall comply with Section 608.3.4.</u></p> <p><u>608.3.4.1 Horizontal Grab Bars.</u> <u>Horizontal grab bars shall be provided in accordance with Section 608.3.2.1.</u></p> <p>608.3.2.1.1 608.3.4.2 Vertical Grab Bar. Where an ambulatory roll-in shower control and hand spray are provided, a vertical grab bar shall be provided. A vertical grab bar 18 inches (45 mm) minimum in length shall be provided on the ambulatory control side wall 3 inches (75 mm) minimum and 6 inches (150 mm) maximum above the horizontal grab bar, and 4 inches (100 mm) maximum inward from the front edge of the shower.</p> <p>608.4 Controls and Hand Showers. Controls and hand showers shall comply with Section 608.4 and 309.4.</p>

	<p>608.4.1 Transfer-Type Showers.</p> <p>608.4.2 Standard Roll-in Showers. In standard roll-in showers, the controls and hand shower shall not be located above the seat. Controls and hand showers shall be located <u>in accordance with the following</u>:</p> <ol style="list-style-type: none"> 1. On the back wall, 2. At a height of 38 inches minimum and 48 inches (1220 mm) maximum above the shower floor, and 3. 16 inches (405 mm) minimum and 27 inches (685 mm) maximum from the wall behind the seat. <p>608.4.3 Alternate Roll-in Showers.</p> <p>608.4.2.1 608.4.4 Ambulatory Roll-In Showers. Where a side wall is provided opposite the seat within 72 inches (1830 mm) of the seat wall, Ambulatory roll-in showers shall have two controls and hand showers. Provide a control and hand shower in accordance with Section 608.4.2. An additional shower control and hand shower may <u>shall</u> be located on this side wall <u>in accordance with the following</u>:</p> <ol style="list-style-type: none"> 1. At a height of 38 inches (965 mm) minimum to 48 inches (1220 mm) maximum above the shower floor, and 2. 17 inches (430 mm) to 19 inches (485 mm) from the back wall. <u>15 inches (380 mm) maximum, from the centerline of the control wall toward the shower opening.</u>
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Reason:

The question is if the attempt is to provide a type of shower that is in addition to the standard roll-in shower, or if this is an additional requirement for a standard roll-in shower. The 2009 A117.1 has separated requirements for the three current types of showers. This option sets it up as a separate type which can be scoped in the building codes.

An alternative public comment is proposed for if the additional control and grab bar is desired in all standard roll-in showers of a certain size, or this is an option that exceeds code requirements.

Agenda Item #30

Comment No: 6-61-12 PC1.2	Submitted by: Kim Paarlberg - ICC
	<p>Further revise as follows:</p> <p>608.3 Grab Bars.</p> <p>608.3.2 Standard Roll-in Type Showers. Grab bar for standard roll-in showers shall comply with Section 608.3.2.</p> <p>608.3.2.1 Horizontal Grab Bars. Horizontal grab bars shall be provided on the back wall beginning at the edge of the seat. The grab bars shall not be located above the seat. The back wall grab bar shall extend the length of the wall but shall not be required to exceed 48 inches (1220 mm) in length. Where a side wall is provided opposite the sea within 72 inches (1830 mm) of the seat wall, a grab bar shall be provided on the side wall opposite the seat. The side wall grab bar shall extend the length of the wall but shall not be required to exceed 30 inches (760 mm) in length. Grab bars shall be 6 inches (150 mm) maximum from the adjacent wall.</p> <p>608.3.2.2 608.3.2.1.4 Vertical Grab Bar. <u>Where a side wall is provided opposite the seat within 72 inches (1830 mm) of the seat wall,</u> Where an ambulatory roll-in shower control and hand spray are provided, a vertical grab bar shall be provided. A vertical grab bar 18 inches (45 mm) minimum in length shall be provided on the ambulatory control side wall 3 inches</p>

	<p>(75 mm) minimum and 6 inches (150 mm) maximum above the horizontal grab bar, and 4 inches (100 mm) maximum inward from the front edge of the shower.</p> <p>608.4 Controls and Hand Showers. Controls and hand showers shall comply with Section 608.4 and 309.4.</p> <p>608.4.1 Transfer-Type Showers. In transfer-type showers, the controls and hand shower shall be located:</p> <ol style="list-style-type: none"> 1. On the control wall opposite the seat, 2. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor, and 3. 15 inches (380 mm) maximum, from the centerline of the control wall toward the shower opening. <p>608.4.2 Standard Roll-in Showers. In standard roll-in showers, the controls and hand shower shall not be located above the seat. Controls and hand showers shall be located <u>in accordance with the following:</u></p> <ol style="list-style-type: none"> 1. On the back wall, 2. At a height of 38 inches minimum and 48 inches (1220 mm) maximum above the shower floor, and 3. 16 inches (405 mm) minimum and 27 inches (685 mm) maximum from the wall behind the seat. <p>608.4.2.1 Ambulatory Roll-In Showers <u>Additional control and hand shower.</u> Where a side wall is provided opposite the seat within 72 inches (1830 mm) of the seat wall, an additional shower control and hand shower may <u>shall</u> be located on this side wall <u>in accordance with the following:</u></p> <ol style="list-style-type: none"> 1. At a height of 38 inches (965 mm) minimum to 48 inches (1220 mm) maximum above the shower floor, and 2. 17 inches (430 mm) to 19 inches (485 mm) from the back wall. <u>15 inches (380 mm) maximum, from the centerline of the control wall toward the shower opening.</u>
<p>Reason: The trigger in 608.3.2.2 and 608.4.2.1 should be the same to avoid confusion. This also limits the need for a new name (which is only in the title in Section 608.4.2.1). If you call it a different name you start to look for where this is sized, which is not part of the change. The change to 608.4.1 places the controls to that they can be reached from the outside of the shower similar to the transfer shower (see section 608.4.1). 17" to 19" is too tight of a range and has no clear technical basis. This is making the control and grab bar mandatory for a standard roll-in shower. Alternative public comments are offered for if this control is something that is an option that exceeds code, or if this should be a different type of shower that should be scoped.</p>	
<p>Agenda Item #31</p>	
<p>Comment No: 6-61-12 PC1.3</p>	<p>Submitted by: Brad Gaskins - NACS</p>
	<p>Further revise as follows:</p> <p>608.3.2.1 Horizontal Back Wall Grab Bar. In standard roll-in type showers, a grab bar shall be provided on the back wall <u>with the outside edges</u> beginning at the front edge of the seat. The back wall grab bar shall and extending the length of the wall extend within 6 inches (150 mm) maximum from the adjacent side wall opposite the seat. The grab bars shall not be provided above the seat.</p>

	<p>608.3.2.2 Horizontal Side Wall Grab Bars. Where a side wall is provided opposite the seat within 72 inches (1830 mm) of the seat wall, a grab bar shall be provided on the side wall opposite the seat. <u>The outside edges of the side wall grab bar shall extend the length of the wall within 2 inches (50 mm) minimum of the front wall and extend within 6 inches (150 mm) maximum from the adjacent back wall.</u></p>
<p>Reason: This language will help resolve some high potential constructability issues. Also, coordinate language previously used concerning edge of grab bar and extension of grab bar. Provides language consistency with other sections of the Standard.</p>	
<p>Agenda Item #32</p>	
<p>Comment No: 6-61-12 PC1.4</p>	<p>Submitted by: Kim Paarlberg - ICC</p>
	<p>Further revise as follows:</p> <p>608.3 Grab Bars.</p> <p>608.3.2 Standard Roll-in Type Showers. Grab bar for standard roll-in showers shall comply with Section 608.3.2. <u>In standard roll-in type showers, horizontal grab bars shall be provided</u></p> <p>608.3.2.1 Horizontal Grab Bars. Horizontal grab bars shall be provided on the back wall beginning at the edge of the seat. The grab bars shall not be located above the seat. The back wall grab bar shall extend the length of the wall but shall not be required to exceed 48 inches (1220 mm) in length. Where a side wall is provided opposite the sea within 72 inches (1830 mm) of the seat wall, a grab bar shall be provided on the side wall opposite the seat. The side wall grab bar shall extend the length of the wall but shall not be required to exceed 30 inches (760 mm) in length. Grab bars shall be 6 inches (150 mm) maximum from the adjacent wall.</p> <p>608.3.2.1.1 Vertical Grab Bar. Where an ambulatory roll-in shower control and hand spray are provided, a vertical grab bar shall be provided. A vertical grab bar 18 inches (45 mm) minimum in length shall be provided on the ambulatory control side wall 3 inches (75 mm) minimum and 6 inches (150 mm) maximum above the horizontal grab bar, and 4 inches (100 mm) maximum inward from the front edge of the shower.</p> <p>608.4 Controls and Hand Showers. Controls and hand showers shall comply with Section 608.4 and 309.4.</p> <p>608.4.1 Transfer-Type Showers. In transfer-type showers, the controls and hand shower shall be located:</p> <ol style="list-style-type: none"> 1. On the control wall opposite the seat, 2. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor, and 3. 15 inches (380 mm) maximum, from the centerline of the control wall toward the shower opening. <p>608.4.2 Standard Roll-in Showers. In standard roll-in showers, the controls and hand shower shall not be located above the seat. Controls and hand showers shall be located:</p> <ol style="list-style-type: none"> 1. On the back wall, 2. At a height of 38 inches minimum and 48 inches (1220 mm) maximum above the shower floor, and 3. 16 inches (405 mm) minimum and 27 inches (685 mm) maximum from the wall

	<p>behind the seat.</p> <p>608.4.2.1 Ambulatory Roll-In Showers. Where a side wall is provided opposite the seat within 72 inches (1830 mm) of the seat wall, an additional shower control and hand shower may be located on this side wall:</p> <ol style="list-style-type: none"> 1. At a height of 38 inches (965 mm) minimum to 48 inches (1220 mm) maximum above the shower floor, and 2. 17 inches (430 mm) to 19 inches (485 mm) from the back wall.
<p>Reason: In the proposed language a vertical grab bar and additional control 'may' be provided. It is not necessary to state that something that exceeds code is permitted. Therefore the language should be removed. Some minor editorial cleanup has been kept. Other public comments are proposed for if the committee wants a new type that can be scopes, or if they want to require the additional control and grab bar for certain size standard roll-in showers.</p>	
<p>Agenda Item #33</p>	
<p>Comment No: 6-61-12 PC1.5</p>	<p>Submitted by: Hope Reed - NMGCD</p>
	<p>Further revise as follows:</p> <p>608.4.2.1 Ambulatory Roll-In Showers. Where a side wall is provided opposite the seat within 72 inches (1830 mm) of the seat wall, an additional shower control and hand shower can be located on this side wall:</p> <ol style="list-style-type: none"> 1. At a height of 38 inches (965 mm) minimum to 48 inches (1220 mm) maximum above the shower floor, and 2. <u>15 inches (380 mm) maximum</u> 17 inches (430 mm) to 19 inches (485 mm) from the back wall.
<p>Reason: This location is consistent with the location of Transfer-Type Showers.</p>	
<p>Agenda Item #34</p>	
<p>Comment No: 6-61-12 PC1.6</p>	<p>Submitted by: Matt Sigler - PMI</p>
	<p>Requests Deletion without substitution</p>
<p>Reason: In regards to proposed Section 608.4.2.1, there is no need to have two separate shower controls. What the proponent is trying to achieve can be done by simply adding a diverter to provide the necessary water supply from the primary control or mixing valve located on the back wall.</p>	
<p style="text-align: center;">6-61-12 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT</p>	
<p>Revise as follows:</p> <p>608.3 Grab Bars.</p> <p>608.3.2 Standard Roll-in Type Showers. <u>Grab bar for standard roll-in showers shall comply with Section 608.3.2.</u> In standard roll-in type showers, grab bars shall be provided</p>	

608.3.2.1 Horizontal Grab Bars. Horizontal grab bars shall be provided on the back wall beginning at the edge of the seat. The grab bars shall not be located above the seat. The back wall grab bar shall extend the length of the wall but shall not be required to exceed 48 inches (1220 mm) in length. Where a side wall is provided opposite the seat within 72 inches (1830 mm) of the seat wall, a grab bar shall be provided on the side wall opposite the seat. The side wall grab bar shall extend the length of the wall but shall not be required to exceed 30 inches (760 mm) in length. Grab bars shall be 6 inches (150 mm) maximum from the adjacent wall.

608.3.2.1.1 Vertical Grab Bar. Where an ambulatory roll-in shower control and hand spray are provided, a vertical grab bar shall be provided. A vertical grab bar 18 inches (45 mm) minimum in length shall be provided on the ambulatory control side wall 3 inches (75 mm) minimum and 6 inches (150 mm) maximum above the horizontal grab bar, and 4 inches (100 mm) maximum inward from the front edge of the shower.

608.4 Controls and Hand Showers. Controls and hand showers shall comply with Section 608.4 and 309.4.

608.4.1 Transfer-Type Showers. In transfer-type showers, the controls and hand shower shall be located:

1. On the control wall opposite the seat,
2. At a height of 38 inches (965 mm) minimum and 48 inches (1220 mm) maximum above the shower floor, and
3. 15 inches (380 mm) maximum, from the centerline of the control wall toward the shower opening.

608.4.2 Standard Roll-in Showers. In standard roll-in showers, the controls and hand shower shall not be located above the seat. Controls and hand showers shall be located:

1. On the back wall,
2. At a height of 38 inches minimum and 48 inches (1220 mm) maximum above the shower floor, and
3. 16 inches (405 mm) minimum and 27 inches (685 mm) maximum from the wall behind the seat.

608.4.2.1 Ambulatory Roll-In Showers. Where a side wall is provided opposite the seat within 72 inches (1830 mm) of the seat wall, an additional shower control and hand shower may be located on this side wall:

3. At a height of 38 inches (965 mm) minimum to 48 inches (1220 mm) maximum above the shower floor, and
4. 17 inches (430 mm) to 19 inches (485 mm) from the back wall.

Chapter 7

7-1-12 PC3	
Agenda Item #35	
Comment No: 7-1-12 PC3.1	Submitted by: Sharon Toji – HLAA Eugene Lozano, Jr. – California Council of the Blind Billie Lousie (Beezy) Bentzen – Accessible Design for the Blind on behalf of AERBVI
	<p>Further revise as follows:</p> <p><u>105.2.XX Light reflectance value (LRV) of a surface.</u> Method of Test. BS 8493:2008 + A1: 2010 (British Standards Institution, 389 Chiswick High Road, London W4 4AL, United Kingdom).</p> <p><u>504.5.1 Visual Contrast.</u> 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 (51 mm) 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.</p> <p><u>701.1.2 Light Reflectance Value.</u> The light reflectance value (LRV) of surfaces shall be determined in accordance with BS 8493 for the following surface types:</p> <ol style="list-style-type: none"> <u>1. Opaque paint coatings and paint systems, including those that cause extreme angular dependences of reflected light and those that have a surface texture of less than 2 mm;</u> <u>2. Opaque coverings including those that cause extreme angular dependences of reflected light, and those that have an unyielding texture of less than 2 mm;</u> <u>3. Opaque coverings with a yielding pile, e.g. carpet;</u> <u>4. Opaque materials, including those that cause extreme angular dependences of reflected light, and those that have a texture of less than 2 mm, e.g. finished metals;</u> <u>5. Opaque materials coated with non-opaque coatings or coverings, e.g. timber door coated with a woodstain, including those that cause extreme angular dependences of reflected light, and those that have a texture of less than 2 mm;</u> <u>6. Multi-colored surfaces;</u> <u>7. Ordinary materials as defined in 3. Terms and Definitions, 3.3, by BS 8493:2008 + A1: 2010;</u> <p><u>701.1.2.1 Other Surfaces.</u> Other surfaces shall comply with Section 703.1.3.1.</p> <p><u>701.1.3 Contrast Value.</u> The contrast between the LRVs of adjacent surfaces required by Sections 703.2.1.2, 703.5.3.2, 703.6.3.2, 705.3, and 504.5.1 shall be determined by Equation 7-1,</p> $\text{Contrast} = [(B1-B2)/B1] \times 100 \text{ percent} \quad \text{Equation 7-1}$ <p>Where</p> <p><u>B1 = light reflectance value (LRV) of the lighter surface,</u> <u>B2 = light reflectance value (LRV) of the darker surface.</u></p> <p><u>701.1.3.1 Other Surfaces.</u> Surfaces not within the scope of BS 8493 shall provide contrast between adjacent surfaces that are either light on dark or dark on light.</p>

703.2.1 General. Visual characters shall comply with the following:
(Balance of section is not changed)

703.2.1.1 Nonglare Finish. The glare from coverings, the finish of characters and their background shall not exceed 19 as measured on a 60-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.

~~**703.2.10 Contrast.** Characters and their background shall have a non-glare finish. Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.~~

~~**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. The glare from coverings and the finish of pictograms and their fields shall not exceed 19 as measured on a 60-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. Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.

~~**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. The glare from coverings and the finish of symbols of accessibility and their backgrounds shall not exceed 19 as measured on a 60-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 7-1. The lighter surface shall have a LRV of not less than 45.

Reasons:

Reasons and documentation supplied by Sharon Toji:

Reasons why we need a measurable standard for contrast in the ANSI A117.1 Standard

I can cite many anecdotal incidents where contrast for signs covered by the ANSI standards and the ADA SAD have insufficient contrast. These are signs that are sometimes very consequential in safely and efficiently gaining access to public buildings.

In one such anecdote, a building inspector wrote in my LinkedIn group that he was in a high rise hotel during a fire. He went down the corridor to what he thought was an appropriate exit, only to find that the sign adjacent to the door stated that the stair did not actually lead to the public way, so he had to travel back a distance to a different stair. He blamed a non-contrasting sign, and said "I would have liked to get my hands on the inspector who passed that sign as having adequate contrast.

Hospitals often have non-contrasting signs on walls because the colors are left to designers, and pale silver on off-white walls are particularly popular. Elevator floor indicators and informational signs in transit venues such as airports and rail stations often use red characters on black backgrounds, virtually invisible to a large number of people with common "color blindness."

I believe that if we had a standard, it would serve as a guide for designers and sign companies, and we would get much better understanding of the requirement for light/dark contrast that is part of the ANSI standard as well as the Americans with Disabilities Act Design Standards.

Such a standard would, I believe, prompt manufacturers of measurement devices to come out with many more useful devices that could be used in the field. Already, there is one such device out, and it costs less than \$250 for a device that can measure a color stroke as small as 3 MM in width. There is no doubt that more companies would enter the field with such devices if a standard were in place. Already, there are many devices that do measure color on computer screens as well as colors on walls and furniture, but other than the above device, I don't know of any that have such a small aperture, so they don't work for small sign character strokes. The fact that the devices exist, however, shows that the ability is there to adapt them for sign use.

We also have, thanks to the British Standards Institute, a "Standard of Test" for LRVs that applies to the great majority of the materials used for the kinds of signs that are covered by the ADA design standards, as well as materials used for stair striping and detectable warning surfaces. Because of the availability of this standard, LRV measurements are being adopted internationally as a standard for measuring contrast in the built environment. If you read the British Standard carefully, you will see that about the only surfaces that cannot be measured are those that change color when exposed to light (such as photo luminescent materials) and materials that would have to be measured on curved surfaces. That appears to be a minor consideration in light of the number of signs that could be tested, even on site. Also, just as with braille, once you have determined that one sign fabricated of particular materials is compliant, there is no need to measure all the remainder of the signs made of identical materials, even if some of those are displayed on curved surfaces.

In my opinion, we are holding up a much higher standard of research for this one item than we usually do for many other issues that come before the committee. Virtually all the measurements that we deal with are compromise measurements. They all strive to affect the majority of persons with various types of disabilities, but can never be considered the one and only perfect measurement for all. Vision is especially difficult to calibrate in this way, because it is so complex, and one person can have a combination of vision issues, all of which are subject to change. Finding the perfect "sample population" would be virtually impossible. The purpose of the figure we chose (i.e. 45 LRV) as the minimum lighter color merely gets us to a point where we are forcing the designer to choose at least one of the colors from the lighter end of the spectrum. Otherwise, they are free to choose two colors from the darker end, and the formula flaw then becomes obvious.

There are instances going back many years, during the history of the 70 percent contrast ratio, where reports suggested that the way to correct the flaw in the formula, which tends to give contrast preference to dark colors, due to the mathematical curve created because of the uneven intervals between LRV points, would be to require a minimum light color. That is why the work group on Contrast took that direction.

Establishing this dividing line where light colors are divided from dark colors is important for two reasons: First, many people still think we are talking about color (or hue) when we talk about contrast. Without the LRV standard, that belief persists and color choices are made accordingly. Second, there is a tendency to interpret the code as "darker colors versus lighter colors," or vice versa. When I ask architects or inspectors why certain choices were made, or two obviously non-contrasting colors were passed, I'm told "this color is darker than this color, so it complies." In one case some years ago, which some Committee members might remember, the two colors were white and ivory. I just saw another new college building with a complete system of signs with white characters on very light beige backgrounds, barely better than the white on ivory example.

How did we choose 45? After a lot of study of various reports and charts, and viewing of different combinations, we saw this was the area that was the rational point to divide light from dark. We obviously could have chosen 46 or 44. Numbers in the standard are almost always somewhat arbitrary. Why is a reach range 48 and not 47 or 49? We chose 45 instead because we often count or measure by fives, just as 48 was chosen because it represents 4 feet.

The British approach contrast in a slightly different manner, by dictating the difference between LRV figures. For some elements, such as doors and hardware, they chose 30 points. However, unless they choose a very high number, they end up with a flaw as well. Thirty points of difference between darker colors is much different than it is between lighter colors. For signs, they solved the problem by stating that the two LRV numbers for sign characters and background must be 70 points apart. This restricts the number of hues for signs to relatively few, only the very darkest and lightest colors. Our method, requiring that the lighter color have a number of 45 or higher, allows designers much more latitude, so we think it is a better way to correct the flaw, and one that allows for more creativity and will encourage much more compliance.

In other words, we are not trying to find a "perfect" number at which everyone with a vision impairment, but with usable vision, will be able to detect the difference between the characters and background of a sign. This is a minimum, and it is a compromise that will not serve every person, although it will be fine for many as well. We are merely giving the designer a boundary, and saying, we are going to call colors with an LRV of 45 or higher "light colors," and those below that numbers "dark colors." Then we are going to require that the contrast be 70 percent, by applying a formula to those two numbers. And, we are referring to the British standard of test in case there is a question about the correctness of the LRV number assigned to a material. That means that the LRV can be determined in a laboratory environment using an instrument that conforms to certain specifications, following a specific procedure.

Since most colored materials are already tested using similar procedures for consistency reasons, or for architects who want to use the latest "green" design standards, only custom materials will need special testing. An architectural materials company in the UK has reported that they set up the material and trained their personnel to do the testing, and have added

this to their services with great success. I have been told by employees of UL that they would be willing to add the service as well, although I think some large design and sign firms and architects might invest in it for in-house use.

There are literally hundreds of combinations of colors that will be available to designers, and a great variety of materials, including wood, painted surfaces, plastics, metals, and even carpet if they care to use them for signs, by using this standard and method of test. And, there are many different brands of scientific instruments that can correctly measure the LRV, as well as at least one device currently available for a modest price that an inspector could use for a site measurement. There is even an "ap" available for many phones and tablets that will instantly calculate the 70 percent formula. Measurement only takes seconds using this device and application, and does not depend on ambient light.

Another argument of opponents was that contrast does not affect many people. I think those people are forgetting that, in addition to the significant number of people who have a variety of vision impairments, but still use their vision, color deficiencies are a serious problem for many people with otherwise normal vision. About 8 percent of the male population has the most common form of "color blindness" and for those people, some signs might as well be invisible if they do not have sufficient light/dark contrast. I have read statements that, if we also include women, and those with vision conditions that also include certain color deficiencies, the percentage of the population could be as high as 12 percent. Aging affects the color vision of most people, and there are increasing number of elderly people who are living longer and who remain active to a more advanced age so they are also accessing public buildings.

Color deficient vision is of such importance to science and industry, that there are entire firms, including firms for both research and testing, devoted to it. NASA has also done significant research on the topic, and has reports on their site. I have received letters in support of the need for contrast from some of their staff, as well as from others in the defense department. Most people are not aware of the number of crucial professions that rely on adequate color vision, These institutions are concerned about the numbers of people who do not have normal color vision, and are trying to solve those problems. One possible solution for some problems is obviously determining contrast standards, and being able to substitute materials of varied darkness and lightness. In one study, NIST was investigating the colors of electrical wires in aircraft to determine contrast.

Another issue is lighting. Of course adequate lighting influences vision. However, at this time we have few lighting standards, and even if we did, it would be difficult to control, on a day to day basis, whether or not a specific sign is lighted sufficiently. What we can control, is that the sign comes from the manufacturer with enough contrast that it can be read under normal lighting conditions in most public buildings.

Another point to consider is that the National Institute of Building Sciences has been dealing with many of the same questions under the auspices of a committee studying the needs of the low vision community. This is a topic that is getting increasing attention, as we think beyond the needs of those with the most significant life-long disabilities, and the discrimination they have lived with, to the needs of others in the population as they access the built environment, and particularly older people, who will represent a major part of the population. Here is the link to the most recent draft version of their report: http://www.nibs.org/?page=lvdc_guidelines

It is long past time for us to have a measurable standard since this is a very far reaching problem, affecting not only those who are classified as blind, but anyone who is deaf or hard of hearing, those with mobility impairments, or those who cannot speak or be understood by others when they ask directions. Being able to read the signs that direct us around facilities, give us important safety information, travel information, rules and regulations for using buildings, or even inform us during disasters, is crucial.

We need to put this proposed standard in perspective: Like many of our standards, there is more to be learned on the condition that prompts the standard. New technology will emerge that will make all or some parts of our standards obsolete. Because of digital advances, new wayfinding possibilities, including for those with vision impairments, are emerging monthly. This is a simple attempt to provide a reasonable divide between light and dark colors, so that a contrast ratio long in existence can be used in a reasonably consistent manner. The use of light reflectance values to establish contrast is based on solid research on contrast by respected individuals in the UK, most of it already in use in Europe and other countries as they establish international standards. Why are we resisting such a step forward for people who need to be able to read signs in order to get around and use public services in a safe and efficient manner?

Areas of Particular Interest from the NIBS Report

These are some excerpts from the National Institute of Building Sciences report, which states that lighting and contrast are the two biggest influences on use of buildings by people with low vision.

2.8 Wayfinding (pages 21-22)

Tactile wayfinding aids (braille) are generally not familiar to older adults and persons with low vision, but all wayfinding aids should comply with the following:

Information displays, lettering styles, spacing and other features should comply with ADA Standards 703.2 (30), and as follows:

- ♣ Signs are more legible for people with low vision when characters contrast with their background with a Light Reflectance Value (LRV) as recommended in Table 4C-2.
- ♣ Lettering and other graphics should be monochromatic white information on black field because many persons with low vision have some degree of color blindness and difficulty with low contrast. See also Table 4C-2.

- ♣ Raised or incised lettering not contrasting in color or value with the surrounding field is not recommended for use by persons with low vision. Shadows may confuse rather than enhance visibility.

Wayfinding surface illumination should be uniform and as recommended in Table 5C-1, Ref. 4, in daylight and after dark and the sign surfaces should be shielded from the light source to avoid reflected glare.

Internally illuminated or backlit signs may be difficult for persons with low vision due to glare.

Variable message signs may be suitable with the following recommendations (28):

- ♣ Use left-justified text a minimum of 22 mm (7/8 in.) high but not less than 1 percent of the distance at which the sign is to be read.
- ♣ Use sans-serif fonts with upper and lower-case in simple sentences without abbreviations.
- ♣ Space characters about ¼ of the font width, and space words more than characters.
- ♣ Space lines apart 50 percent of text height where multiple lines are needed, but avoid fewer than 3 lines.
- ♣ Do not use multiple colors or flashing messages.

Liquid crystal displays may be difficult for persons with low vision, especially where they may be subject to direct sunlight or strong shadows. LED and other internally illuminated displays are preferable.

3.3.2 Wayfinding Aids (page 31)

Directional and wayfinding graphic aids are important for all buildings used by the public, especially for people visiting for the first time. In addition to the guidance provided for signs in ADA Standards 703 (30), the following is recommended to accommodate persons with low vision:

- Persons with low vision may not be proficient in interpreting braille. Therefore, visual aids are more appropriate, and should be placed as close to the main entrance doors as possible to be readable before entering the lobby without having to search for the reception desk, security facilities, etc.
- All graphics must be adequately illuminated at all hours, and should have high-contrasts between figures or text and background field. See introductory discussion to this chapter and Table 4C-2 for additional guidance.

3.5.9 Wayfinding Aids (page 34)

Wherever possible, wayfinding aids should be placed facing the direction of travel rather than on walls and doors along the corridor sides. Signage placed across corridors at the ceilings may be difficult to see for some people with low vision to see and may be difficult to illuminate properly.

- All wayfinding aids must be in high contrast with the surrounding fields in color and value. See Table 4C-2.
- All wayfinding aids require electric lighting illumination that does not result in glare from reflections off the signage or adjacent surfaces (34).

3.6 Stairways

3.6.1 Surface Finishes (page 35)

- Stair risers should contrast with treads to aid in visibility to persons ascending the stairs.
- Stair tread nosings should be in high contrast colors and values from stair treads and should be 50 mm (2 in.) wide so that the edge of each tread is highly visible to the user descending.
- Stringers or skirting should be darker and have a strong value contrast with treads and risers to enhance their visibility.
- Highly figured or patterned materials should be avoided, as they may be confusing to those with low vision. Continuous carpeted stair runners with such designs may camouflage the edge of the tread and create a fall hazard.
- The sloping undersides of stairs and escalators could become a head-bumping hazard, so spaces under the stairs or escalators must be enclosed or otherwise protected to prevent access below a height of 2030 mm (80 in) See also ADA Standards 307.4 (30).
 - See Table 4C-2 for further guidance.

3.10.6 Other Design Considerations (pages 40-41)

Menus may be a reading challenge for many people with low vision due to small font size. Menu boards mounted on the wall behind preparation areas of cafeteria stations and short order counters may be difficult for many people to read, especially when the menu selection is large and restrictive space dictates using small font size. At tables in

dining areas with wait staff, printed menus may be hard to read due to low lighting. Some options to be considered to address this issue follow (28):

- If space is available at the beginning of the cafeteria line or short order counters, task-lit menu boards and other information may be located there. Labels of food and beverage selections located at the place of display or point of sale such as at the steam table or dessert case may also be helpful.
- Hand-out paper menus in large font size, with contrasting print on a matte finish, at the beginning of the cafeteria line or short-order counter may be a simple way to accommodate low-vision customers.
- Task lighting luminaires at tables can help diners read traditional menus and see their food and dishes in otherwise low ambient light.
- Video and touchscreens may also be useful tools for presenting menus and other information.

Note: the Chart referenced shows the familiar 70 percent contrast ratio as required for signs, and gives the formula, but does not mention the need for a minimum lighter color or the flaw in the formula. For other types of surfaces, such as stair striping, they recommend a minimum number of points. For stair striping, a minimum difference of 50 points is recommended. Depending on what colors were used, a 50 point difference could mean anything from a high of 89 percent to a low of 54 percent. It would depend on whether you were comparing a black stripe with a medium color step, or a white stripe with a medium-light color step.

Dr Geoff Cook's research was used prominently by the committee, according to two of the members with whom I met to discuss the report.

Material in Support of Contrast Standard

The following two page document is an excerpt from the British Standard of Test for Light Reflectance Values.

I maintain that the adopted amendment to my original proposal has omitted a very significant category of material types, which I believe has the result of greatly reducing the effectiveness of the proposed standard.

The implication of comments made by some committee members was that the list of materials that could be tested according to the British Standard of Test is very restrictive. I have included two pages that refer to these comments, and I believe show the fallacy of that conclusion.

As a matter of fact, I maintain that a careful and correct reading of the standard details shows that the method of test can be used for a very broad array of materials that are commonly used for signs, in addition to their use for other architectural elements, such as stair striping, that are also covered by this proposal.

I have highlighted the sections that I believe demonstrate this, so they are easy to locate.

First, under Section 1 Scope, there is a list of materials that the method of test applies to. The text emphasizes, with the use of the word "including" in the descriptions of the materials, that not only is the test applicable, for example, to "opaque paint coatings and paint systems," but it also includes what might be considered an unusual material, "those that cause extreme angular dependences of reflected light and those that have a surface texture of less than 2 mm." So, it isn't confined to such materials, but includes them in addition to all the more usual opaque paint coatings and paint systems.

The proponents of the amended text also left out a very important item on the list, the term "ordinary materials." Perhaps they thought the term was too general to include, but as a matter of fact, it is a fairly carefully defined term in the standard, and should be included in the list.

Skipping to 3 Terms and Definitions, 3.3 ordinary materials, we see all materials that are not considered "ordinary materials." That would mean that most of the plastics, for instance, that are used for signs could be tested. We already have a very inclusive list of other materials that can be tested.

Then, to give us even more specificity, the scope goes on to list the surfaces that cannot be tested: thermochromic, photochromic, retroreflecting, fluorescent, phosphorescent, those involving electrical power, and self-luminous, or composed of free-standing, curved non-opaque materials such as curved glass or clear plastic.

Those who actually design and fabricate the types of architectural signs that must comply with accessibility standards will ascertain, I believe, that very few of these materials are used for such signs. Photoluminescent material used for exit signs, for instance, would be one exception. Many of these materials cannot be tested because they actually change color with temperature or light change. I have also been informed by Geoff Cook, who was the lead for this standard, that a material that is fabricated in its flat state, such as a piece of plastic that has the graphics applied to it while flat, can be accurately tested, even though later it may be forced into an extrusion that will cause it to be curved. You cannot, however, test a curved surface.

The question of opaque materials coated or covered with non-opaque coatings or coverings are covered in the highlighted area on the second page. Dr Cook has ascertained that if each material is tested individually with its coating or covering, the LRV will be valid. For instance, even though both materials would be otherwise identical, if they are different colors, and each is coated or covered, each would have to be tested. You cannot assume that the difference in the LRV caused by deflection will be identical.

I propose, therefore, that the materials called "ordinary materials" be included on the list that can be tested. This will greatly reduce the materials that will revert to the vague "light on dark or dark on light" standard.

(Due to copyright we can not include Sharon's excerpt of the standard. She will need to provide those to you directly.)

Reason provided by Eugene Lozano, Jr.:

The California Council of the Blind, Inc. (CCB) is a statewide membership organization. Its members are blind, visually impaired and fully sighted individuals who are concerned about the dignity and well-being of blind and visually impaired people throughout the state. Formed in 1934, the Council has become the largest organization of people who are blind or visually impaired in the state of California, with over 40 chapters and special interest affiliates and a membership of over 2,000.

Through a variety of programs and services, CCB enables people who are blind and visually impaired to live and work independently and to participate in their own communities. The Council has influenced change in such areas and issues as civil rights, employment, rehabilitation, transportation, environmental access, travel, recreation, Social Security, and other benefits. To strengthen advocacy efforts, the Council often works in coalition with other state disability groups.

The CCB is in support of reinstating Proposal 7-1-12, which cover Sections 105.2, 504.5.1, 701.1.2, 701.1.3, 701.2.1, 701.2.1.2, 703.2.10, 703.5.3, 703.5.3.2, 703.6.3.2, and 705.3. The reinstatement of the Proposal and the adoption of these sections will make the difference in having effective and useable visual cues for detectable warning surfaces, stair-striping for the edge of stair trends, signage, and other applications which will increase the safety and access for persons with low vision.

We are in full agreement with the supporting documentation which has been submitted by Sharon Toji, Access Communications, on behalf of Hearing Loss Association of America. Her comments are based on independent and scientifically-based research from the Reading University in the UK, which eventually became an officially recognized standard.

The CCB feels additional research is unnecessary at this time and that the ANSI A117.1 committee should adopt the British standard to establish a method for measuring contrast between foreground and background. Also it is important there be at least a 70% contrast between adjoining surfaces.

Reason provided by Billie Louise (Beezy) Bentzen:

The perfect has been the enemy of the good for far too long regarding standards for visual contrast and glare. Numerous other countries as well as the ISO have measureable, enforceable standards for visual contrast. The US standard of light-on-dark or dark-on-light is an embarrassment that serves no one well. It is totally subjective, not measureable, and serves no sign readers well. It is high time that ANSI A117 remedied this situation by adopting a standard that includes a well-researched formula and for which there are modestly priced and reasonably accurate measurement instruments that can be used in the field.

Establishing this standard can reasonably be expected to improve legibility of signs not only for people with impaired visual acuity or color vision, but for all people who sometimes need to read signs in low illumination. Failure to establish this measurable, enforceable, research-based standard tells the world once again, that legibility of signs is not really important to US standards bodies. Perceived beauty, ease and expense of manufacturing trump the fundamental purpose of signs—to provide information that people can read and understand.

7-1-12 PC3 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT

Delete reference standard as follows:

~~**105.2.XX Light reflectance value (LRV) of a surface. Method of Test.** BS 8493:2008 + A1: 2010 (British Standards Institution, 389 Chiswick High Road, London W4 4AL, United Kingdom).~~

Revise as follows:

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 (51 mm) 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.

701.1.2 Light Reflectance Value. The light reflectance value (LRV) of surfaces shall be determined in accordance with BS 8493 for the following surface types:

1. Opaque paint coatings and paint systems, including those that cause extreme angular dependences of reflected light and those that have a surface texture of less than 2 mm;
2. Opaque coverings including those that cause extreme angular dependences of reflected light, and those that have an unyielding texture of less than 2 mm;
3. Opaque coverings with a yielding pile, e.g. carpet;

4. ~~Opaque materials, including those that cause extreme angular dependences of reflected light, and those that have a texture of less than 2 mm, e.g. finished metals;~~

5. ~~Opaque materials coated with non-opaque coatings or coverings, e.g. timber door coated with a woodstain, including those that cause extreme angular dependences of reflected light, and those that have a texture of less than 2 mm;~~

6. ~~Multi-colored surfaces;~~

701.1.2.1 Other Surfaces. Other surfaces shall comply with Section 703.1.3.1.

701.1.3 Contrast Value. The contrast between the LRVs of adjacent surfaces required by Sections 703.2.1.2, 703.5.3.2, 703.6.3.2, 705.3, and 504.5.1 shall be determined by Equation 7-1,

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

Where

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

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

701.1.3.1 Other Surfaces. Surfaces not within the scope of BS 8493 shall provide contrast between adjacent surfaces that are either light on dark or dark on light.

703.2.1 General. Visual characters shall comply with the following:

(Balance of section is not changed)

703.2.1.1 Nonglare Finish. The glare from coverings, the finish of characters and their background shall not exceed 19 as measured on a 60-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.

703.2.10 Contrast. Characters and their background shall have a non-glare finish. Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background

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. The glare from coverings and the finish of pictograms and their fields shall not exceed 19 as measured on a 60-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. Characters shall contrast with their background, with either light characters on a dark background or dark characters on a light background.

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.

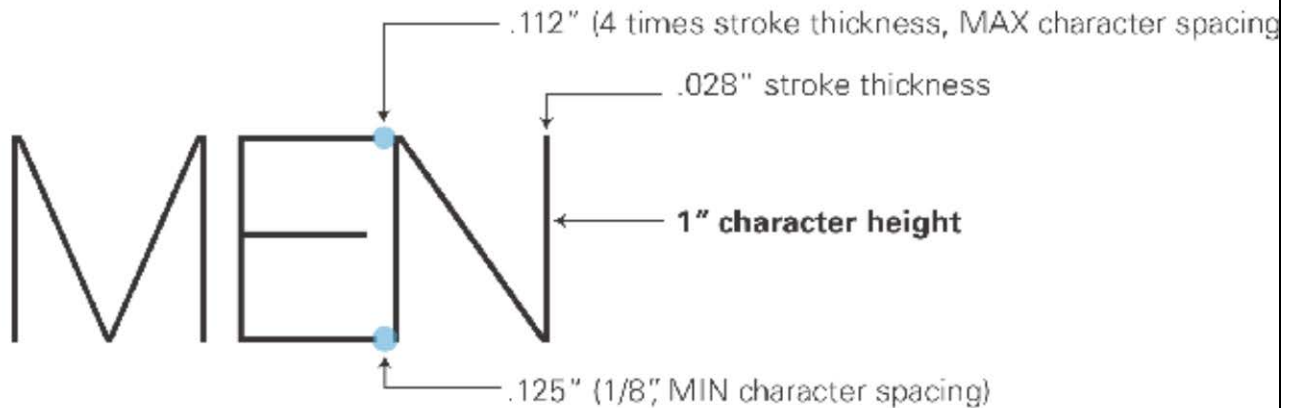
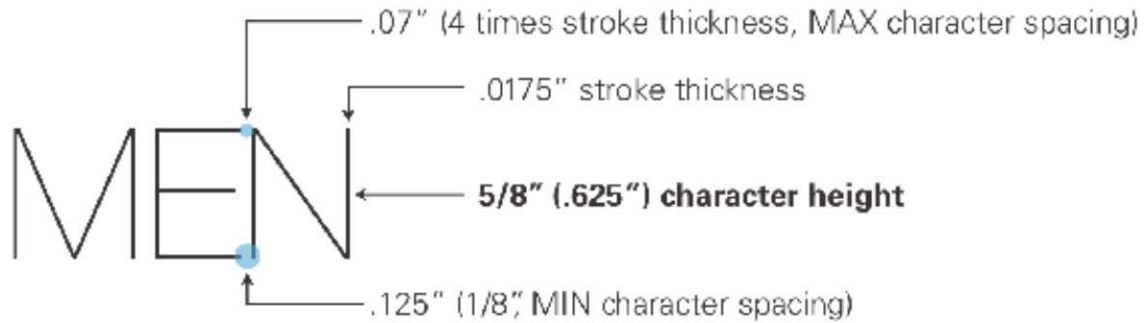
703.6.3.1 Nonglare Finish. The glare from coverings and the finish of symbols of accessibility and their backgrounds shall not exceed 19 as measured on a 60-degree gloss meter.

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 7-1. The lighter surface shall have a LRV of not less than 45.

7-23-12 PC1	
Agenda Item #36	
Comment No: 7-23-12 PC1.1	Submitted by: Teresa Cox – APCO Sign Systems, Inc., on behalf of ISA
	<p>Further revise as follows:</p> <p>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 <u>15% or 1/8 inch (3.2 mm) minimum, whichever is greater, and 35% maximum of the character height</u> measured at the top of the 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.</p>
<p>Reason:</p> <p>During our meeting in January 2014, the question was called on 7-23-12 before ISA was able to give a full explanation of the sign industry's concern. The Committee voted to reverse the action taken the previous July to address a problem with language defining maximum spacing between raised characters.</p> <p>The current standard reads: "Spacing between individual raised characters shall be 1/8 inch (3.2 mm) minimum ... and four times the raised character stroke width maximum."</p> <p>As there is no minimum stroke width for raised characters, there are instances where the 1/8 inch minimum exceeds the maximum. A PDF is attached illustrating the problem.</p> <p>Good design practice in signage maintains proportional spacing between characters. Spacing between characters should increase with character height. Proportional spacing enhances legibility and accessibility. Using a percentage of the character height is a logical way to define spacing between characters.</p> <p>The ISA did not propose to change the minimum spacing, but to allow for wider spacing than four times the stroke width.</p>	



Typeface: Helvetica Neue 25 Ultra Light

Agenda Item #37

Comment No:
7-23-12 PC1.2

Submitted by:
Sharon Toji – HLAA

Comment in support of Second Public Review Draft – Item 7-23-12 PC1

COMMENT:

Although I hope it does not result in a rash of text messages with double spaces between characters, as was “trendy” several years ago, I have decided to support this change. It does correct a possible flaw, where it is not possible to determine a maximum distance for characters with very slender or non-existent top surfaces, if you measure the character distance between the top surfaces, rather than the bases. The most important standard is the standard for the necessary separation, and that is now retained.

7-23-12 PC1 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT

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 15% or 1/8 inch (3.2 mm) minimum, whichever is greater, and 35% maximum of the character height measured at the top of the 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.

7-16-12 PC2	
Agenda Item #38	
Comment No: 7-16-12 PC2.1	Submitted by: Kim Paarlberg - ICC
	<p>Further revise as follows:</p> <p>704.8 Visual Relay Service Booth. Each public Visual Relay Service Booth shall be accommodate one user with seating and privacy enclosure, a visual monitor, a video camera device, control device, a two way communication system for visual communication for persons with hearing impairments, diffuse lighting with a minimum lighting level of 20 foot candles (215 lux). The background of the seating area, and within range of the video camera device two way communication system, shall have a flat, non-textured surface and finish color in the bright green or blue range <u>that offers high contrast.</u></p>
<p>Reason: Technology is advancing so quickly, the language should be more generic. The current language could be interpreted to not allow for a computer link. The revision to the last sentence uses language that is similar to the signage requirements. There has to be some colors of 'bright' blue or green that would be to intense, or a color of green or blue that was not considered 'bright' by some people but would still be a contrast.</p>	
7-16-12 PC2 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT	
<p>Revise as follows:</p> <p>704.8 Visual Relay Service Booth. Each public Visual Relay Service Booth shall be accessible and accommodate one user with seating <u>and privacy enclosure,</u> a visual monitor, <u>a video camera device,</u> control device, diffuse lighting with a minimum lighting level of 20 foot candles (215 lux). And privacy enclosure with a flat, non-textured surface and finish color in contrast with the full range of human skin tones to provide a background for clear visual communication. <u>The background of the seating area, and within range of the video camera device, shall have a flat, non-textured surface and finish color in the bright green or blue range.</u></p>	

Chapter 8

3-13E-12 PC1 and PC3	
Agenda Item #39	
Comment No: 3-13E-12 PC1.1	Submitted by: Kim Paarlberg - ICC
	<p>Further revise as follows:</p> <p>802.7.2 Companion Seat Alignment. In row seating, the companion seat shall be located to provide shoulder alignment with the wheelchair space occupant. The shoulder of the wheelchair space occupant is considered to be 36 inches (915 mm) from the front or 16 inches (405 mm) from the rear of the wheelchair space. The floor surface for the companion seat shall be at the same elevation as the wheelchair space floor surface.</p> <p style="text-align: center;">EXCEPTION: In existing facilities, the companion seat shall be permitted to be positioned 12 inches (305 mm) from the rear of the wheelchair space.</p>
<p>Reason: This is coordination with PC3 – with the new size of clear floor space the shoulder alignment with companion seats will be more than must in existing facilities. The exceptions should be applicable for new and altered facilities.</p>	
Agenda Item #40	
Comment No: 3-13E-12 PC3.1	Submitted by: Edward Steinfeld - RESNA
	<p>Further revise as follows:</p> <p>802.7.2 Companion Seat Alignment. <u>The floor surface for the companion seat shall be at the same elevation as the wheelchair space floor surface.</u> In row seating, the companion seat shall be located <u>to provide shoulder such that the back of the companion seat aligns alignment with the wheelchair space seat back as per 305.8 Seat Back Location.</u> The shoulder of the wheelchair space occupant is considered to be 36 inches (915 mm) from the front or 16 inches (405 mm) from the rear of the wheelchair space. The floor surface for the companion seat shall be at the same elevation as the wheelchair space floor surface.</p> <p>EXCEPTIONS:</p> <ol style="list-style-type: none"> <u>1.</u> Companion seat alignment is not required in tiered seating that includes dining surfaces or work surfaces. <u>2.</u> For wheelchair spaces with front <u>rear</u> access, the shoulder wheelchair seat back alignment shall be <u>is permitted to be measures 12 inches (305 mm) 4 inches (100 mm) maximum behind the companion seat back from the rear of the space.</u> <u>3.</u> For wheelchair spaces with side access, the should alignment shall be permitted to be measured 12 inches (305 mm) from the rear of the space. <p>305.8 Seat Back Location. <u>For the purposes of this standard, the seat back of a wheelchair within the clear floor space shall be considered 40 inches (1015 mm) from the front or 12 inches (305mm) from the rear of the wheelchair space.</u></p>

<p>Reason: Since the bulk of the paragraph is about seat alignment, it reads better if the floor surface is moved to the first sentence. It is also the more important rule.</p> <p>Since there is no definition of where the shoulder location is on the companion seat, it seems arbitrary to align based on shoulder location. The key feature is really the seat back.</p> <p>Seat back alignment should be part of the clear floor space section because it can be used for many purposes besides this, such as the shower seat alignment. Designers should learn about seat back location because it plays a role in reachability. The IDeA Center can prepare an illustration that will be useful for many purposes. The current alignment in the standard is 12 inches and there is insufficient evidence to increase this to 16 inches. Thus, the general rule should remain 12 inches from the rear; and exceptions can be provided to address concerns where they arise, as proposed in 802.7.2.</p>	
<p>Agenda Item #41</p>	
<p>Comment No: 3-13E-12 PC3.2</p>	<p>Submitted by: Kim Paarlberg - ICC</p>
	<p>Further revise as follows:</p> <p>802.7.2 Companion Seat Alignment. In row seating, the companion seat shall be located to provide shoulder alignment with the wheelchair space occupant. The shoulder of the wheelchair space occupant is considered to be 36 inches (915 mm) from the front or 16 inches (405 mm) from the rear of the wheelchair space. The floor surface for the companion seat shall be at the same elevation as the wheelchair space floor surface.</p> <p>EXCEPTIONS:</p> <ol style="list-style-type: none"> 4. Companion seat alignment is not required in tiered seating that includes dining surfaces or work surfaces. 5. For wheelchair spaces with front access, the shoulder alignment shall be permitted to be measures 12 inches (305 mm) from the rear of the space. 6. For wheelchair spaces with side access, the should alignment shall be permitted to be measured 12 inches (305 mm) from the rear of the space. 7. <u>For wheelchair spaces with rear access, the shoulder alignment shall be permitted to be measures 40 inches (305 mm) from the rear of the space.</u>
<p>Reason: Three exceptions were added for the shoulder alignment to allow coordination with the new size for clear floor space. One option that was missed is when someone pulls forward into a space. This would be consistent with the exceptions already permitted by the committee.</p>	
<p>3-13E-12 PC1 and PC3 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT</p>	
<p>3-13E-12 PC1</p> <p>Revise as follows:</p> <p>802.7.2 Companion Seat Alignment. In row seating, the companion seat shall be located to provide shoulder alignment with the wheelchair space occupant. The shoulder of the wheelchair space occupant is considered to be 36 inches (915 mm) from the front or 16 inches (405 mm) from the rear of the wheelchair space. The floor surface for the companion seat shall be at the same elevation as the wheelchair space floor surface.</p> <p><u>EXCEPTION: In existing facilities, the companion seat shall be permitted to be positioned 12 inches (305 mm) from the rear of the wheelchair space.</u></p>	
<p>3-13E-12 PC3</p> <p>Revise as follows:</p> <p>802.7.2 Companion Seat Alignment. In row seating, the companion seat shall be located to provide shoulder alignment with the wheelchair space occupant. The shoulder of the wheelchair space occupant is considered to be 36 inches (915 mm) from the front or 16 inches (405 mm) from the rear of the wheelchair space. The floor surface for the companion seat shall be at the same elevation as the</p>	

wheelchair space floor surface.

EXCEPTIONS:

8. Companion seat alignment is not required in tiered seating that includes dining surfaces or work surfaces.
9. For wheelchair spaces with front access, the shoulder alignment shall be permitted to be measured 12 inches (305 mm) from the rear of the space.
10. For wheelchair spaces with side access, the shoulder alignment shall be permitted to be measured 12 inches (305 mm) from the rear of the space.

8-6-12 PC1	
Agenda Item #42	
Comment No: 8-6-12 PC1.1	Submitted by: Kim Paarlberg - ICC
	<p>Further revise as follows:</p> <p>105.2.XX IES Handbook 10th Edition, (Illuminating Engineering Society, 120 Wall Street, Floor 17, New York, NY 10005-4001).</p> <p>802.11 General. Sign language interpreter stations shall comply with Section 802.11.</p> <p>802.11.1 Area. A sign language interpreter station shall provide a level and clear floor of sufficient floor area necessary to enable a sign language interpreter with a minimum size of 24 inches (? mm) deep and 36 inches (? mm) wide that is located to providing a direct line of sight from to produce sign language legible from the seating area identified in Section 802.11.2 and allow periodic interpreter shift changes to take place. <u>providing a direct line of sight from</u></p> <p>802.11.2 Location. Sign language interpreter stations shall be located so that seating within an arc centered on <u>from</u> the station and subtending 120 <u>measured to the left and right</u> a minimum of 60 degrees maximum and not more than within 65 feet (19.8 m) <u>horizontal distance</u> from the station is provided with sightlines providing unobstructed a <u>a</u> view of the signers from top of their heads to their waists and to an arm's length to both sides of the signer <u>sign language station from a height 36 inches (?? mm) to 72 inches (?? mm) above the floor of the station</u> , all as measured to the center of the station. The vertical viewing angle from the person in the seat to the interpreter station shall not exceed 30 degrees <u>measures to the front and center of the floor of the sign language station.</u></p> <p>802.11.3 Illumination: The sign language interpreter station shall have lighting facilities capable of providing 10 foot-candles (108 lux) of illuminance while signing is underway be illuminated in compliance with 802.11.2 measured at the center of the floor of the sign language station at a height of 48 inches (? mm) above the floor. Illumination of the sign language interpreter station shall comply with the Recommended Maintained Illuminance Targets established for a "Transitional Sermon" by IES Handbook 10th Edition, Table 37.2. <u>shall have lighting facilities capable of providing 10 foot-candles (108 lux) of illuminance while signing is underway</u></p> <p>802.11.4 Backdrop. When a sign language interpreter station is located no greater less than 10 feet (3050 mm) in front of a permanent wall as measured tangent to the centerline of the arc described in Section 802.11.2 a portion of the wall measuring 69 inches (1755 mm) wide centered on behind the sign language interpreter station and to a height of 96 inches (2440 mm) high from the finish floor shall be considered as a backdrop. The surface treatment of the backdrop shall comply with Section 802.11.5 while sign language interpretation is being provided. <u>less than 10 feet (3050 mm) in front of a permanent wall as measured tangent to the centerline of the arc described in Section 802.11.2 a portion of the wall measuring 69 inches (1755 mm) wide centered on behind the sign language interpreter station and to a height of 96 inches (2440 mm) high from the finish floor shall be considered as a backdrop.</u> The backdrop shall provide a flat, smooth surface with a monochromatic, low-luster finish treatment.</p> <p>Exception: <u>The wall is not required to comply with Section 802.11.4 where a backdrop with a monochromatic, low-luster finish treatment is provided.</u></p>
Reason:	<p>105.2.xx, and 802.11.3 - A handbook that includes recommendations should never be references in a standard that relies on mandatory requirements. This goes against all policies followed by the A117.1 for all other referenced standards.</p> <p>802.11.1 – The phrase “to produce sign language legible from the seating area identified” is replaces by “providing a direct line of sight from”. Whether or not sing language is legible is dependent on the eyesight of the viewer. This language is not clear or uniformly enforceable. The proposed language is consistent with language used in the assembly seating criteria and is more clearly understood.</p>

The phrase “and allow periodic interpreter shift changes to take place” is proposed to be struck because this is an operational issue and not clear. Does this mean that there has to be space for two people to exchange, or that there needs to be a place for the 2nd person to stand or sit out of the way? I have seen the 2nd interpreter sit next to the 1st interpreter or come from somewhere else – both options should be permissible.

802.11.2 - The word subtend is defined in the dictionary as follows:

In geometry, an angle subtended by an arc, line, or other curve is one whose two rays pass through the endpoints of the arc. The precise meaning varies with the context. For example, one may speak of the angle subtended by an arc of a circumference when the angle's vertex is a point on the circumference. A simple theorem of plane geometry states that arcs of equal lengths subtend equal angles in such a situation.

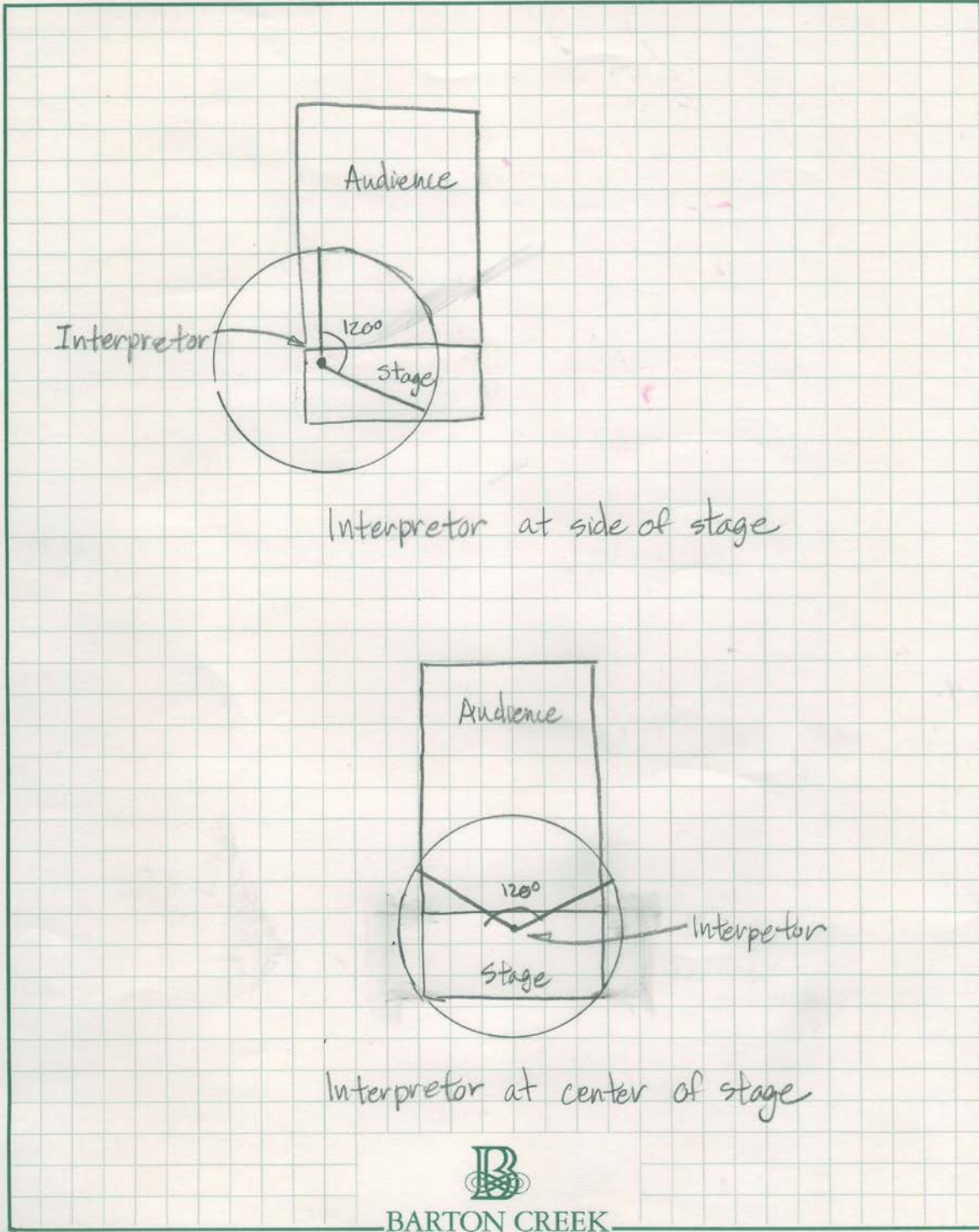
Assuming this is the range for where the seats that have a good view of the interpreter are required, if an interpreter was standing in the middle of the stage, this might be doable. However, the most common place for an interpreter is at the side of the stage. This literally would require the viewing area to be behind them. See Figures. The maximum” could be read to indicate that the angle could be anything up to that range in width – including 0 degrees – which I don't think was the intent. ‘Unobstructed’ to 65 feet could be interpreted to not allow any columns in the room in that area. Thus the room we have our A117.1 meetings in would be in violation. Since an interpreter could be of any height, using the size of the interpreter for the viewing range is not consistent.

The intent of the revisions to the last sentence is intended to provide more precise information of measurement. However, this requirement should probably be deleted because it could prohibit seating immediately in front of the interpreter when the interpreter is on any type of raised platform or stage.

802.11.3 – 10 footcandles is the lighting required for work. The measurement it take at the approximate height of the signers between their hands and face.

802.11.4 – The phrase “as measured tangent to the centerline of the arc described in Section 802.11.2” does not seem to have any purpose and is confusing. Why set a width of 69” if the station is wider? The backdrop is the full width of the station. The sentence “The surface treatment of the backdrop shall comply with Section 802.11.5 while sign language interpretation is being provided.” Is struck because you do not change the surface of a permanent wall. An exception that would allow for good contrast is a better solution. “Smooth” is left out of the exception because the temporary backdrop may be a curtain.

If the committee agrees with the problems raised, but do not think that these corrections go far enough, the alternative would be to vote to delete the original proposal.



Interpreter at side of stage

Interpreter at center of stage



BARTON CREEK
CONFERENCE RESORT

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Agenda Item #43	
Comment No: 8-6-12 PC1.2	Submitted by: R. Duane Wilson – George C. Ixenour Associates on behalf of ASTC
	<p>802.11 General. Sign language interpreter stations shall comply with Section 802.11.</p> <p>Exception: <u>Where the sign language interpretation is part of a presentation where the presentation and the interpretation have been rehearsed and where the production is under control of a production team including director, scenic and lighting designers; compliance with 802.11 shall not be required.</u></p> <p><i>(Balance remains unchanged)</i></p>
<p>Reason: The requirements of 802.11 are directed toward sign language interpretation at public events such as town council meetings, zoning board proceedings, etc. Applying the requirements to a theatrical production could create unsolvable problems and discourage producing organizations from offering sign language interpretation performances as an option during a production run.</p>	
8-6-12 PC1 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT	
<p>Add new reference standard as follows</p> <p><u>105.2.XX IES Handbook 10th Edition, (Illuminating Engineering Society, 120 Wall Street, Floor 17, New York, NY 10005-4001).</u></p> <p>Revise as follows:</p> <p>802.11 Stage Lighting for Sign Language Interpreters. Lighting shall be provided at each side of a stage for the purposes of illuminating a Sign Language Interpreter. The illuminated presentation area shall be 25 square feet (2.3 m²) minimum measured in a vertical plane with the bottom edge at 48 inches (1220 mm) above the finished floor and a minimum of 36 inches (915 mm) measured from the presentation wall. The illumination shall be provided by directional light fixtures controlled independently from the general room lighting. The fixtures shall be located as necessary to provide a diagonal cast of light for facial illumination at no less than 15 degrees from the vertical plane. The illumination shall be 10 foot candles (108 lux) minimum greater than the least light level.</p> <p>802.11 General. Sign language interpreter stations shall comply with Section 802.11.</p> <p>802.11.1 Area. A sign language interpreter station shall provide a level and clear floor of sufficient floor area necessary to enable a sign language interpreter to produce sign language legible from the seating area identified in Section 802.11.2 and allow periodic interpreter shift changes to take place.</p> <p>802.11.2 Location. Sign language interpreter stations shall be located so that seating within an arc centered on the station and subtending 120 degrees maximum and not more than 65 feet (19.8 m) from the station is provided with sightlines providing unobstructed view of the signers from top of their heads to their waists and to an arm's length to both sides of the signer, all as measured to the center of the station. The vertical viewing angle to the interpreter station shall not exceed 30 degrees.</p> <p>802.11.3 Illumination: The sign language interpreter station shall be illuminated in compliance with 802.11.2 while signing is underway. Illumination of the sign language interpreter station shall comply with the Recommended Maintained Illuminance Targets established for a "Transitional Seimon" by IES Handbook 10th Edition, Table 37.2.</p> <p>802.11.4 Backdrop. When a sign language interpreter station is located no greater than 10 feet (3050 mm) in front of a permanent wall as measured tangent to the centerline of the arc described in Section 802.11.2 a portion of the wall measuring 69 inches (1755 mm) wide centered on the sign language interpreter station and 96 inches (2440 mm) high from the finish floor shall be considered as a backdrop. The surface treatment of the backdrop shall comply with Section 802.11.5 while sign language interpretation is being provided. The backdrop shall provide a flat, smooth surface with a monochromatic, low-luster finish treatment.</p>	

8-15-12 PC4 and PC5	
Agenda Item #44	
Comment No: 8-15-12 PC4.1	Submitted by: Kim Paarlberg - ICC
	<p>Further revise as follows:</p> <p>808.2 Reverberation Time. Classroom reverberation times shall comply with either Section 808.2.1 or Section 808.2.2, depending on the size of the room. <u>Reverberation times shall apply to fully-furnished, unoccupied classrooms.</u></p> <p>808.2.1 Performance Method. For each of the octave frequency bands with center frequencies of 500, 1000, and 2000 Hz, the Reverberation Time (T60) shall not exceed the times specified below:</p> <ol style="list-style-type: none"> 1. 0.6 seconds in classrooms with volumes up to and including 10,000 cubic feet (285 m³). 2. 0.7 seconds in classrooms with volumes of more than 10,000 cubic feet (285 m³), but less than 20,000 cubic feet (566 m³). <p>Reverberation times shall apply to fully-furnished, unoccupied classrooms. Reverberation times shall be field-verified via measurements made in accordance with ASTM E2235-04(2012) "Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods" over a minimum 20 dB decay in each octave frequency band.</p>
<p>Reason: The sentence regarding reverberation should be generally applicable to the different options available, not just the performance method. This proposal moves it back to where it was originally. This would be consistent with what the committee approved in 8-15-12 PC5.</p>	
Agenda Item #45	
Comment No: 8-15-12 PC5.1	Submitted by: Kim Paarlberg - ICC
	<p>Further revise as follows:</p> <p>808.1 General. This section applies to classrooms with volumes up to 20,000 cubic feet (566 m³). <u>Classrooms not exceeding 20,000 cubic feet (565 m³) and required to provide enhanced acoustics shall comply with Section 808.</u></p> <p><i>(Portions not shown remain unchanged)</i></p>
<p>Reason: The starting paragraph that was in the last proposal is better code language and provides better information about the purpose of the section.</p>	

Agenda Item #46	
Comment No: 8-15-12 PC5.2	Submitted by: R. Duane Wilson – George C. Ixenour Associates on behalf of ASTC
	<p>Further revise as follows:</p> <p>808.1 General. This section applies to classrooms with volumes up to 20,000 cubic feet (565 m³)</p> <p>Exception: <u>Classrooms dedicated for use for music instruction, such as band, orchestra, and chior, shall be exempt from the requirments for reverberation time in this section, allowing use of reverberation times appropriate to such use.</u></p> <p><i>(Portions not shown remain unchanged)</i></p>
<p>Reason: Special purpose, dedicated, classrooms should have RT60 reverbation times appropriate to their use. For most music classrooms, the desired reverberation time is longer than that required in 808.2.</p>	
8-15-12 PC4 and PC5 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT	
8-15-12 PC4	
<p>Revise as follows:</p> <p>808.2 Reverberation Time. Classroom reverberation times shall comply with either Section 808.2.1 or Section 808.2.2, depending on the size of the room. Reverberation times shall apply to fully-furnished, unoccupied classrooms.</p> <p>808.2.1 Performance Method. For each of the octave frequency bands with center frequencies of 500, 1000, and 2000 Hz, the Reverberation Time (T60) shall not exceed the times specified below:</p> <ol style="list-style-type: none"> 1. 0.6 seconds in classrooms with volumes up to and including 10,000 cubic feet (285 m³). 2. 0.7 seconds in classrooms with volumes of more than 10,000 cubic feet (285 m³), but less than 20,000 cubic feet (566 m³). <p>Reverberation times shall apply to fully-furnished, unoccupied classrooms.–Reverberation times shall be field-verified via measurements made in accordance with ASTM E2235-04(2012) “Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods” over a minimum 20 dB decay in each octave frequency band.</p>	
8-15-12 PC5	
<p>Add new reference standard as follows</p> <p><u>105.2.XX Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods ASTM E 2235-04(2012) (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959).</u></p>	
<p>Revise as follows:</p> <p style="text-align: center;"><u>808 Acoustics</u></p> <p>808.1 General. <u>This section applies to classrooms with volumes up to 20,000 cubic feet (565 m³)</u></p> <p>808.2 Reverberation Time. <u>Classroom reverberation times shall comply with either Section 808.2.1 or Section 808.2.2, depending on the size of the room. Reverberation times shall apply to fully-furnished, unoccupied classrooms.</u></p> <p>808.2.1 Performance Method. <u>For each of the octave frequency bands with center frequencies of 500, 1000, and 2000 Hz, the Reverberation Time (T60) shall not exceed the times specified below:</u></p> <ol style="list-style-type: none"> <u>1. 0.6 seconds in classrooms with volumes up to and including 10,000 cubic feet (285 m³).</u> <u>2. 0.7 seconds in classrooms with volumes of more than 10,000 cubic feet (285 m³), but less than 20,000 cubic feet (566 m³).</u> <p><u>Reverberation times shall be field-verified via measurements made in accordance with ASTM E2235-04(2012) “Standard Test Method for</u></p>	

Determination of Decay Rates for Use in Sound Insulation Test Methods” over a minimum 20 dB decay in each octave frequency band.

808.2.2 Prescriptive Method. The Noise reduction coefficient (NRC) ratings for floor, wall and ceiling surface finishes shall conform to the following equations:

For a classroom with a volume less than or equal to 10,000 cubic feet (285 cubic meters):

$$(NRC_{\text{Floor}} \times S_{\text{Floor}}) + (NRC_{\text{Ceiling}} \times S_{\text{Ceiling}}) + (NRC_{\text{Wall}} \times S_{\text{Wall}}) \geq \text{Volume}/12$$

For a classroom with a volume between 10,000 cubic feet (285 cubic meters) and 20,000 cubic feet (565 cubic meters):

$$(NRC_{\text{Floor}} \times S_{\text{Floor}}) + (NRC_{\text{Ceiling}} \times S_{\text{Ceiling}}) + (NRC_{\text{Wall}} \times S_{\text{Wall}}) \geq \text{Volume}/14$$

Where:

NRC_{Floor} = NRC rating of the floor finish material

S_{Floor} = floor area in square feet

NRC_{Ceiling} = NRC rating of the ceiling finish material

S_{Ceiling} = ceiling area in square feet

NRC_{Wall} = NRC rating of the wall acoustical treatment

S_{Wall} = wall treatment area in square feet

Volume = room volume in cubic feet

Where a floor, ceiling or wall has multiple surface finishes, the NRC x S product for each surface finish shall be added to the left side of the equation.

808.3 Ambient Sound Level. Classroom ambient sound levels shall comply with Sections 808.3.1 and 808.3.2. Ambient sound levels from sound sources outside and inside the classroom shall be evaluated individually. The greatest one-hour averaged sound levels shall be evaluated at the loudest usable location in the room at a height of 36 inches (915 mm) to 42 inches (1065 mm) above the floor and no closer than 36 inches (915 mm) from any wall, window, or object. The ambient sound level limits shall apply to fully-furnished, unoccupied classrooms, and with only permanent HVAC, electrical and plumbing systems functioning. Classroom equipment, including, but not limited to, computers, printers, fish tank pumps shall be turned off during these measurements.

808.3.1 Sound Sources Outside of the Classroom. Classroom ambient sound levels shall not exceed 35 dBA and 55 dBC due to intruding noise from sound sources outside of the classroom, whether from the exterior or from other interior spaces.

808.3.2 Sound Sources Inside the Classroom. Classroom ambient sound levels shall not exceed 35 dBA and 55 dBC for noise from sound sources inside the classroom.

Chapter 9

9-10-12 PC2 and PC3	
Agenda Item #47	
Comment No. 9-10-12 PC2.1	Submitted by: Gene Boecker - NATO
	<p>Further revise as follows:</p> <p>904.3.2 Parallel Approach. A portion of the public or common use side of the counter surface 36 inches (915 mm) minimum in length and 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor shall be provided. A clear floor space complying with Section 305, positioned for a parallel approach adjacent to the accessible counter, shall be provided. The space between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum.</p> <p style="text-align: center;">Exception: <i>(Text is not changed)</i></p> <p>904.3.3 Forward Approach. A portion of the public or common use side of the counter surface 30 inches (760 mm) minimum in length and 36 inches (915 mm) maximum in height above the floor shall be provided. A clear floor space complying with Section 305, positioned for a forward approach to the accessible counter, shall be provided. Knee and toe clearance complying with Section 306 shall be provided under the accessible counter. The space between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum.</p>
<p>Reason: The term "public use" is not a defined term in the ANSI standard. Common use IS defined as of this cycle. Without the definition, the term "public" could be interpreted to be applied in only locations which the general public access. While this would be applicable to the bank teller's counter, it would not be applicable to a condition where employees are located on both sides of the counter such as at the linen station where uniforms are provided or the cash counting stations at any number of grocery stores or department stores.</p>	
Agenda Item #48	
Comment No. 9-10-12 PC2.2	Submitted by: Edward Steinfeld - RESNA
	<p>Further revise as follows:</p> <p>904.3.2 Parallel Approach. [unchanged from committee action on 9-10-12 PC2]</p> <p style="text-align: center;">Exception: <u>At pass-through or hand-off portions of counters, the counter surface shall may be reduced to 12 inches minimum in length. Where the counter surface at pass-through or hand-off elements of a counter is less than 36 inches (915 mm) in length, the entire pass-through or hand-off element of the counter surface shall be 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor</u></p> <p>904.7 Pass-throughs. <u>Openings shall be 12 inches minimum in length. If the opening is less than 36 inches (915 mm) in length, it shall be 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor.</u></p>
<p>Reason: The text is really not all an exception. Part of it is an exception to 904.3.2 and the rest is a new item on pass-throughs, which do not always have a service counter, for example, a pass through for dirty dishes.</p>	

Agenda Item #49	
Comment No: 5-22-12 PC2.3	Submitted by: Karen Gridley – Target Corporation
	<p>Further revise as follows:</p> <p>904.3.2 Parallel Approach. [unchanged from committee action on 9-10-12 PC2]</p> <p>Exception: At pass-through or hand-off portions of counters, the counter surface shall be 12 inches minimum in length. Where the counter surface at pass-through or hand-off elements of a counter is less than 36 inches (915 mm) in length, the entire pass-through or hand-off element of the counter surface shall be 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor.</p>
<p>Reason:</p> <p>I believe some of the previously proposed language was inadvertently left in place that was intended to be struck out during the last committee meeting when the language for the exception was being edited.</p> <p>If I'm remembering correctly, instead of the Exception language shown in the Second Public Review Draft, I believe the committee took action to disapprove portions of the new language shown in strike out above, which restores the original language of the exception but just pulls it out of the existing Section 904.3.2 main paragraph and makes it an overt exception.</p> <p>The proposed change in the Second Public Review Draft does not correctly reflect the committee's action for reworking the exception.</p> <p>The committee expressed concern over introducing the terms "element" and "pass-through" or "hand-off", as well as concern over setting new length limits without having some data for defining what those lengths should be. Target agrees with these concerns and believes the original language works well once it is pulled out into its own overt exception.</p>	
9-10-12 PC2 and PC3 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT	
9-10-12 PC3	
<p>Revise as follows:</p> <p>904.3 Sales and Service Counters. Sales and service counters and windows shall comply with Sections 904.3.1 and <u>either</u> 904.3.2 or Section 904.3.3. Where a counter is provided, the accessible portion of the countertop shall extend the same depth as the sales and service countertop provided for standing customers.</p>	
9-10-12 PC2	
<p>Revise as follows:</p> <p>904.3.2 Parallel Approach. A portion of the <u>public use side of the</u> counter surface 36 inches (915 mm) minimum in length and 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor shall be provided. Where the counter surface at pass-through or hand-off elements of a counter is less than 36 inches (915 mm) in length, the entire pass-through or hand-off element of the counter surface shall be 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor. A clear floor space complying with Section 305, positioned for a parallel approach adjacent to the accessible counter, shall be provided. The space between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum.</p> <p><u>Exception: At pass-through or hand-off portions of counters, the counter surface shall be 12 inches minimum in length. Where the counter surface at pass-through or hand-off elements of a counter is less than 36 inches (915 mm) in length, the entire pass-through or hand-off element of the counter surface shall be 26 inches (660 mm) minimum to 36 inches (915 mm) maximum in height above the floor</u></p> <p>904.3.3 Forward Approach. A portion of the <u>public use side of the</u> counter surface 30 inches (760 mm) minimum in length and 36 inches (915 mm) maximum in height above the floor shall be provided. A clear floor space complying with Section 305, positioned for a forward approach to the accessible counter, shall be provided. Knee and toe clearance complying with Section 306 shall be provided under the accessible counter. The space between the accessible counter surface and any projecting objects above the accessible counter shall be 12 inches (305 mm) minimum.</p>	

Chapter 10

(Please note that when the next edition of the standard is published – Chapters 10 and 11 will be reversed in order. For review purposes, they remain as currently found in the standard.)

10-10-12 PC1	
Agenda Item #50	
Comment No: 10-10-12 PC1.1	Submitted by: Gene Boecker – Code Consultants, Inc. on behalf of NATO
	<p>Further revise as follows:</p> <p>1002.9 Operable Parts. Lighting controls, electrical panelboards, electrical switches and receptacle outlets, environmental controls, appliance controls, operating hardware for operable windows, plumbing fixture controls, and user controls for security or intercom systems shall comply with Sections 1002.9 and 309.</p> <p>EXCEPTIONS: <i>(text remains unchanged)</i></p> <p>1002.9.1 Wheelchair Charging Area. A wheelchair charging area <u>complying with Section 906</u> shall be located adjacent to one bed. –A– The clear floor space complying with Section 305 <u>906.2</u> shall be positioned for parallel approach to the side of the bed.</p>
<p>Reason: One of the items missing from the final version of this proposal is the electrical outlet for charging the wheelchair. With the added text in new Section 906 provided in proposal 8-5-12 for charging stations, the reference can be made to that section for the electrical needs and reach range requirements. The combination of requirements still allows design flexibility by allowing the electrical outlets to be placed anywhere that Section 308 would allow.</p>	
Agenda Item #51	
Comment No: 10-10-12 PC1.2	Submitted by: Kim Paarlberg - ICC
	<p>Further revises as follows:</p> <p>1002.15 Beds. In at least one sleeping area, a minimum of five percent, but not less than one bed shall comply with Section 1002.15.</p> <p>1002.15.1 Clear Floor Space. A clear floor space complying with Section 305 shall be provided on both sides of the bed. The clear floor space shall be positioned for parallel approach to the side of the bed.</p> <p>EXCEPTION: Where a single clear floor space complying with Section 305 positioned for parallel approach is provided between two beds, a clear floor space shall not be required on both sides of the bed.</p> <p>1002.15.2 Bed Frames. At least one bed shall be provided with an open bed frame.</p> <p>4002.9.1 1002.15.3 Wheelchair Charging Area. A wheelchair charging area shall be located adjacent to one bed. A clear floor space complying with Section 305 shall be positioned for parallel approach to the side of the bed. <u>A 110V duplex receptacle outlet complying with Section 1002.9 shall be located adjacent to the clear floor space required in Section 1002.15.1.</u></p>

Reason:

The language for wheelchair charging station was revised during the last cycle for clarification. The outlet requirement was accidentally taken out. This should be added back in.

This really is not something that has to do with operable parts. It needs to be clear that this applies to at least one bed in a sleeping area. By relocating this to the section dealing with beds, that will make the application a lot clearer. In addition, the 2nd sentence is not needed because the language is already in Section 1002.15.1.

10-10-12 PC1 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT

Revise as follows:

1002.9 Operable Parts. Lighting controls, electrical panelboards, electrical switches and receptacle outlets, environmental controls, appliance controls, operating hardware for operable windows, plumbing fixture controls, and user controls for security or intercom systems shall comply with Sections 1002.9 and 309.

EXCEPTIONS: *(remain unchanged)*

1002.9.1 Wheelchair Charging Area. A wheelchair charging area shall be located adjacent to one bed. A clear floor space complying with Section 305 shall be ~~located between the bedside and a parallel wall. The parallel wall shall be 36 inches (915 mm) minimum to 48 inches (1220 mm) maximum from the bed and provide a 110V duplex receptacle outlet located 24 inches (610 mm) minimum and 48 inches (1220 mm) maximum from the head wall of the bed and complying with Section 1002.9 positioned for parallel approach to the side of the bed.~~

Exception: ~~Where there is no parallel wall within 36 inches (915 mm) minimum to 48 inches (1220 mm) maximum of the bedside, a clear floor space complying with Section 305 shall be along the wall at the head of one bed. A 110V duplex receptacle outlet complying with Section 1002.9 shall be located along the wall at the bed head and within 24 inches (610 mm) minimum and 48 inches (1220 mm) maximum of the bedside.~~

3-13L-12 PC9	
Agenda Item #52	
Comment No: 3-13L-12 PC9.1	Submitted by: Kevin Brinkman - AEMA
	<p>Further revise as follows:</p> <p>1104.7 Elevators. Elevators within the unit shall comply with Section 407, 408, or 409.</p> <p>EXCEPTION:</p> <p>1. In a Private Residential Residence Elevators, the inside dimensions of elevator cars shall provide a clear floor space in accordance with Section 1104.1.1. <u>409.4.1.2.</u></p> <p>(Exceptions 2 and 3 are unchanged.)</p> <p>1104.8 Platform Lifts. Platform lifts within the unit shall comply with Section 410.</p> <p>EXCEPTION:</p> <p>1. Doors. Platform lifts with a single door or doors on opposite ends shall provide a clear floor width of 36 inches (915 mm) minimum and a clear floor space complying with Section 1104.1.1. <u>410.5.1.2.</u></p> <p>(Exceptions 2 through 4 are unchanged.)</p>
<p>Reason: Corrected name to Private Residence Elevator for consistency with 409 and ASME A17.1 The language in the draft would allow a minimum clear width of 30 inches for both products. The minimum clear width is currently 36 inches in 409 and 410. The requested change is to refer to those sections as modified by 3-6-12 PC2 for consistency.</p>	
3-13L-12 PC9 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT	
<p>Revise as follows:</p> <p style="text-align: center;">1004 Type B Units</p> <p>1004.1 General. Type B units shall comply with Section 1004.</p> <p><u>1004.1.1. Clear Floor Space.</u> The clear floor space shall be 48 inches (1220 mm) minimum in length and 30 inches (760 mm) minimum in width.</p> <p><u>1004.1.2 Alcoves.</u> Where the clear floor space is positioned for a forward approach, the alcove shall be 36 inches (915 mm) minimum in width where the depth exceeds 24 inches (610 mm).</p> <p><u>1004.1.3 Forward reach unobstructed.</u> Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the floor.</p> <p><u>1004.1.4. Mailboxes.</u> Mailboxes serving Type B dwelling units and complying with Section 1001.2 shall be permitted an unobstructed side reach range at 54 inches (1370 m) maximum above the floor.</p> <p><u>1004.1.5. Parking Space Width.</u> Access aisles serving Type B units and adjacent to accessible and van accessible parking spaces shall be 60 inches (1525 mm) minimum in width.</p> <p><u>1004.3.3 Clear Floor Space.</u> For the purposes of Type B units, the clear floor space shall be 48 inches (1220mm) minimum in length and 30 inches(760 mm) minimum in width.</p> <p>1004.4 Walking Surfaces.</p> <p>1004.4.1 Clear Width. Clear width of an accessible route shall comply with Section 403.5.</p> <p><u>EXCEPTIONS:</u></p>	

1. **180 Degree Turn.** Where an accessible route makes a 180 degree turn around an object that is less than 48 inches (1220 mm) in width, clear widths shall be 42 inches (1065 mm) minimum approaching the turn, 48 inches (1220 mm) minimum during the turn and 42 (1065 mm) inches minimum leaving the turn.
2. **Turn Around an Object.** Where an accessible route makes a 180 degree turn around an object that is less than 48 inches (1220 mm) in width, the clear width approaching the turn and leaving the turn shall be 36 inches (915 mm) minimum. Where the clear width during the turn is 60 inches (1525 mm) minimum.
3. **90 Degree Turn.** Where an accessible route makes a 90 degree turn the clear widths approaching the turn and leaving the turn shall be 36 inches (915 mm) minimum.
4. **Clear Width.** The clear width shall be permitted to be reduced to 32 inches (815 mm) minimum for a length of 24 inches (610 mm) maximum provided the reduced width segments are separated by segments that are 48 inches (1220 mm) minimum in length and 36 inches (915 mm) minimum in width.

1004.5.1 Primary Entrance Door. The primary entrance door to the unit shall comply with Section 404.

EXCEPTIONS:

1. **Storm and Screen Doors.** Storm and screen doors serving individual dwelling or sleeping units are not required to comply with Section 404.2.5.
2. **Maneuvering Clearance.** For the maneuvering clearance at swinging doors, for the front approach direction on the push side the dimension perpendicular to the door shall be 48 inches (122 mm) minimum.
3. **Clearance at Sliding and Folding Doors.** For the maneuvering clearance at sliding and folding doors, for the front approach direction the dimension perpendicular to the door shall be 48 inches (122 mm) minimum.

1004.5.2.3 Automatic Doors. Automatic doors shall comply with Section 404.3.

EXCEPTION: Unobstructed Reach. Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the floor

1004.7 Elevators. Elevators within the unit shall comply with Section 407, 408, or 409.

EXCEPTIONS:

1. **In a Private Residential Elevators,** the inside dimensions of elevator cars shall provide a clear floor space in accordance with Section 1004.1.1.
2. **Controls.** Unobstructed forward reach for controls shall be permitted to comply with Section 1004.1.3.
3. **Unobstructed Reach.** Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the floor

1004.8 Platform Lifts. Platform lifts within the unit shall comply with Section 410.

EXCEPTIONS:

1. **Doors.** Platform lifts with a single door or doors on opposite ends shall provide a clear floor width of 36 inches (915 mm) minimum and a clear floor space complying with Section 1004.1.1.
2. **Unobstructed forward reach for controls shall be permitted to comply with Section 1004.1.3.**
3. **Controls.** Unobstructed forward reach for controls shall be permitted to comply with Section 1004.1.3.
4. **Unobstructed Reach.** Where a forward reach is unobstructed, the high forward reach shall be 48 inches (1220 mm) maximum and the low forward reach shall be 15 inches (380 mm) minimum above the floor.

1004.9 Operable Parts. Lighting controls, electrical switches and receptacle outlets, environmental controls, electrical panelboards, and user controls for security or intercom systems shall comply with Sections ~~4004.3.3~~ 1004.1.1 and 309.3.

EXCEPTIONS:

1. **Unobstructed forward reach for operable parts shall be permitted to comply with Section 1004.1.3**
2. Receptacle outlets serving a dedicated use.
3. In a kitchen, where two or more receptacle outlets are provided above a length of counter top that is uninterrupted by a sink or appliance, only one receptacle outlet shall not be required to comply with Sections ~~309.2~~ 1004.1.1 and 309.3.
4. In a kitchen, where a clear floor space for a parallel approach cannot be located at a counter top in a corner between appliances, receptacle outlets over the counter top shall not be required to comply with Sections ~~309.2~~ 1004.1.1 and 309.3 provided that the counter top is 7 square feet (0.65 m²) maximum.
5. Floor receptacle outlets.
6. HVAC diffusers.

7. Controls mounted on ceiling fans.
8. Controls or switches mounted on appliances.
9. Plumbing fixture controls.
10. Reset buttons and shut-offs serving appliances, piping and plumbing fixtures.
11. Where redundant controls other than light switches are provided for a single element, one control in each space shall not be required to be accessible.
12. Within kitchens and bathrooms, lighting controls, electrical switches and receptacle outlets are permitted to be located over cabinets with counter tops 36 inches (915 mm) maximum in height and 25-1/2 inches (650 mm) maximum in depth.

1004.10.1 Clear Floor Space. A clear floor space complying with Section ~~4004.3.3~~ 1004.1.1 shall be provided for each washing machine and clothes dryer. A parallel approach shall be provided for a top loading machine. A forward or parallel approach shall be provided for a front loading machine.

1004.11.2 Clear Floor Space. Clear floor spaces required by Section 1004.11.3.1 (Option A) or 1104.11.3.2 (Option B) shall comply with Sections 1004.11.2 and ~~4004.3.3~~1004.1.1.

1004.11.2.1 Doors. Doors shall not swing into the clear floor space or clearance for any fixture.

EXCEPTION: Where a clear floor space complying with Section ~~4004.3.3~~ 1004.1.1, excluding knee and toe clearances under elements, is provided within the room beyond the arc of the door swing.

1004.11.2.2 Knee and Toe Clearance. Clear floor space complying with Section 1004.1.1, at fixtures shall be permitted to include knee and toe clearances complying with Section 306.

1004.11.3.1.1 Lavatory. A clear floor space complying with Section ~~4004.3.3~~1004.1.1, positioned for a parallel approach, shall be provided at a lavatory. The clear floor space shall be centered on the lavatory.

EXCEPTION: A lavatory complying with Section 606 and ~~4004.3.3~~1004.1.1 shall be permitted. Cabinetry shall be permitted under the lavatory provided the following criteria are met.

- (a) The cabinetry can be removed without removal or replacement of the lavatory; and
- (b) The floor finish extends under the cabinetry; and
- (c) The walls behind and surrounding the cabinetry are finished.

1004.12.2 Clear Floor Space. Clear floor space at appliances shall comply with Sections 1004.12.2 and ~~4004.3.3~~1004.1.1.

EXCEPTION: Where the clear floor space complying with Section 1004.1.1 is positioned for a forward approach, the alcove shall comply with Section 1004.1.2.

1004.12.2.1 Sink. A clear floor space complying with Section 1004.1.1 positioned for a parallel approach to the sink, shall be provided. The clear floor space shall be centered on the sink bowl.

EXCEPTION: A sink with a forward approach complying with Section 1003.12.4.1, except the clear floor space shall be permitted to comply with Section 1004.1.1 and the alcove with Section 1004.1.2.

10-19-12	
Agenda Item #53	
Comment No: 10-19-12 PC1.1	Submitted by: Kim Paarlberg - ICC
	<p>Further revise as follows:</p> <p>Type B units</p> <p>1004.11.3.1.3.3 Shower Compartment. If a shower compartment is the only bathing facility, the shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth. A clearance of 48 inches (1220 mm) minimum in length, measured perpendicular from the shower head wall, and 30 inches (760 mm) minimum in depth, measured from the face of the shower compartment, shall be provided. Reinforcing for a shower seat is not required in shower compartments larger than 36 inches (915 mm) in width and 36 inches (915 mm) in depth</p> <p>Exception: A shower door assembly shall be permitted where the assembly can be removed without removal or replacement of the surrounding walls and floor to which it is affixed.</p> <p>1004.5 Doors and Doorways. Doors and doorways shall comply with Section 1004.5.</p> <p>1004.5.1 Primary Entrance Door. The primary entrance door to the unit shall comply with Section 404.</p> <p>EXCEPTION: Storm and screen doors serving individual dwelling or sleeping units are not required to comply with Section 404.2.5.</p> <p>1004.5.2 User Passage Doorways. Doorways intended for user passage shall comply with Section 1004.5.2.</p> <p>Exception: <u>Doors that are part of a shower door assembly are not required to comply with this section.</u></p> <p>1004.5.2.1 Clear Width. Doorways shall have a clear opening of 31³/₄ inches (805 mm) minimum. Clear opening of swinging doors shall be measured between the face of the door and stop, with the door open 90 degrees.</p> <p>1004.5.2.1.1 Double Leaf Doorways. Where the operable parts on an inactive leaf of a double leaf doorway are located more than 48 inches (1220 mm) or less than 15 inches (380 mm) above the floor, the active leaf shall provide the clearance required by Section 1004.5.2.1.</p> <p>1004.5.2.2 Thresholds. Thresholds shall comply with Section 303.</p> <p>EXCEPTION: Thresholds at exterior sliding doors shall be permitted to be 3/4 inch (19 mm) maximum in height, provided they are beveled with a slope not steeper than 1:2.</p> <p>1004.5.2.3 Automatic Doors. Automatic doors shall comply with Section 404.3.</p> <p>Type A units</p> <p>1003.11.2.5.2 Shower. Showers shall comply with Section 608.</p> <p>EXCEPTIONS:</p>

	<ol style="list-style-type: none"> 1. At standard roll-in shower compartments complying with Section 608.2.2, lavatories, counter tops and cabinetry shall be permitted at one end of the clearance, provided the following criteria are met: <ol style="list-style-type: none"> (a) The countertop and cabinetry can be removed; (b) The floor finish extends under the countertop and cabinetry; and (c) The walls behind and surrounding the countertop and cabinetry are finished. 2. <u>A shower door assembly shall be permitted where the assembly can be removed without removal or replacement of the surrounding walls and floor to which it is affixed.</u> <p>1003.5 Doors and Doorways. The primary entrance door to the unit, and all other doorways intended for user passage, shall comply with Section 404.</p> <p>EXCEPTIONS:</p> <ol style="list-style-type: none"> 1. Thresholds at exterior sliding doors shall be permitted to be 3/4 inch (19 mm) maximum in height, provided they are beveled with a slope not greater than 1:2. 2. In toilet rooms and bathrooms not required to comply with Section 1003.11.2, maneuvering clearances required by Section 404.2.3 are not required on the toilet room or bathroom side of the door. 3. <u>Doors that are part of a shower door assembly are not required to comply with this section.</u>
<p>Reason: This approved exception to Section 1004.11.3.1.3.3 was intended to address shower stall doors and that they should be permitted when they are easily removable. A standard 36" stall with sliding doors has a clearance of only 16 inches. While it is in place, is cannot be considered a door intended for user passage, therefore the coordinating exception under doors is required.</p> <p>Type A units reference Section 608. The only think dealing with shower stall doors in this section is the following:</p> <p style="padding-left: 40px;">608.7 Shower Enclosures. Shower compartment enclosures for shower compartments shall not obstruct controls or obstruct transfer from wheelchairs onto shower seats.</p> <p>This section does not clearly address requirements doors in shower stalls. Type A units are also permitted to be adaptable to a certain extent. The same exceptions in Type B units shall be permitted in Type A units.</p>	
<p>10-19-12 - AS PUBLISHED 2ND PUBLIC REVIEW DRAFT</p>	
<p>Revise as follows:</p> <p>1004.11.3.1.3.3 Shower Compartment. If a shower compartment is the only bathing facility, the shower compartment shall have dimensions of 36 inches (915 mm) minimum in width and 36 inches (915 mm) minimum in depth. A clearance of 48 inches (1220 mm) minimum in length, measured perpendicular from the shower head wall, and 30 inches (760 mm) minimum in depth, measured from the face of the shower compartment, shall be provided. Reinforcing for a shower seat is not required in shower compartments larger than 36 inches (915 mm) in width and 36 inches (915 mm) in depth</p> <p>Exception: <u>A shower door assembly shall be permitted where the assembly can be removed without removal or replacement of the surrounding walls and floor to which it is affixed.</u></p>	

Chapter 11

(Please note that when the next edition of the standard is published – Chapters 10 and 11 will be reversed in order. For review purposes, they remain as currently found in the standard.)

There were no changes to Chapter 11 published as part of the Second Public Review Draft. Changes to this chapter are part of other multiple part proposals earlier in the agenda.