

ICC A117.1-2017

Standard for Accessible and Usable Buildings and Facilities

American National Standard



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FOREWORD

(The information contained in this foreword is not part of this American National Standard (ANS) and has not been processed in accordance with ANSI's requirements for an ANS. As such, this foreword may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the standard.)

Development

The 1961 edition of ANSI Standard A117.1 presented the first criteria for accessibility to be approved as an American National Standard and was the result of research conducted by the University of Illinois under a grant from the Easter Seal Research Foundation. The National Easter Seal Society and the President's Committee on Employment of People with Disabilities became members of the Secretariat, and the 1961 edition was reaffirmed in 1971.

In 1974, the U.S. Department of Housing and Urban Development joined the Secretariat and sponsored needed research, which resulted in the 1980 edition. After further revision that included a special effort to remove application criteria (scoping requirements), the 1986 edition was published. When requested in 1987, the Council of American Building Officials (CABO) assumed the Secretariat. Central to the intent of the change in the Secretariat was the development of a standard that, when adopted as part of a building code, the standard would be compatible with the building code and its enforcement. The 1998 edition largely achieved that goal. The 2017 edition of the standard is the latest example of the A117.1 committee's effort to continue developing a standard that is compatible with the building code.

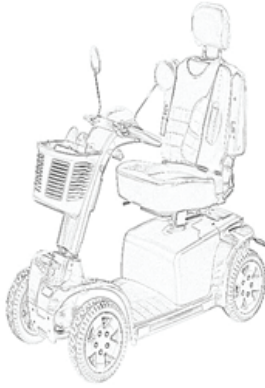
In 1998, CABO became the International Code Council (ICC). The International Code Council (ICC) became the secretariat in 1998 when CABO became ICC. The 2017 edition marks the 30th anniversary of the ICC Secretariat of the standard.

2017 Edition

New to the 2017 edition are enhanced dimensions for clear floor spaces and turning spaces. These increases were in response to technical data regarding the space needed by persons using scooters and some types of motorized wheelchairs. These enhanced provisions only apply to new buildings and facilities. Where existing buildings and facilities are remodeled, the historic dimensions will still apply.

Other changes include exterior routes, curb cuts, blended transitions, clarity for detectable warnings, passenger drop offs and parking requirements coordinated with the Public Rights of Way Guidelines, providing an accessible design standard for electrical vehicle charging stations and enhanced safety for accessible routes crossing parking lots. Also introduced are acoustic standards for classrooms, features allowing for better communication for persons using sign language, provisions addressing the recharging of wheelchairs in assembly venues and hotels, access to





gaming machines and tables, and provisions for water bottle filling stations.

The new standard continues to provide coordination between the accessible provisions of this standard and the Fair Housing Accessibility Guidelines (FHAG) and the 2010 Standard for Accessible Design referenced by the American’s with Disabilities Act (ADA) and the Architectural Barriers Act (ABA).

ANSI Approval

This Standard was processed and approved for submittal to ANSI by the Accredited Standards Committee A117 on Architectural Features and Site Design of Public Buildings and Residential Structures for Persons with Disabilities. ANSI approved the 2017 edition on March 28, 2017. Committee approval of the Standard does not necessarily imply that all Committee members voted for its approval.

Adoption

ICC A117.1–2017 is available for adoption and use by jurisdictions internationally. Its use within a governmental jurisdiction is intended to be accomplished through adoption by reference in accordance with proceedings establishing the jurisdiction’s laws.

Interpretations

Requests for interpretations on the provisions of ICC A117.1–2017 should be addressed to: ICC, Chicago District Office, 4051 W. Flossmoor Road, Country Club Hills, IL 60478–5795.

Maintenance—Submittal of Proposals

All ICC standards are revised as required by ANSI. Proposals for revising this edition are welcome. Please visit the ICC website at www.iccsafe.org for the official “Call for proposals” announcement. A proposal form and instructions can also be downloaded from www.iccsafe.org.

ICC, its members and those participating in the development of ICC A117.1-2017 do not accept any liability resulting from compliance or noncompliance with the provisions of ICC A117.1-2017. ICC does not have the power or authority to police or enforce compliance with the contents of this standard. Only the governmental body that enacts this standard into law has such authority.

Marginal Markings

Solid vertical lines in the margins within the body of the standard indicate a technical change from the requirements of the 2009 edition. Deletion indicators in the form of an arrow (◄) are provided in the margin where an entire section, paragraph, exception or table has been deleted or an item in a list of items or a table has been deleted.

Accredited Standards Committee A117 on Architectural Features and Site Design of Public Buildings and Residential Structures for Persons with Disabilities

At the time of ANSI approval, the A117.1 Committee consisted of the following members:

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Acknowledgment

The updating of this standard over the past 6 years could only be accomplished by the hard work of not only the current committee members listed at the time of approval but also the many committee members who participated and contributed to the process over the course of development. ICC recognizes their contributions as well as those of the participants who, although not on the committee, provided valuable input during this update cycle.

The A117.1 standard committee would like to take a moment to recognize three members of the committee who were unable to see the fruits of their labor from this past cycle come to completion. Much of what has been accomplished would not have been possible without their contributions, expertise and passion for providing access to the disabled communities in the built environment. This edition of the standard will be a lasting tribute to their memory and a reminder for those who serve on the committee of what may be accomplished.

Brian D. Black – National Elevator Industry, Inc.
 Ron Burton – Building Operators and Managers Association
 Tricia Mason – Little People of America

Interest Categories

Builder/Owner/Operator (BO) – Members in this category include those in the private sector involved in the development, construction, ownership and operation of buildings or facilities; and their respective associations.

Consumer/User (CU) – Members in this category include those with disabilities, or others who require accessibility features in the built environment for access to buildings, facilities and sites; and their respective associations.

Producer/Distributor (PD) – Members in this category include those involved in manufacturing, distributing, or sales of products; and their respective associations.

Professional (P) – Members in this category include those qualified to engage in the development of the body of knowledge and policy relevant to their area of practice, such as research, testing, consulting, education, engineering or design; and their respective associations.

Regulatory (R) – Members in this category include federal agencies, representatives of regulatory agencies or organizations that promulgate or enforce codes or standards; and their respective associations.

Individual Expert (IE) (Nonvoting) – Members in this category are individual experts selected to assist the consensus body. Individual experts shall serve for a renewable term of one year and shall be subject to approval by vote of the consensus body. Individual experts shall have no vote.

Voting Membership in Each Category

Category	Number
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Consumer/User - (CU)	11
Professional - (P)	15 (5 individual)
Producer/Distributor - (PD)	9 (1 individual)
Regulatory - (R)	9
TOTAL MEMBERS	52

Table of Contents

CHAPTER 1 APPLICATION AND ADMINISTRATION	1	CHAPTER 5 GENERAL SITE AND BUILDING ELEMENTS.	55
101 Title	1	501 General	55
102 Purpose	1	502 Parking Spaces	55
103 Human Factor Provisions	1	503 Passenger Loading Zones	59
104 Compliance Alternatives	1	504 Stairways	60
105 Conventions	1	505 Handrails	62
106 Referenced Documents	1	506 Windows	65
107 Definitions	3	507 Accessible Routes through Parking	65
CHAPTER 2 SCOPING	7	CHAPTER 6 PLUMBING ELEMENTS AND FACILITIES	67
201 General	7	601 General	67
202 Dwelling and Sleeping Units	7	602 Drinking Fountains and Bottle Filling Stations	67
203 Administration	7	603 Toilet and Bathing Rooms	68
CHAPTER 3 BUILDING BLOCKS.	9	604 Water Closets and Toilet Compartments	69
301 General	9	605 Urinals	78
302 Floor Surfaces	9	606 Lavatories and Sinks	79
303 Changes in Level	9	607 Bathtubs	80
304 Turning Space	10	608 Shower Compartments	82
305 Clear Floor Space	12	609 Grab Bars	87
306 Knee and Toe Clearance	13	610 Seats	89
307 Protruding Objects	15	611 Washing Machines and Clothes Dryers	90
308 Reach Ranges	16	612 Saunas and Steam Rooms	92
309 Operable Parts	17	CHAPTER 7 COMMUNICATION ELEMENTS AND FEATURES	93
CHAPTER 4 ACCESSIBLE ROUTES	19	701 General	93
401 General	19	702 Alarms	93
402 Accessible Routes	19	703 Signs	93
403 Walking Surfaces	19	704 Telephones	100
404 Doors, Doorways and Gates	25	705 Detectable Warnings and Surfaces	101
405 Ramps	33	706 Assistive Listening Systems	106
406 Curb Ramps and Blended Transitions	35	707 Automatic Teller Machines (ATMs) and Fare Machines	107
407 Elevators	40	708 Two-way Communication Systems	108
408 Limited-use/Limited-application Elevators	47		
409 Private Residence Elevators	50		
410 Platform Lifts	51		

TABLE OF CONTENTS

CHAPTER 8 SPECIAL ROOMS AND SPACES . . . 109

801 General 109
802 Assembly Areas 109
803 Dressing, Fitting, and Locker Rooms 116
804 Kitchens 116
805 Transportation Facilities 118
806 Holding Cells and Housing Cells 121
807 Courtrooms 121
808 Enhanced Acoustics for Classrooms 122

CHAPTER 9 FURNISHINGS AND EQUIPMENT . 123

901 General 123
902 Dining Surfaces and Work Surfaces 123
903 Benches 123
904 Sales and Service Counters and Windows 124
905 Storage Facilities 126
906 Charging Stations 126
907 Gaming Machines and Tables 126

CHAPTER 10 RECREATIONAL FACILITIES 127

1001 General 127

1002 Amusement Rides 127
1003 Recreational Boating Facilities 129
1004 Exercise Machines and Equipment 129
1005 Fishing Piers and Platforms 131
1006 Golf Facilities 132
1007 Miniature Golf Facilities 132
1008 Play Areas 133
1009 Swimming Pools, Wading Pools, Hot Tubs
and Spas 137
1010 Shooting Facilities with Firing Positions 142

CHAPTER 11 DWELLING UNITS AND SLEEPING UNITS 143

1101 General 143
1102 Accessible Units 143
1103 Type A Units 144
1104 Type B Units 150
1105 Type C (Visitable) Units 159
1106 Units with Communication Features 160

INDEX 161

List of Figures

Chapter 1	Application and Administration 1	Figure 308.2.2	Obstructed High Forward Reach 16
Figure 105.4	Graphic Convention for Figures 2	Figure 308.3.1	Unobstructed Side Reach 17
Chapter 2	Scoping (No figures) 7	Figure 308.3.2(A)	Obstructed High Side Reach 17
Chapter 3	Building Blocks 9	Figure 308.3.2(B)	Obstructed High Side Reach 17
Figure 302.2	Carpet on Floor Surfaces 9	Figure 309.1	Operable Parts - Exception 3 18
Figure 302.3	Openings in Floor Surfaces 9	Chapter 4. Accessible Routes 19	
Figure 303.2	Vertical Change in Level 9	Figure 403.5.1(A)	Clear Width of an Accessible Route - New Buildings - Interior 19
Figure 303.3	Beveled Changes in Level 9	Figure 403.5.1(B)	Clear Width of an Accessible Route - New Buildings - Exterior 20
Figure 304.3.1.1	Circular Turning Space - New Buildings - Size and Overlap 10	Figure 403.5.1(C)	Clear Width of an Accessible Route - Existing Buildings - Interior 20
Figure 304.3.1.2	Circular Turning Space - Existing Buildings - Size and Overlap 10	Figure 403.5.1(D)	Clear Width of an Accessible Route - Existing Buildings - Exterior 20
Figure 304.3.2.1(A)	T-Shaped Turning Space - New Buildings - Option 1 10	Figure 403.5.2.1(A)	Clear Width at 180-degree Turn - New Buildings - Option 1 21
Figure 304.3.2.1(B)	T-shaped Turning Space - New Buildings - Option 2 11	Figure 403.5.2.1(B)	Clear Width at 180-degree Turn - New Buildings - Option 2 21
Figure 304.3.2.1(C)	T-shaped Turning Space - New Buildings - Option 3 11	Figure 403.5.2.1(C)	Clear Width at 180-degree Turn - New Buildings - Option 3 21
Figure 304.3.2.1.1	T-shaped Turning Space - New Buildings - Overlap 11	Figure 403.5.2.2(A)	Clear Width at 180-degree Turn - Existing Buildings 22
Figure 304.3.2.2	T-shaped Turning Space - New Buildings - Size and Overlap 12	Figure 403.5.2.2(B)	Clear Width at 180-degree Turn - Existing Buildings - Exception 22
Figure 304.3.2.2.1	T-shaped Turning Space - Existing Buildings - Overlap 12	Figure 403.5.3.1(A)	Clear Width at 90-degree Turn - New Buildings - Option 1 22
Figure 305.3.1	Size of Clear Floor Space - New Buildings 12	Figure 403.5.3.1(B)	Clear Width at 90-degree Turn - New Buildings - Option 2 23
Figure 305.3.2	Size of Clear Floor Space - Existing Buildings 12	Figure 403.5.3.1(C)	Clear Width at 90-degree Turn - New Buildings - Option 3 23
Figure 305.5(A)	Position of Clear Floor Space - Forward 13	Figure 403.5.3.1(D)	Clear Width at 90-degree Turn - New Buildings - Option 4 23
Figure 305.5(B)	Position of Clear Floor Space - Parallel 13	Figure 403.5.3.2	Clear Width at 90-degree Turn - Existing Buildings 23
Figure 305.7.1	Maneuvering Clearance in an Alcove - Parallel Approach 13	Figure 403.5.4.1(A)	Passing Space- New Buildings - 60 X 60 Option 24
Figure 305.7.2	Maneuvering Clearance in an Alcove - Forward Approach 13	Figure 403.5.4.1(B)	Passing Space- New Buildings - T-turn Option 24
Figure 306.2(A)	Toe Clearance - Elevation 14	Figure 403.5.4.2(A)	Passing Space- Existing Buildings - 60 X 60 Option 25
Figure 306.2(B)	Toe Clearance - Plan 14	Figure 403.5.4.2(B)	Passing Space- Existing Buildings - T-turn Option 25
Figure 306.3(A)	Knee Clearance - Elevation 14	Figure 404.2.2(A)	Clear Width of Doorways - Hinged Door 26
Figure 306.3(B)	Knee Clearance - Plan 14	Figure 404.2.2(B)	Clear Width of Doorways - Sliding Door 26
Figure 307.2	Limits of Protruding Objects 15	Figure 404.2.2(C)	Clear Width of Doorways - Folding Door 26
Figure 307.3(A)	Post-mounted Protruding Objects 15		
Figure 307.3(B)	Post-mounted Protruding Objects 15		
Figure 307.4	Reduced Vertical Clearance 16		
Figure 308.2.1	Unobstructed Forward Reach 16		

LIST OF FIGURES

Figure 404.2.2(D)	Clear Width of Doorways- Doorways within Doors.	26	Figure 404.2.3.5(A)	Recessed Doors and Gates - New Buildings - Pull Side	29
Figure 404.2.3.2(A)	Maneuvering Clearances at Manual Swinging Doors - Front Approach - Pull Side	26	Figure 404.2.3.5(B)	Recessed Doors and Gates - New Buildings - Push Side	29
Figure 404.2.3.2(B)	Maneuvering Clearances at Manual Swinging Doors - Front Approach - Push Side - New Buildings	26	Figure 404.2.3.5(C)	Recessed Doors and Gates - New Buildings - Push Side - Provided with Both Closer and Latch.	29
Figure 404.2.3.2(C)	Maneuvering Clearances at Manual Swinging Doors - Front Approach - Pull Side - Existing Buildings - Footnote 5	26	Figure 404.2.3.5(D)	Recessed Doors and Gates - Existing Buildings - Pull Side	30
Figure 404.2.3.2(D)	Maneuvering Clearances at Manual Swinging Doors - Hinge Approach - Pull Side	27	Figure 404.2.3.5(E)	Recessed Doors and Gates - Existing Buildings - Push Side	30
Figure 404.2.3.2(E)	Maneuvering Clearances at Manual Swinging Doors - Hinge Approach - Pull Side	27	Figure 404.2.3.5(F)	Recessed Doors and Gates - Existing Buildings - Push Side - Door Provided with Both Closer and Latch.	30
Figure 404.2.3.2(F)	Maneuvering Clearances at Manual Swinging Doors - Hinge Approach - Push Side	27	Figure 404.2.5(A)	Two Doors or Gates in a Series - New Buildings.	30
Figure 404.2.3.2(G)	Maneuvering Clearances at Manual Swinging Doors - Latch Approach - Pull Side	27	Figure 404.2.5(B)	Two Doors or Gates in a Series - New Buildings.	30
Figure 404.2.3.2(H)	Maneuvering Clearances at Manual Swinging Doors - Latch Approach - Push Side	27	Figure 404.2.5(C)	Two Doors or Gates in a Series - New Buildings.	31
Table 404.2.3.2	Maneuvering Clearances at Manual Swinging Doors and Gates	28	Figure 404.2.5(D)	Two Doors or Gates in a Series - Existing Buildings.	31
Table 404.2.3.3	Maneuvering Clearances at Sliding and Folding Doors.	28	Figure 404.2.5(E)	Two Doors or Gates in a Series - Existing Buildings.	31
Figure 404.2.3.3(A)	Maneuvering Clearance at Sliding and Folding Doors - Front Approach - New Buildings.	28	Figure 404.2.5(F)	Two Doors or Gates in a Series - Existing Buildings.	31
Figure 404.2.3.3(B)	Maneuvering Clearance at Sliding and Folding Doors - Front Approach - Existing Buildings - Footnote 2.	28	Table 405.2	Allowable Ramp Dimensions for Construction in Existing Sites, Buildings and Facilities.	33
Figure 404.2.3.3(C)	Maneuvering Clearance at Sliding and Folding Doors - Pocket or Hinge Approach	28	Figure 405.7	Ramp Landings	33
Figure 404.2.3.3(D)	Maneuvering Clearance at Sliding and Folding Doors - Stop or Latch Approach.	28	Figure 405.9	Edge Protection - Limited Drop Off - Exception 3	34
Table 404.2.3.4	Maneuvering Clearances for Doorways without Doors or Gates	29	Figure 405.9.1	Extended Floor Surface.	35
Figure 404.2.3.4(A)	Maneuvering Clearances for Doorways without Doors or Gates - Front Approach - New Buildings	29	Figure 405.9.2.1	Curb.	35
Figure 404.2.3.4(B)	Maneuvering Clearances for Doorways without Doors or Gates - Front Approach - Existing Buildings - Footnote 1	29	Figure 405.9.2.2	Barrier	35
Figure 404.2.3.4(C)	Maneuvering Clearances for Doorways without Doors or Gates - Side Approach	29	Figure 406.2(A)	Perpendicular Curb Ramp.	36
			Figure 406.2(B)	Perpendicular Curb Ramp.	36
			Figure 406.3(A)	Parallel Curb Ramp.	37
			Figure 406.3(B)	Parallel Curb Ramp.	37
			Figure 406.4	Blended Transition	38
			Figure 406.5.2	Grade Break	39
			Figure 406.5.4	Counter Slope of Surfaces Adjacent to Curb Ramps	39
			Figure 406.5.5	Clear Space at Bottom of Curb Ramps and Blended Transitions.	40
			Figure 407.2.1.1	Height of Elevator Call Buttons	41
			Figure 407.2.1.7	Destination-oriented Elevator Indication	41
			Figure 407.2.2.2(A)	Elevator Visible Signals - Height of Signals.	42
			Figure 407.2.2.2(B)	Elevator Visible Signals - Size of Signals.	42

Figure 407.2.3.1	Floor Designation	42	Figure 410.5.1.1	Platform Lifts - Size with Single Door or Doors on Opposite Ends - New Buildings	52
Figure 407.2.3.2	Destination-oriented Elevator Car Identification	43	Figure 410.5.1.2	Platform Lifts - Size with Door or Doors on Opposite Ends - Existing Buildings	52
Figure 407.4.1(A)	Inside Dimensions of Elevator Cars - Centered Door Location	43	Figure 410.5.2.1	Platform Lifts - Size with Doors on Adjacent Sides - New Buildings	53
Figure 407.4.1(B)	Inside Dimensions of Elevator Cars - Side (Off-centered Door) Location.	44	Figure 410.5.2.2	Platform Lifts - Size with Doors on Adjacent Sides - Existing Buildings	53
Figure 407.4.1(C)	Inside Dimensions of Elevator Cars - Any Door Location	44	Chapter 5. General Site and Building Elements 55		
Figure 407.4.1(D)	Inside Dimensions of Elevator Cars - Any Door Location.	44	Figure 502.2(A)	Vehicle Parking Space Size	55
Figure 407.4.1(E)	Inside Dimensions of Elevator Cars - Existing Car Configuration.	44	Figure 502.2(B)	Van Parking Space Size Exception	55
Table 407.4.1	Minimum Dimensions of Elevator Cars	44	Figure 502.4	Parking Space Access Aisle	56
Figure 407.4.6.2	Elevator Car Control Buttons	45	Figure 502.9.1	Wide Sidewalks	57
Table 407.4.7.1.4	Control Button Identification	46	Figure 502.9.1.2	Narrow Sidewalks	58
Figure 408.3.3(A)	Door Location for Limited Use/ Limited Application (LULA) Elevators - Car with Single Door	48	Figure 502.9.2	Perpendicular or Angled Parking Space.	58
Figure 408.3.3(B)	Door Location for Limited Use/Limited Application (LULA) Elevators - Car with Doors on Opposite Sides	48	Figure 503.3(A)	Passenger Loading Zone Access Aisle - New Buildings	59
Figure 408.3.3(C)	Door Location for Limited Use/Limited Application (LULA) Elevators - Car with Doors on Adjacent Sides	48	Figure 503.3(B)	Passenger Loading Zone Access Aisle - Existing Buildings	60
Figure 408.3.3(D)	Door Location for Limited Use/Limited Application (LULA) Elevators - Car with Doors on Adjacent Sides - Exception	49	Figure 504.2	Treads and Risers for Stairways.	60
Figure 408.4.1(A)	Inside Dimensions of Limited Use/ Limited Application (LULA) Elevator Cars - New Buildings	49	Figure 504.5(A)	Stair Nosings - Vertical Riser - Curve or Bevel at Leading Edge.	61
Figure 408.4.1(B)	Inside Dimensions of Limited Use/ Limited Application (LULA) Elevator Cars - Existing Buildings - Exception 1	49	Figure 504.5(B)	Stair Nosings - Vertical Riser - Curved Nosing	61
Figure 408.4.1(C)	Inside Dimensions of Limited Use/ Limited Application (LULA) Elevator Cars - Existing Buildings - Exception 2	50	Figure 504.5(C)	Stair Nosings - Vertical Riser - Beveled Nosing	61
Figure 409.4.1(A)	Private Residence Elevators - New Buildings - Car Size	50	Figure 504.5(D)	Stair Nosings - Vertical Riser - Angled Riser	61
Figure 409.4.1(B)	Private Residence Elevators - Existing Buildings - Car Size	51	Figure 505.4(A)	Handrail Height - Stairs	62
Figure 409.4.6.3	Location of Controls in Private Residence Elevators	51	Figure 505.4(B)	Handrail Height - Ramps	62
Figure 410.2.1(A)	Platform Lift Doors and Gates - Platform Lift with Door at One End or at Opposite Ends.	52	Figure 505.5	Handrail Clearance.	62
Figure 410.2.1(B)	Platform Lift Doors and Gates - Platform Lift with Doors on Adjacent Sides	52	Figure 505.7(A)	Handrail Cross Section - Circular	63
			Figure 505.7(B)	Handrail Cross Section - Noncircular	63
			Figure 505.7(C)	Handrail Cross Section - Noncircular	63
			Figure 505.10.1	Top and Bottom Handrail Extension at Ramps	64
			Figure 505.10.2	Top Handrail Extension at Stairs	64
			Figure 505.10.3	Bottom Handrail Extension at Stairs.	64
			Chapter 6. Plumbing Elements and Facilities 67		
			Figure 602.2.1(A)	Clear Floor Space at Wheelchair Drinking Fountains.	67
			Figure 602.2.1(B)	Clear Floor Space at Wheelchair Drinking Fountains - Primarily for Children's Use - Exception	67
			Figure 602.2.3	Wheelchair Drinking Fountain Spout Height and Location.	67

LIST OF FIGURES

Figure 602.2.4	Wheelchair Drinking Fountain Spout Location	68	Figure 604.11.7(B)	Children’s Dispenser Outlet - Exception	78
Figure 602.3.2	Standing Use Drinking Fountain Spout Height and Location	68	Figure 605.2(A)	Height and Depth of Urinal - Wall Hung Type	78
Figure 602.3.3	Standing Use Drinking Fountain Spout Location	68	Figure 605.2(B)	Height and Depth of Urinal - Stall Type	79
Table 603.6	Maximum Reach Depth and Height	69	Figure 606.3	Height of Lavatories and Sinks	79
Figure 604.2	Water Closet Location	69	Figure 607.2(A)	Clearance for Bathtubs with Removable In-tub Seats	80
Figure 604.3	Size of Clearance for Water Closet	70	Figure 607.2(B)	Clearance for Bathtubs with Seat at Head End of Tub	80
Figure 604.4	Water Closet Seat Height	70	Figure 607.4.1(A)	Grab Bars for Bathtubs with Seat at Head End of Tub - Elevation	81
Figure 604.5.1	Side-Wall Grab Bar for Water Closet	71	Figure 607.4.1(B)	Grab Bars for Bathtubs with Seat at Head End of Tub - Plan	81
Figure 604.5.2	Rear-Wall Grab Bar for Water Closet	71	Figure 607.4.2(A)	Grab Bars for Bathtubs with Removable Seats - Elevation	81
Figure 604.7.1(A)	Dispenser Outlet Location - Protruding Dispenser Below Grab Bar	72	Figure 607.4.2(B)	Grab Bars for Bathtubs with Removable Seats - Plan	82
Figure 604.7.1(B)	Dispenser Outlet Location - Protruding Dispenser Above Grab Bar	72	Figure 607.5	Location of Bathtub Controls	82
Figure 604.7.1(C)	Dispenser Outlet Location - Recessed Dispenser	72	Figure 608.2.1.1	Transfer-type Shower Compartment Size	82
Figure 604.7.1(D)	Dispenser Outlet Location - Dispenser in Front of Water Closet - Exception	73	Figure 608.2.1.2(A)	Transfer-type Shower Compartment Clearances - New Buildings - Option 1	83
Figure 604.9.2(A)	Wheelchair Toilet Compartments - Wall Hung Closet, Adult	73	Figure 608.2.1.2(B)	Transfer-type Shower Compartment Clearances - New Buildings - Option 2	83
Figure 604.9.2(B)	Wheelchair Toilet Compartments - Floor Mounted Water Closet, Adult - Wall Hung and Floor Mounted Water Closet, Children	73	Figure 608.2.1.2(C)	Transfer-type Shower Compartment Clearances - Existing Buildings	83
Figure 604.9.2.3	Wheelchair Toilet Compartments - Alternate Wheelchair Toilet Compartment	74	Figure 608.2.2.1	Standard Roll-in-type Shower Compartment Size	83
Figure 604.9.3(A)	Wheelchair Toilet Compartment Doors - Door Swinging into the Wheelchair Toilet Compartment	74	Figure 608.2.2.2	Standard Roll-in-type Shower Compartment Clearance	84
Figure 604.9.3(B)	Wheelchair Toilet Compartment Doors - Exception 3 - Alternate Wheelchair Compartment	75	Figure 608.2.3.1	Alternate Roll-in-type Shower Compartment Size	84
Figure 604.9.3.1(A)	Wheelchair Toilet Compartment Door Opening Location - Door Swinging in on Front Wall of Partition	75	Figure 608.3.1(A)	Grab Bars in Transfer-type Shower - Elevation	85
Figure 604.9.3.1(B)	Wheelchair Toilet Compartment Door Opening Location - Door Swinging in on Side Wall of Partitions	75	Figure 608.3.1(B)	Grab Bars in Transfer-type Shower - Plan	85
Table 604.9.3.1	Door Opening Location	76	Figure 608.3.2(A)	Grab Bars in Standard Roll-in-type Shower - Elevation	85
Figure 604.9.5(A)	Toe Clearance - Elevation	76	Figure 608.3.2(B)	Grab Bars in Standard Roll-in-type Shower - Plan	85
Figure 604.9.5(B)	Toe Clearance - Plan	76	Figure 608.3.3(A)	Grab Bars in Alternate Roll-in-type Shower - Elevation	86
Figure 604.10.1	Ambulatory Compartment	77	Figure 608.3.3(B)	Grab Bars in Alternate Roll-in-type Shower - Plan	86
Figure 604.11.2	Children’s Water Closet Location	77	Figure 608.4.1	Transfer-type Shower Controls and Hand Shower Location	86
Figure 604.11.4	Children’s Water Closet Height	77	Figure 608.4.2	Standard Roll-in-type Shower Controls and Hand Shower Location	86
Figure 604.11.7(A)	Children’s Dispenser Outlet - Location	78			

Figure 608.4.3(A)	Alternate Roll-in-type Shower Controls and Hand Shower Location - End Wall - Elevation	87	Figure 704.2.1.2	Clear Floor Space for Telephones - Forward Approach	101
Figure 608.4.3(B)	Alternate Roll-in-type Shower Controls and Hand Shower Location - Control Wall - Elevation	87	Figure 705.5(A)	Truncated Dome Size and Spacing	102
Figure 609.2	Size of Grab Bars	88	Figure 705.5(B)	Elevation (Enlarged)	102
Figure 609.3	Spacing of Grab Bars	88	Figure 705.6(A)	Extent of Detectable Warnings - Perpendicular	102
Figure 609.4.2(A)	Positions of Children's Grab Bars - Side-wall View	88	Figure 705.6(B)	Extent of Detectable Warnings - Returned Curb	103
Figure 609.4.2(B)	Positions of Children's Grab Bars - Rear-wall View	89	Figure 705.6(C)	Extent of Detectable Warnings - Parallel	103
Figure 610.2(A)	Bathtub Seats - Removable In-tub Seats	89	Figure 705.7.1	Perpendicular Curb Ramps	104
Figure 610.2(B)	Bathtub Seats - Seat Provided at Head End of Tub	89	Figure 705.7.2	Parallel Curb Ramps	104
Figure 610.3.1	Rectangular Shower Compartment Seats	90	Figure 705.7.3	Blended Transitions	105
Figure 610.3.2	L-shaped Shower Compartment Seats	90	Figure 705.7.4	Pedestrian Refuge Islands	106
Figure 611.2(A)	Clear Floor Space - Top Loading	91	Figure 705.7.5	Pedestrian At-grade Rail Crossings	106
Figure 611.2(B)	Clear Floor Space - Front Loading	91	Figure 707.5(A)	Numeric Key Layout - 12-key Ascending	107
Figure 611.4 (A)	Height of Laundry Equipment - Top Loading	91	Figure 707.5(B)	Numeric Key Layout - 12-key Descending	107
Figure 611.4 (B)	Height of Laundry Equipment - Front Loading	91	Table 707.6.1	Raised Symbols	107
Chapter 7. Communication Elements and Features . . . 93			Chapter 8. Special Rooms and Spaces 109		
Table 703.2.4	Visual Character Height	94	Figure 802.3(A)	Width of Wheelchair Space in Assembly Area - Single Space	109
Figure 703.3.5	Character Height	94	Figure 802.3(B)	Width of Wheelchair Space in Assembly Area - Multiple Adjacent Space	109
Figure 703.3.10	Height of Raised Characters above Floor	95	Figure 802.4(A)	Depth of Wheelchair Space in Assembly Area - Front or Rear Access - New Buildings	109
Figure 703.3.11	Location of Signs at Doors	95	Figure 802.4(B)	Depth of Wheelchair Space in Assembly Area - Front or Rear Access - Existing Buildings	109
Figure 703.4.3	Braille Measurement	96	Figure 802.4(C)	Depth of Wheelchair Space in Assembly Area - Side Access - New and Existing Buildings	109
Table 703.4.3	Braille Dimensions	96	Figure 802.5.1(A)	Wheelchair Space Location Overlap - Rear Approach - New and Existing Buildings	110
Figure 703.4.4	Position of Braille	97	Figure 802.5.1(B)	Wheelchair Space Location Overlap - Side Approach	111
Figure 703.4.5	Height of Braille Characters above Floor	97	Figure 802.7.2(A)	Companion Seat Alignment - Elevation	111
Figure 703.5	Pictogram Field	98	Figure 802.7.2(B)	Companion Seat Alignment - Front or Rear Approach - Existing Buildings	112
Figure 703.6.3.1	International Symbol for Accessibility	98	Figure 802.7.2(C)	Companion Seat Alignment - Front or Rear Approach - New Buildings	112
Figure 703.6.3.2	International TTY Symbol	98	Figure 802.7.2(D)	Companion Seat Alignment - Side Approach	112
Figure 703.6.3.3	International Symbol of Access for Hearing Loss	98	Figure 802.9.1.1	Lines of Sight over the Heads of Seated Spectators	113
Figure 703.6.3.4	Volume-controlled Telephone	98			
Table 703.7.4	Low Resolution VMS Character Height	99			
Table 703.7.5	Pixel Count for Low Resolution VMS Signage	99			
Figure 703.7.5	Low Resolution VMS Signage Characters	100			
Figure 704.2.1.1	Clear Floor Space for Telephones - Parallel Approach	101			

LIST OF FIGURES

Figure 802.9.1.2 Lines of Sight between the Heads of Seated Spectators 113

Figure 802.9.2 Line of Sight over Standing Spectators 114

Table 802.9.2.2 Required Wheelchair Space Location Elevation over Standing Spectators 114

Table 802.10 Wheelchair Space Location Dispersion 115

Figure 804.2.1(A) Pass-through Kitchen Clearance 116

Figure 804.2.1(B) Pass-through Kitchen Clearance 116

Figure 804.2.2(A) U-shaped Kitchen Clearance 117

Figure 804.2.2(B) U-shaped Kitchen Clearance 117

Figure 804.2.2(C) U-shaped Kitchen Clearance - Exception 117

Figure 805.2.2(A) Size of Bus Boarding and Alighting Area - New Buildings 119

Figure 805.2.2(B) Size of Bus Boarding and Alighting Area - Existing Buildings 119

Figure 805.3 Bus Shelters 120

Figure 805.10 Track Crossing 121

Chapter 9. Furnishings and Equipment 123

Figure 903(A) Benches - Bench size and Clear Floor Space 124

Figure 903(B) Benches - Bench Back Support and Seat Height 124

Figure 904.3(A) Sales and Service Counters - Cross Section 124

Figure 904.3(B) Sales and Service Counters - Elevation 125

Figure 904.4.2 Height of Checkout Counters 126

Chapter 10. Recreational Facilities 127

Figure 1002.4.4.3 Protrusions in Wheelchair Spaces in Amusement Rides 128

Figure 1003.3.1(A) Boat Slip and Boarding Pier Clearance 130

Figure 1003.3.1(B) Boat Slip and Boarding Pier Clearance - Exception 1 - Clear Pier Space Reduction at Boat Slips and Boarding Piers 130

Figure 1003.3.1(C) Boat Slip and Boarding Pier Clearance - Exception 2 - Edge Protection at Boat Slips and Boarding Pier 131

Figure 1005.4.2 Extended Ground or Deck Surface at Fishing Piers and Platforms 131

Figure 1007.3.2(A) Golf Club Reach Range - New Buildings 133

Figure 1007.3.2(B) Golf Club Reach Range - Existing Buildings 133

Table 1008.3.2.1.2 Number and Types of Ground Level Play Components Required to be on Accessible Routes 134

Figure 1008.4.2.1 Transfer Platforms 136

Figure 1008.4.2.2 Transfer Steps 136

Figure 1009.2.2 Pool Lift Seat Location 137

Figure 1009.2.3(A) Clear Deck Space at Pool Lifts - New Buildings 138

Figure 1009.2.3(B) Clear Deck Space at Pool Lifts - Existing Buildings 138

Figure 1009.2.4 Pool Lift Seat Height 138

Figure 1009.2.8 Pool Lift Submerged Depth 138

Figure 1009.3.2 Sloped Entry Submerged Depth 139

Figure 1009.3.3 Handrails for Sloped Entry 139

Figure 1009.4.1 Clear Deck Space at Transfer Walls 139

Figure 1009.4.2 Transfer Wall Height 139

Figure 1009.4.3 Depth and Length of Transfer Walls 140

Figure 1009.4.5 Grab Bars for Transfer Walls 140

Figure 1009.5.1 Size of Transfer Platforms 140

Figure 1009.5.2 Clear Deck Space at Transfer Platforms 141

Figure 1009.5.4 Transfer Steps 141

Figure 1009.5.6 Size of Transfer Steps 141

Figure 1009.5.7(A) Grab Bars - Individual Grab Bars 141

Figure 1009.5.7(B) Grab Bars - Continuous Grab Bars 141

Chapter 11. Dwelling Units and Sleeping Units 143

Figure 1103.11.2.4(A) Water Closets in Type A Units - Water Closet Location 145

Figure 1103.11.2.4(B) Water Closets in Type A Units - Minimum Clearance 146

Figure 1103.11.2.4(C) Water Closets in Type A Units - Clearance with Lavatory (Overlap Exception) 146

Figure 1103.11.2.4(D) Water Closets in Type A Units - Water Closet Seat Height 146

Figure 1103.11.2.5.1(A) Clearance for Bathtubs in Type A Units - With Removable Seat 146

Figure 1103.11.2.5.1(B) Clearance for Bathtubs in Type A Units - With Permanent Seat 146

Figure 1103.11.2.5.2 Standard Roll-in-type Shower Compartment in Type A Units 147

Figure 1103.12.1.1 Minimum Kitchen Clearance in Type A Units 147

Figure 1103.12.1.2(A) U-shaped Kitchen Clearance in Type A Units 148

Figure 1103.12.1.2(B) U-shaped Kitchen Clearance in Type A Units - Exception 148

Figure 1103.12.3	Work Surface in Kitchen for Type A Units	148
Figure 1103.12.4	Kitchen Sink for Type A Units.	149
Figure 1104.1.1	Clear Floor Space for Type B Units.	150
Figure 1104.9	Reach over a Kitchen or Bathroom Cabinet.	151
Figure 1104.11.1.1	Swing-up Grab Bars for Water Closets	152
Figure 1104.11.3.1.1	Lavatory in Type B Units – Option A Bathrooms.	153
Figure 1104.11.3.1.2(A)	Clearance at Water Closets in Type B Units - Water Closet Location	153
Figure 1104.11.3.1.2(B)	Clearance at Water Closets in Type B Units - Clearance Width and Depth	153
Figure 1104.11.3.1.2(C)	Clearance at Water Closets in Type B Units - Increased Clearance Depth - Forward Approach.	154
Figure 1104.11.3.1.2(D)	Clearance at Water Closets in Type B Units - Clearance with Lavatory Overlap	154
Figure 1104.11.3.1.3.1	Parallel Approach Bathtub in Type B Units–Option A Bathroom	155
Figure 1104.11.3.1.3.2	Forward Approach Bathtub in Type B Units–Option A Bathroom	156
Figure 1104.11.3.1.3.3(A)	Transfer-type Shower Compartment in Type B Units	156
Figure 1104.11.3.1.3.3(B)	Transfer-type Shower Compartment in Type B Units - Exception	156
Figure 1104.11.3.2.1	Lavatory in Type B Units – Option B Bathroom	156
Figure 1104.11.3.2.3.1	Bathroom Clearance in Type B Units – Option B Bathroom	157
Figure 1104.12.1.1	Minimum Clearance in Type B Units.	157
Figure 1104.12.1.2(A)	U-shaped Kitchen Clearance in Type B Units.	158
Figure 1104.12.1.2(B)	U-shaped Kitchen Clearance in Type B Units - Exception.	158

CHAPTER 1

APPLICATION AND ADMINISTRATION

SECTION 101 TITLE

This document shall be known as the standard for Accessible and Usable Buildings and Facilities, hereinafter referred to as “this standard.”

SECTION 102 PURPOSE

102.1 General. The technical criteria in Chapters 3 through 10, Sections 1102, 1103 and 1106 of this standard make sites, facilities, buildings and elements accessible to and usable by people with such physical disabilities as the inability to walk, difficulty walking, reliance on walking aids, blindness and visual impairment, deafness and hearing impairment, incoordination, reaching and manipulation disabilities, lack of stamina, difficulty interpreting and reacting to sensory information, and extremes of physical size. The intent of these sections is to allow a person with a physical disability to independently get to, enter, and use a site, facility, building or element.

Section 1104 of this standard provides criteria for Type B units. These criteria are intended to be consistent with the intent of the criteria of the U.S. Department of Housing and Urban Development (HUD) Fair Housing Accessibility Guidelines. The Type B units are intended to supplement, not replace, Accessible units or Type A units as specified in this standard.

Section 1105 of this standard provides criteria for minimal accessibility features for one and two family dwelling units and townhouses which are not covered by the U.S. Department of Housing and Urban Development (HUD) Fair Housing Accessibility Guidelines.

This standard is intended for adoption by government agencies and by organizations setting model codes to achieve uniformity in the technical design criteria in building codes and other regulations.

102.2 Applicability. Sites, facilities, buildings, and elements required to be accessible by the scoping provisions adopted by the administrative authority shall comply with the applicable provisions of Chapters 3 through 10. Dwelling units and sleeping units shall comply with the applicable provisions of Chapter 11.

SECTION 103 HUMAN FACTOR PROVISIONS

The technical criteria in this standard are based on body sizes and functional abilities of adults and, in those sections where specifically noted, children.

SECTION 104 COMPLIANCE ALTERNATIVES

Nothing in this standard is intended to prevent the use of designs, products or technologies as alternatives to those prescribed by this standard, provided they result in equivalent or greater accessibility and such equivalency is approved by the administrative authority adopting this standard.

SECTION 105 CONVENTIONS

105.1 General. Where specific criteria of this standard differ from the general criteria of this standard, the specific criteria shall apply.

105.2 Calculation of percentages. Where the determination of the required size or dimension of an element or facility involves ratios or percentages, rounding down for values less than one half shall be permitted.

105.3 Dimension tolerances. All dimensions are subject to conventional industry tolerances except where the requirement is a range with stated minimum and maximum end points.

105.4 Figures. Unless specifically stated, figures included herein are provided for informational purposes only and are not considered part of the standard.

105.5 Floor or floor surface. The terms floor or floor surface refer to the finish floor surface or ground surface, as applicable.

105.6 Referenced sections. Unless specifically stated otherwise, a reference to another section or subsection within this standard includes all subsections of the referenced section or subsection.

SECTION 106 REFERENCED DOCUMENTS

106.1 General. The documents listed in Section 106.2 shall be considered part of this standard to the prescribed extent of each such reference. Where criteria in this standard differ from those of these referenced documents, the criteria of this standard shall apply.

106.2 Documents.

106.2.1 Americans with Disabilities Act (ADA) Accessibility Guidelines for Transportation Vehicles. 36 CFR 1192 published in 56 Federal Register 45558, September 6, 1991 (United States Access Board, 1331 F Street, NW, Suite 1000, Washington, DC 20004-1111).

Convention	Description
	dimension showing English units (in inches unless otherwise specified) above the line and SI units (in millimeters unless otherwise specified) below the line
	dimension for small measurements
	dimension showing a range with minimum - maximum
min	minimum
max	maximum
>	greater than
≥	greater than or equal to
<	less than
≤	less than or equal to
	boundary of clear floor space or maneuvering clearance
	centerline
	a permitted element or its extension
	direction of travel or approach
	a wall, floor, ceiling or other element cut in section or plan
	a highlighted element in elevation or plan
	location zone of element, control or feature

FIGURE 105.4
GRAPHIC CONVENTION FOR FIGURES

106.2.2 Hearing aids – Magnetic field strength in audio-frequency induction loops for hearing aids operating with an induction pickup coil. IEC 60118.4-2014 (International Electrotechnical Commission, 3 rue de Varenbe, PO Box 131, 1211 Geneva 20, Switzerland.)

106.2.3 Manual on Uniform Traffic Control Devices. MUTCD-2009 with Revisions 1 and 2 incorporated, May 2012 (The Federal Highway Administration, Office of Transportation Operations, Room 3408, 400 7th Street, S.W., Washington, DC 20590).

106.2.4 National Fire Alarm and Signaling Code. NFPA 72-2016 (National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269-9101).

106.2.5 Performance Criteria for Accessible Communications Entry Systems. DASMA 303-2006. (Door and

Access Systems Manufacturers Association, 1300 Sumner Avenue, Cleveland, OH 44115-2851).

106.2.6 Power Assist and Low Energy Power Operated Doors. BHMA A156.19-2013 (Builders Hardware Manufacturers’ Association, 355 Lexington Avenue, 15th Floor, New York, NY 10017).

106.2.7 Power Operated Pedestrian Doors. ANSI/BHMA A156.10-2011 (Builders Hardware Manufacturers’ Association, 355 Lexington Avenue, 15th Floor, New York, NY 10017).

106.2.8 Safety Code for Elevators and Escalators. ASME A17.1-2013/CSA B44-16 (American Society of Mechanical Engineers International, Three Park Avenue, New York, NY 10016-5990).

106.2.9 Safety Standard for Platform Lifts and Stairway Chairlifts. ASME A18.1-2014 (American Society of Mechanical Engineers International, Three Park Avenue, New York, NY 10016-5990).

106.2.10 Standard Consumer Safety Performance Specification for Playground Equipment for Public Use. ASTM F 1487-01 (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959).

106.2.11 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).

106.2.12 Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment. ASTM F 1292-13 (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959).

106.2.13 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).

SECTION 107 DEFINITIONS

107.1 General. For the purpose of this standard, the terms listed in Section 107.5 have the indicated meaning.

107.2 Terms defined in referenced documents. Terms specifically defined in a referenced document, and not defined in this section, shall have the specified meaning from the referenced document.

107.3 Undefined terms. The meaning of terms not specifically defined in this standard or in a referenced document shall be as defined by collegiate dictionaries in the sense that the context implies.

107.4 Interchangeability. Words, terms and phrases used in the singular include the plural, and those used in the plural include the singular.

107.5 Defined terms.

accessible: Describes a site, building, facility or portion thereof that complies with this standard.

administrative authority: A jurisdictional body that adopts or enforces regulations and standards for the design, construction or operation of buildings and facilities.

amusement attraction: Any facility, or portion of a facility, located within an amusement park or theme park which provides amusement without the use of an amusement device. Amusement attractions include, but are not limited to, fun houses, barrels and other attractions without seats.

amusement ride: A system that moves persons through a fixed course within a defined area for the purpose of amusement.

amusement ride seat: A seat that is built-in or mechanically fastened to an amusement ride intended to be occupied by one or more passengers.

area of sport activity: That portion of a room or space where the play or practice of a sport occurs.

assembly area: A building or facility, or portion thereof, used for the purpose of entertainment, worship, educational or civic gatherings, or similar purposes. For the purposes of these requirements, assembly areas include, but are not limited to, classrooms, lecture halls, courtrooms, public meeting rooms, public hearing rooms, legislative chambers, spaces utilized for viewing motion picture projections, auditoria, theaters, playhouses, dinner theaters, concert halls, centers for the performing arts, amphitheaters, arenas, stadiums, grandstands, places of religious worship or convention centers.

assistive listening system (ALS): An amplification system utilizing transmitters, receivers and coupling devices to bypass the acoustical space between a sound source and a listener by means of induction loop, radio frequency, infrared, or direct-wired equipment.

blended transition: A raised pedestrian street crossing, depressed corner or similar connection between the pedestrian access route at the level of the sidewalk and the level of the pedestrian street crossing that has a grade of 1:20 or less.

boarding pier: A portion of a pier where a boat is temporarily secured for the purpose of embarking or disembarking.

boat launch ramp: A sloped surface designed for launching and retrieving trailed boats and other water craft to and from a body of water.

boat slip: That portion of a pier, main pier, finger pier or float where a boat is moored for the purpose of berthing, embarking, or disembarking.

catch pool: A pool or designated section of a pool used as a terminus for water slide flumes.

characters: Letters, numbers, punctuation marks and typographic symbols.

children's use: Spaces and elements specifically designed for use primarily by people 12 years old and younger.

circulation path: An exterior or interior way of passage provided for pedestrian travel, including but not limited to, walks, hallways, courtyards, elevators, platform lifts, ramps, stairways and landings.

common use: Interior or exterior circulation paths, rooms, spaces or elements that are not for public use and are made available for the shared use of two or more people.

counter slope: Any slope opposing the running slope of a curb ramp.

cross slope: The slope that is perpendicular to the direction of travel (see running slope).

curb ramp: A short ramp cutting through a curb or built up to it.

destination-oriented elevator system: An elevator system that provides lobby controls for the selection of destination floors, lobby indicators designating which elevator to board and a car indicator designating the floors at which the car will stop.

detectable warning: A standardized surface feature built in or applied to floor surfaces to warn of hazards on a circulation path.

dwelling unit: A single unit providing complete, independent living facilities for one or more persons including permanent provisions for living, sleeping, eating, cooking and sanitation.

element: An architectural or mechanical component of a building, facility, space or site.

elevated play component: A play component that is approached above or below grade and that is part of a composite play structure consisting of two or more play components attached or functionally linked to create an integrated unit providing more than one play activity.

elevator car call sequential step scanning: A technology used to enter a car call by means of an up or down floor selection button.

employee work area: All or any portion of a space used only by employees and used only for work. Corridors, toilet rooms, kitchenettes and break rooms are not employee work areas.

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.

existing facility: A facility completed prior to the date of adoption of this standard, or one for which a legal permit has been issued.

facility: All or any portion of a building, structure, site improvements, elements and pedestrian routes or vehicular ways located on a site.

gangway: A variable-sloped pedestrian walkway that links a fixed structure or land with a floating structure. Gangways that connect to vessels are not addressed by this document.

golf car passage: A continuous passage on which a motorized golf car can operate.

grade break: The line where two surface planes with different grades meet.

ground level play component: A play component that is approached and exited at the ground level.

habitable: A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.

key surface: The surface or plane of any key or button that must be touched to activate or deactivate an operable part or a machine function or enter data.

marked crossing: A crosswalk or other identified path intended for pedestrian use in crossing a vehicular way.

operable part: A component of an element used to insert or withdraw objects, or to activate, deactivate or adjust the element.

pictogram: A pictorial symbol that represents activities, facilities or concepts.

play area: A portion of a site containing play components designed and constructed for children.

play component: An element intended to generate specific opportunities for play, socialization or learning. Play components are manufactured or natural; and are stand-alone or part of a composite play structure.

ramp: A walking surface that has a running slope steeper than 1:20.

running slope: The slope that is parallel to the direction of travel (see cross slope).

sign: An architectural element composed of displayed textual, symbolic, tactile or pictorial information.

site: A parcel of land bounded by a property line or a designated portion of a public right-of-way.

sleeping unit: A room or space in which people sleep that can also include permanent provisions for living, sleeping, eating and either sanitation or kitchen facilities but not both. Such rooms and spaces that are also part of a dwelling unit are not sleeping units.

soft contained play structure: A play structure made up of one or more play components where the user enters a fully enclosed play environment that utilizes pliable materials, such as plastic, netting or fabric.

teeing ground: In golf, the starting place for the hole to be played.

transfer device: Equipment designed to facilitate the transfer of a person from a wheelchair or other mobility aide to and from an amusement ride seat.

transition plate: A sloping pedestrian walking surface located at the ends of a gangway.

TTY: An abbreviation for teletypewriter. Equipment that employs interactive, text-based communications through the transmission of coded signals across the standard telephone network. The term TTY also refers to devices known as text telephones and TDDs.

use zone: The ground level area beneath and immediately adjacent to a play structure or play equipment that is designated by ASTM F 1487 listed in Section 106.2.10, for unrestricted circulation around the play equipment and where it is predicted that a user would land when falling from or exiting the play equipment.

variable message signs (VMS): Electronic signs that have a message with the capacity to change by means of scrolling, streaming or paging across a background.

variable message sign (VMS) characters: Characters of an electronic sign are composed of pixels in an array. High reso-

lution VMS characters have vertical pixel counts of 16 rows or greater. Low resolution VMS characters have vertical pixel counts of 7 to 15 rows.

vehicular way: A route provided for vehicular traffic, such as in a street, driveway or parking facility.

walk: An exterior pathway with a prepared surface for pedestrian use.

wheelchair charging area: A clear floor area where people with disabilities can recharge their wheelchair batteries.

wheelchair space: A space for a single wheelchair and its occupant.

wheelchair space locations: A space for a minimum of a single wheelchair and the associated companion seating. Wheelchair space locations can contain multiple wheelchair spaces and associated companion seating.

CHAPTER 2

SCOPING

SECTION 201 GENERAL

This standard provides technical criteria for making sites, facilities, buildings and elements accessible. The administrative authority shall provide scoping provisions to specify the extent to which these technical criteria apply. These scoping provisions shall address the application of this standard to each building and occupancy type; new construction, alterations, temporary facilities, and existing buildings; specific site and building elements; and to multiple elements or spaces provided within a site or building.

SECTION 202 DWELLING AND SLEEPING UNITS

Chapter 11 of this standard contains dwelling unit and sleeping unit criteria for Accessible units, Type A units, Type B

units, Type C (Visitable) dwelling units and units with communication features. The administrative authority shall specify, in separate scoping provisions, the extent to which these technical criteria apply. These scoping provisions shall address the types and numbers of units required to comply with each set of unit criteria.

SECTION 203 ADMINISTRATION

The administrative authority shall provide an appropriate review and approval process to ensure compliance with this standard.