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1				HANDOUT FROM YVONNE ("AN INTERPRETATION OF MASLOW")
1				HANDOUT FOR ATTENDEES

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REV.10/83

HANDICAP ACCESSIBILITY IN NEWLY CONSTRUCTED HOTELS & MOTELS

AN

INTERPRETATION OF ANSI A117.1

Developed by the Executives Engineers Committee of the AH&MA

February 13, 1986

Produced by the Technical Services Center of
The Hospitality, Lodging & Travel Research Foundation, Inc.
An Affiliate of the American Hotel & Motel Association
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MEMORANDUM

June 23, 1986

TO: Users of Handicapped Accessibility in Newly Constructed Hotels and Motels; - an Interpretation of ANSI A117.1

FROM: John P.S. Salmen, AIA

This publication is intended to be used in conjunction with ANSI A117.1. It is an interpretation paper meant to assist those involved in the development of hotels and motels to provide an adequate degree of accessibility within their facilities.

In an attempt to be as concise as possible, this interpretation does not cover many of the standard accessibility features found in all buildings as outlined in ANSI A117.1,.i.e., parking, elevators, etc. For these items you must refer to the ANSI Standard.

Any individual with questions or comments is urged to contact the American Hotel & Motel Association's Technology & Information Department.

JS/cct

WP-0857B

INTERPRETATION OF ANSI A117.7

INTRODUCTION
February 13, 1986

In an attempt to provide clarification of technical information the Executive Engineers Committee of the American Hotel & Motel Association has developed the following INTERPRETATION OF ANSI A117.1. This information is intended to assist persons designing, developing or building, new hotels or motels.

It is an informational piece suggesting a level of accessibility consistent with ANSI- A117.1 (any edition). Specifications for making buildings and facilities accessible to and usable by physically handicapped people. The Committee has attempted to develop an interpretation that works with not only ANSI but also with the U.S. Government's Uniform Accessiblility Standards (UFAS) and anyother "daughters of ANSI".

This booklet is in no way considered to be a standard, binding on any member of the association or industry. Standards, codes and regulations are the exclusive domain of local building and fire authorities. Any question of compliance with regulations should be referred to the building code regulating authority in the locality of construction.

We hope that this booklet will assist people who are building new hotels or motels in complying with the intent of accessibility regulations while building hotels and motels that are efficient, safe, attractive and comfortable for all guests.

This booklet shows the ANSI A117.1 (1980) paragraph number, text and if available illustration that applies to each item listed in the Table of Contents. Where appropriate, interpretive comments or illustrations have been added.

This booklet assumes that public spaces should generally be accessible to all guests. Where making all spaces or elements completely accessible would be undesireable, we recommend that the percentages represented in Table A be used.

TABLE A

# of Elements	# of accessible elements
1- 25	1
26- 50	2
51- 75	3
76- 100	4
101- 150	5
151- 200	6
201- 300	7
301- 400	8
401- 500	9
501-1000	2% of total
1001-and over	20 plus 1 for each 100 over 1000

NOTE: This is the same table as found in the Uniform Federal Accessibility Standards for Acceptable Numbers of Accessible Elements.

This paper makes the assumption that the Standards for Acceptable Numbers of Accessible Elements found in the Uniform Federal Accessibility standards are appropriate numbers for accessible elements in public facilities such as hotels & motels.

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HANDICAP ACCESSIBILITY IN NEWLY CONSTRUCTED HOTELS & MOTELS
AN
INTERPRETATION OF ANSI A117.1

IA MEETING ROOMS

IA1 Location on Accessible Route of Travel

ANSI A117.1 (1980) Wording

4.1.2(1) At least one accessible route complying with 4.3 should connect accessible building or facility entrances with all accessible spaces and elements within the building or facility. See Appendix A for ANSI 4.3.

IA2 Doors

ANSI A117.1 (1980) Wording

4.1.2 (7) All doors to accessible spaces along accessible routes shall comply with 4.13. (See Appendix B for ANSI 4.13)

IA3 Seating, Tables and Work Surfaces

ANSI A117.1 (1980) Wording

4.2.1(7) If seating, tables, or work surfaces are provided in accessible spaces, a reasonable number, but always at least one, of seating spaces, tables, or work surfaces shall comply with 4.32.

IA4 Fixed Seating

ANSI A117.1 (1980) Wording

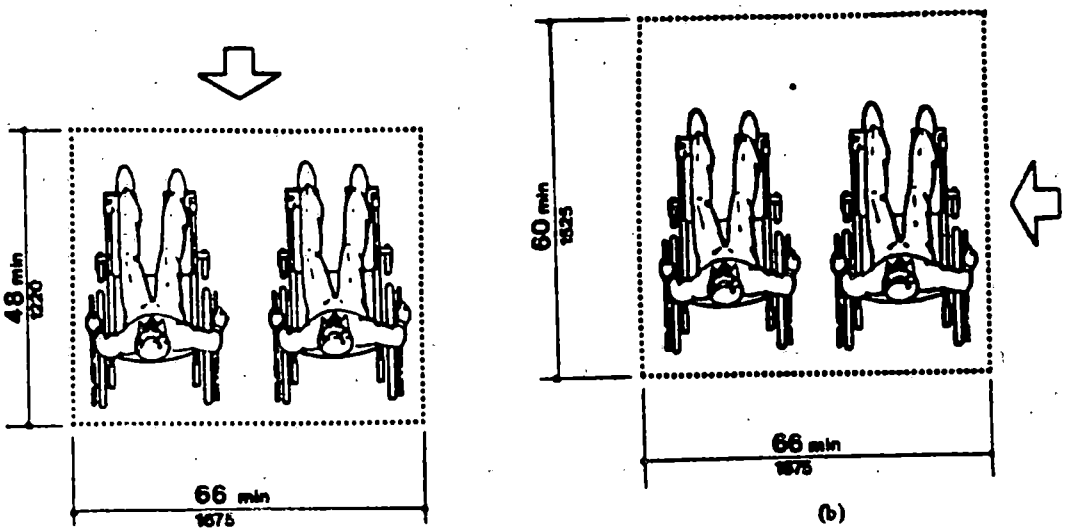
4.33.1 Minimum Number. Assembly areas shall have a reasonable number, but no less than two, of locations for wheelchair users in each assembly area that complies with 4.33. Assembly areas with audio-amplification systems shall have a listening system complying with 4.33.6 and 4.33.7 to assist a reasonable number of people, but no fewer than two, with severe hearing loss in the appreciation of audio presentations.

4.33.2* Size of Wheelchair Locations. Each wheelchair location shall provide minimum clear ground or floor spaces as shown in Fig. 46 and shall accomodate two people in wheelchairs.

4.33.3* Placement of Wheelchair Locations. Wheelchair areas shall be an integral part of any fixed seating plan and shall be dispersed throughout the seating area. They shall adjoin an accessible route that also serves as a means of egress in case of an emergency and shall be located to provide lines of sight comparable to those for all viewing areas.

4.33.4 Surfaces. The ground or floor at wheelchair locations shall be level and shall comply with 4.5.

Existing ANSI Illustrations
Fig. 46



(a)
Forward or Rear Access

(b)
Side Access

Fig. 46
Space Requirements for Wheelchair Seating Spaces in Series

IA5 Access to Performance Areas, Speakers Platforms and other Raised Areas.

Interpretive Comment
Removable ramps at a slope of 1:12 are an acceptable alternative as long as they are available upon short notice for no additional charge.

ANSI A117.1 (1980) Wording
4.33.5 Access to Performing Areas. An accessible route shall connect wheelchair seating locations with performing areas, including stages, arena floors, dressing rooms, locker rooms, and other spaces used by performers.

IA6 Listening Systems for Hearing Impaired

Interpretive Comment
Hard wired or infra red systems are additional acceptable alternatives.

ANSI A117.1 (1980) Wording
4.33.6* Placement of Listening Systems. If the listening system provided serves individual fixed seats, then such seats shall be located within a 50 ft (15 m) viewing distance of the stage or playing area and shall have a complete view of the stage or playing area.

4.33.7* Types of Listening Systems. Audio loops and radio frequency systems are two acceptable types of listening systems.

IA7 Adjustable Microphone at Podium for People who use Wheelchairs

Interpretive Comment
Microphones capable of being relocated for use by a speaker who uses a wheelchair should be provided.

ANSI A117.1 (1980) Wording
No existing wording.

IB RESTAURANTS AND LOUNGES

IB1 Location on Accessible Routes of Travel

ANSI A117.1 (1980) Wording
4.1.2(1) At least one accessible route complying with 4.3 shall connect accessible building or facility entrances with all accessible spaces and elements within the building or facility. (See Appendix A for ANSI 4.3)

IB2 Doors

ANSI A117.1 (1980) Wording
4.1.2 (7) All doors to accessible spaces along accessible routes shall comply with 4.13. (See Appendix B for ANSI 4.13)

IB3 Table Clearances

ANSI A117.1 (1980) Wording
4.32.3 Knee Clearances. If seating for people in wheelchairs is provided at tables, counters, and work surfaces, knee spaces at least 27-in (685 mm) high, 30-in (760 mm) wide, and 19-in (485 mm) deep shall be provided (see Fig. 45)

4.32.4* Height of Work Surfaces. The tops of tables and work surfaces shall be from 28-in to 34-in (710 mm to 865 mm) from the floor or ground.

Existing ANSI Illustrations
Fig. 45.

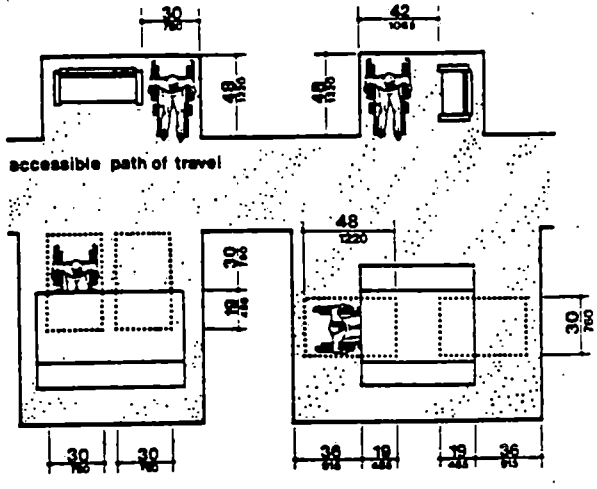


Fig. 45
Minimum Clearances for Seating and Tables

IB4 Number or Percentage of Table Seating Required to be Accessible

Interpretive Comment
Table seating shall be provided in accordance with Table A.

ANSI A117.1 (1980) Wording
No existing wording.

TABLE A

NUMBER OF ELEMENTS	ACCESSIBLE ELEMENTS
1 - 25	1
26- 50	2
51- 75	3
76-100	4
101-150	5
151- 200	6
201- 300	7
301- 400	8
401- 500	9
501-1000	2% of total
1001 and over	20 plus 1 for each 100 over 1000.

IB5 Layout of Cafeteria and Self Service Areas

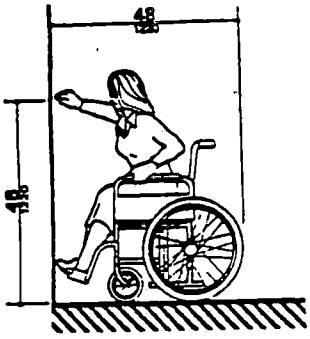
ANSI A117.1 (1980) Wording
4.3.3 Width. The minimum clear width of an accessible route shall be 36 in (915 mm) except at doors (see 4.13.5). If a person in a wheelchair must make a turn around an obstruction, the minimum clear width of the accessible route shall be as shown in Fig. 7.

4.2.5 High Forward Reach. If the clear floor space only allows forward approach to an object, the maximum high forward reach allowed shall be 48 in (1220 mm) (see Fig. 5 (a)). If the high forward reach is over an obstruction, reach and clearances shall be as shown in Fig. 5(b).

4.2.6 Side Reach. If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 in (1370 mm) and the low side reach shall be no less than 9 in (230 mm) above the floor (Fig. 6(a) and (b)). If the side reach is over an obstruction, the reach and clearances shall be as shown in Fig. 6(c)).

Existing ANSI Illustrations
Figs. 5, 6, 7

[Illustrations on following page]



(a)
High Forward Reach Limit

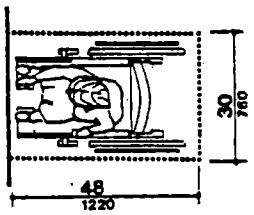
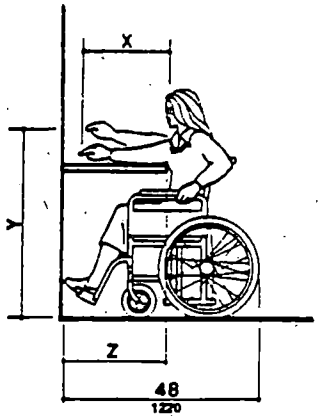
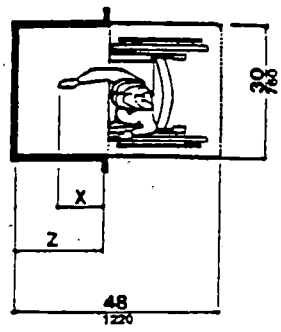


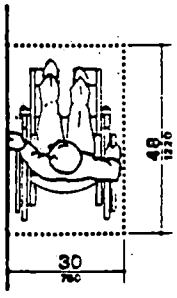
Fig. 5
Forward Reach



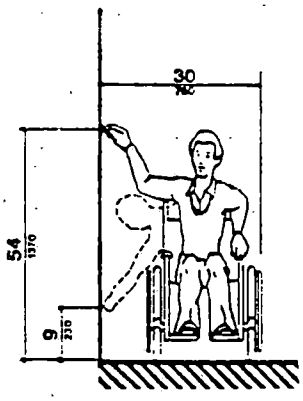


NOTE: x shall be ≤25 in (635 mm); z shall be ≥x. When x < 20 in (510 mm), then y shall be 48 in (1220 mm) maximum. When x is 20 to 25 in (510 to 635 mm), then y shall be 44 in (1120 mm) maximum.

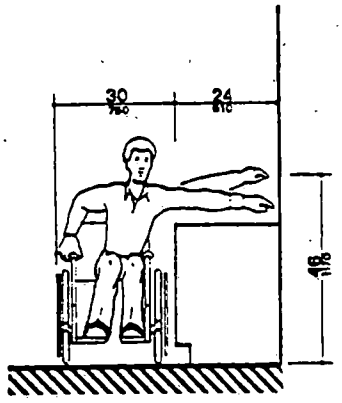
(b)
Maximum Forward Reach over an Obstruction



(a)
Clear Floor Space
Parallel Approach

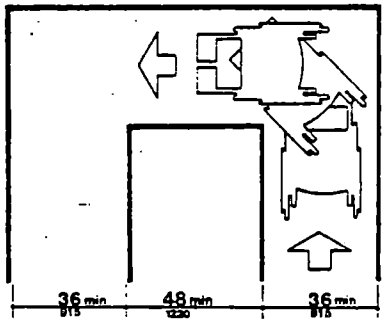


(b)
High and Low
Side Reach Limits

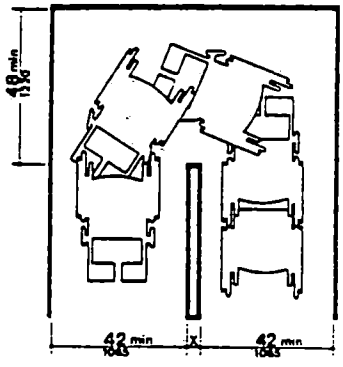


(c)
Maximum Side Reach
over Obstruction

Fig. 6
Side Reach



(a)
90° Turn



NOTE: Dimensions shown apply when x < 48 in (1220 mm).

(b)
Turns around an Obstruction

Fig. 7
Width of Accessible Route

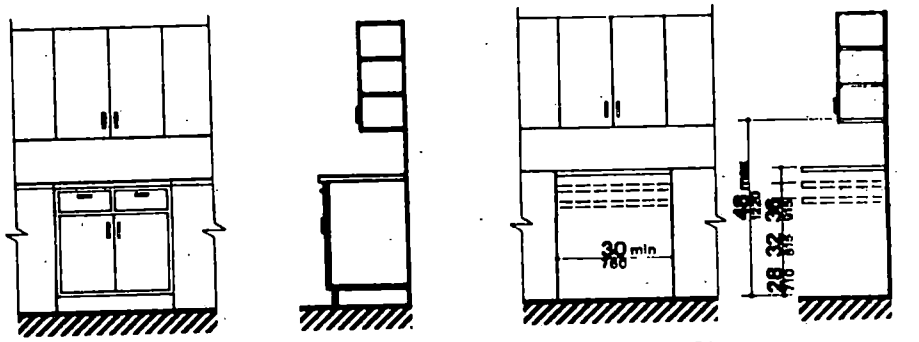
IC REGISTRATION/CASHIER DESK

IC1 Height of Countertop

Interpretive Comment
At least one location offering each service should be provided at an accessible height. A portable clip board or writing surface is an acceptable alternative.

ANSI A117.1 (1980) Wording
4.32.4 Height of Work Surfaces. The tops of counter tops shall be from 28 in to 34 in (710 mm to 865 mm) from the floor or ground.

Existing ANSI Illustrations
Fig. 50(b)



(a)
Before Removal of Cabinets and Base

(b)
Cabinets and Base Removed and Height Alternatives

Fig. 50
Counter Work Surface

ID GUESTROOMS

ID1 Number of Accessible Guestrooms

Interpretive Comment
Guestrooms shall be made accessible in accordance with Table A.

ANSI A117.1 (1980) Wording
No existing wording.

TABLE A

NUMBER OF ELEMENTS	ACCESSIBLE ELEMENTS
1 - 25	1
26- 50	2
51- 75	3
76-100	4
101-150	5
151- 200	6
201- 300	7
301- 400	8
401- 500	9
501-1000	2% of total
1001 and over	20 plus 1 for each 100 over 1000.

ID2 DOORS

Interpretive Comment
All doors within accessible guestrooms or suites should comply with all ANSI door requirements as shown in Appendix A. All other guestroom entry and bathroom doors should have 32" of clearwidth.

ID3 Guestroom entry door locking device

Interpretive Comment
Guestroom entry door locking device keys should facilitate operation by someone with arthritic hands, or poor hand dexterity.

ANSI A117.1 (1980) Wording
No existing wording.

ID4 Requirement for Tactile Signage

Interpretive Comment
Guestrooms should be provided with tactile room numbers.

ANSI A117.1 (1980) Wording
4.30.4* Raised or Indented Characters or Symbols. Letters and numbers on signs shall be raised or incised 1/32 in (0.8 mm) minimum and shall be sans serif characters. Raised characters or symbols shall be at least 5/8 in (16 mm) high, but no higher than 2 in (50 mm). Indented characters or symbols shall have a stroke width of at least 1/4 in (6 mm). Symbols or pictographs on signs shall be raised or indented 1/32 in (0.8 mm) minimum.

ID5 Bed Spacing or Clear Floor Area

Interpretive Comment
Maneuvering space for guests who use wheelchairs should be provided on at least one side of each bed in the guest room and in the bathroom according to the ANSI criteria. Consideration should be given to the way a room will be used to allow maneuvering space for convenient access to telephone, bed and toilet.

ANSI A117.1 (1980) Wording
4.2.3* Wheelchair Turning Space. The space required for a wheelchair to make a 180-degree turn is a clear space of 60-in (1525 mm) diameter (see Fig. 3(a)) or a T-shaped space (see Fig. 3(b)).

4.2.4* Clear Floor or Ground Space for Wheelchairs.

4.2.4.1 Size and Approach. The minimum clear floor or ground space required to accommodate a single, stationary wheelchair and occupant is 30 in by 48 in (760 mm by 1220 mm) (see Fig. 4(a)). The minimum clear floor or ground space for wheelchairs may be positioned for forward or parallel approach to an object (see Fig. 4(b) and (c)). Clear floor or ground space for wheelchairs may be part of the knee space required under some objects.

4.2.4.2 Relationship of Maneuvering Clearances to Wheelchair Spaces. One full unobstructed side of the clear floor or ground space for a wheelchair shall adjoin or overlap an accessible route or adjoin another wheelchair clear floor space. If a clear floor space is located in an alcove or otherwise confied on all or part of three sides, additional maneuvering clearances shall be provided as shown in Fig. 4(d) and (e).

4.2.4.3 Surfaces of Wheelchair Spaces. Clear floor or ground spaces for wheelchairs shall comply with 4.5.

Existing ANSI Illustrations
Fig. 3 and 4.

[Illustrations on following page]

ID6 Restrictions in use of Platform Beds

Interpretive Comment
It is recommended that standard open legged bed supports be installed in accessible rooms. Enclosed platforms under beds make it impossible for portable lifts to safely lift people to and from the bed.

Existing ANSI Wording
No existing wording.

ID7 Location of Telephone

Interpretive Comment
The telephone should be located so that it is easily reachable from the bed and from the accessible route of travel in the guestroom.

ID8 Availability of Special Electronic Amplification Equipment for Hearing Impaired Guests

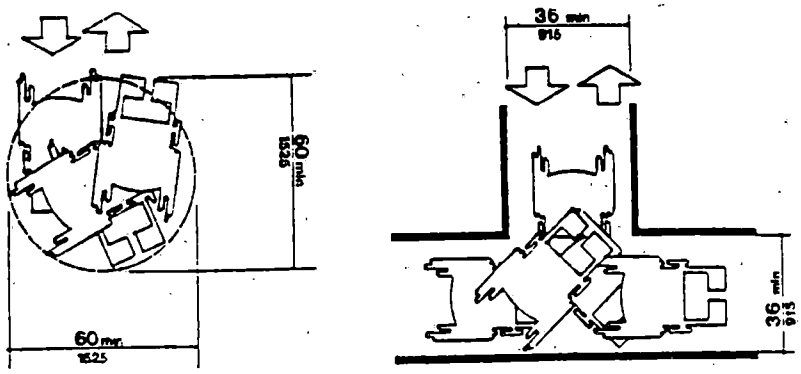
Interpretive Comment
All telephones should be compatible with hearing aids for guests with hearing impairments. Closed Captioned Television decoding equipment should be available upon request at the front desk for guests requiring such equipment.

ANSI A117.1 (1980) Wording
No existing wording.

ID9 Controls and Switches

Interpretive Comment
All guest room controls including, but not limited to, thermostat, lights, TV, etc., should be accessible according to the ANSI criteria.

ANSI A117.1 (1980) Wording
4.27 Controls and Operating Mechanisms



(a)
60-in (1525-mm) -Diameter Space

(b)
T-Shaped Space for 180° Turns

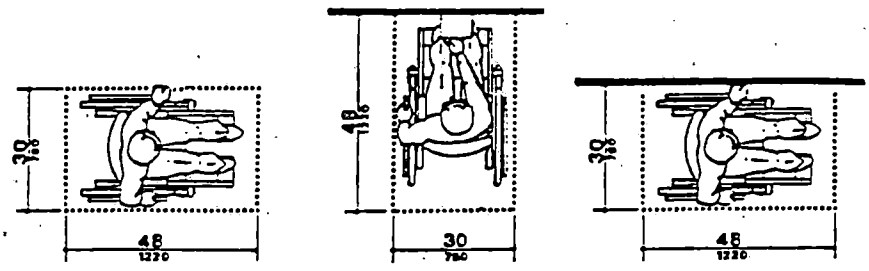
Fig. 3
Wheelchair Turning Space

4.2 Space Allowances and Reach Ranges

4.2.1* Wheelchair Passage Width. The minimum clear width for single wheelchair passage shall be 32 in (815 mm) at a point and 36 in (915 mm) continuously (see Fig. 1).

4.2.2 Width for Wheelchair Passing. The minimum width for two wheelchairs to pass is 60 in (1525 mm) (see Fig. 2).

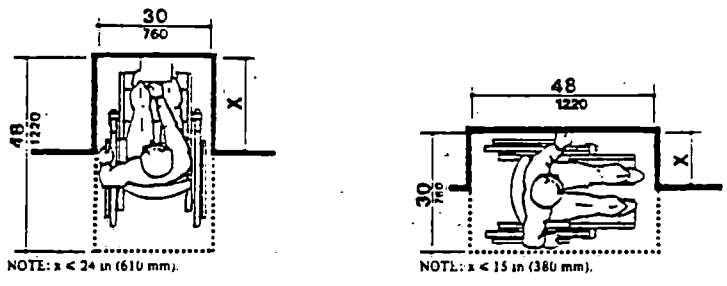
4.2.3* Wheelchair Turning Space. The space required for a wheelchair to make a 180-degree turn is a clear space of 60-in (1525 mm) diameter (see Fig. 3(a)) or a T-shaped space (see Fig. 3(b)).



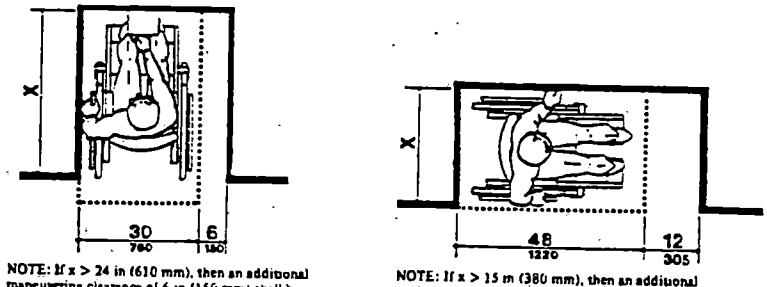
(a)
Clear Floor Space

(b)
Forward Approach

(c)
Parallel Approach



(d)
Clear Floor Space in Alcoves



(e)
Additional Maneuvering Clearances for Alcoves

Fig. 4
Minimum Clear Floor Space for Wheelchairs

4.27.1 General. Controls and operating mechanisms in accessible spaces, along accessible routes, or as part of accessible elements (for example, light switches, dispenser controls) shall comply with 4.27.

4.27.2 Clear Floor Space. Clear floor space complying with 4.2.4 [see item ID6 of this position paper] that allows a forward or a parallel approach by a person using a wheelchair shall be provided at controls, dispensers, receptacles, and other operable equipment.

4.27.3 Height. The highest operable part of all controls, dispensers, receptacles, and other operable equipment shall be placed within at least one of the reach ranges specified in 4.2.5 and 4.2.6. Except where the use of special equipment dictates otherwise, electrical and communications system receptacles on walls shall be mounted no less that 15 in (380 mm) above the floor.

4.27.4 Operation. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf (22.2 N).

4.2.5 High Forward Reach. If the clear floor space only allows forward approach to an object, the maximum high forward reach allowed shall be 48 in (1220 mm) (see Fig. 5(a)). If the high forward reach is over an obstruction, reach and clearances shall be as shown in Fig. 5(b).

4.2.6 Side Reach. If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 in (1370 mm) and the low side reach shall be no less than 9 in (230 mm) above the floor (Fig. 6(a) and (b)). If the side reach is over an obstruction, the reach and clearances shall be as shown in Fig. 6(c)).

ID10 Controls for TV and Room Lights at Bed

Interpretive Comment
Electrical switches or remote control equipment controlling the power to the television and the room lights should be located at the head of the bed so that a guest may control those devices without getting out of bed.

ANSI A117.1 (1980) Wording
None

ID11 Clothes and Towel Racks and Bars

ANSI A117.1 (1980) Wording
4.25 Storage

4.25.1 General. Accessible storage facilities such as cabinets, shelves, closets, and drawers shall comply with 4.25.

4.25.2 Clear Floor Space. A clear floor space at least 30 in by 48 in (760 mm by 1220 mm) complying with 4.2.4 [see item ID9 of this position paper] that allows either a forward or parallel approach by a person using a wheelchair shall be provided at accessible storage facilities.

4.25.3 Height. Accessible storage spaces shall be within at least one of the reach ranges specified in 4.2.5 and 4.2.6 [see item ID9 of this position paper]. Clothes rods shall be a maximum of 54 in (1370 mm) from the floor (see Fig. 38).

4.25.4 Hardware. Hardware for accessible storage facilities shall comply with 4.27.4. Touch latches and U-shaped pulls are acceptable.

Existing ANSI Illustrations
Fig. 38.

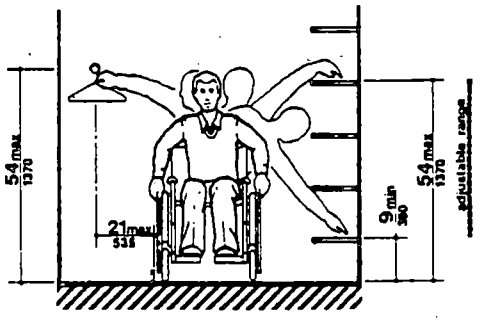


Fig. 38
Storage Shelves and Closets

ID12 Mirror and Lavatories

ANSI A117.1 (1980) Wording
4.19 Lavatories and Mirrors.

4.19.1 General. The requirements of 4.19 shall apply to lavatory fixtures, vanities, and built-in lavatories.

4.19.2 Height and Clearances. Lavatories shall be mounted with a clearance of at least 29-in (735 mm) from the floor to the bottom of the apron. Knee and toe clearances shall comply with Fig. 31.

4.19.3 Clear Floor Space. A clear floor space 30-in by 48-in (760 mm by 1220 mm) complying with 4.2.4 shall be provided in front of a lavatory to allow a forward approach. Such clear floor space shall adjoin or overlap an accessible route and shall extend a maximum of 19-in (485 mm) underneath the lavatory (see Fig. 32).

4.19.4 Exposed Pipes and Surfaces. Hot water and drain pipes under lavatories shall be insulated or otherwise covered. There shall be no sharp or abrasive surfaces under lavatories.

4.19.5 Faucets. Faucets shall comply with 4.27.4. Lever-operated, push-type, and electronically controlled mechansisms are examples of acceptable designs. Self-closing valves are allowed if the faucet remains open for at least 10 seconds.

4.19.6* Mirrors. Mirrors shall be mounted with the bottom edge no higher than 40-in (1015 mm) from the floor (see Fig. 31).

Existing ANSI Illustrations
Figs. 31, 32.

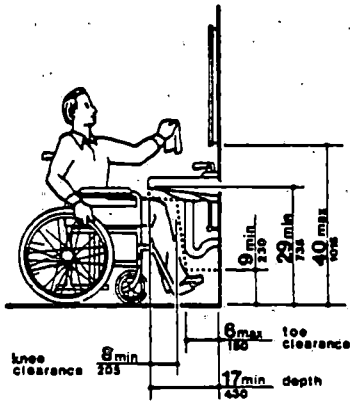


Fig. 31
Lavatory Clearances

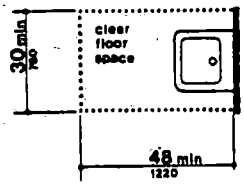


Fig. 32
Clear Floor Space at Lavatories

ID13 Bathtubs

ANSI A117.1 (1980) Wording
4.20 Bathtubs

4.20.1 General. Accessible bathtubs shall comply with 4.20. For bathtubs in adaptable dwelling units, see 4.34.5.4.

4.20.2 Floor Space. Clear floor space in front of bathtubs shall be as shown in Fig. 33.

4.20.3 Seat. An in-tub seat or a seat at the head end of the tub shall be provided as shown in Fig. 33 and 34. The structural strength of seats and their attachments shall comply with 4.26.3. Seats shall be mounted securely and shall not slip during use.

4.20.4 Grab Bars. Grab bars complying with 4.26 shall be provided as shown in Fig. 33 and 34.

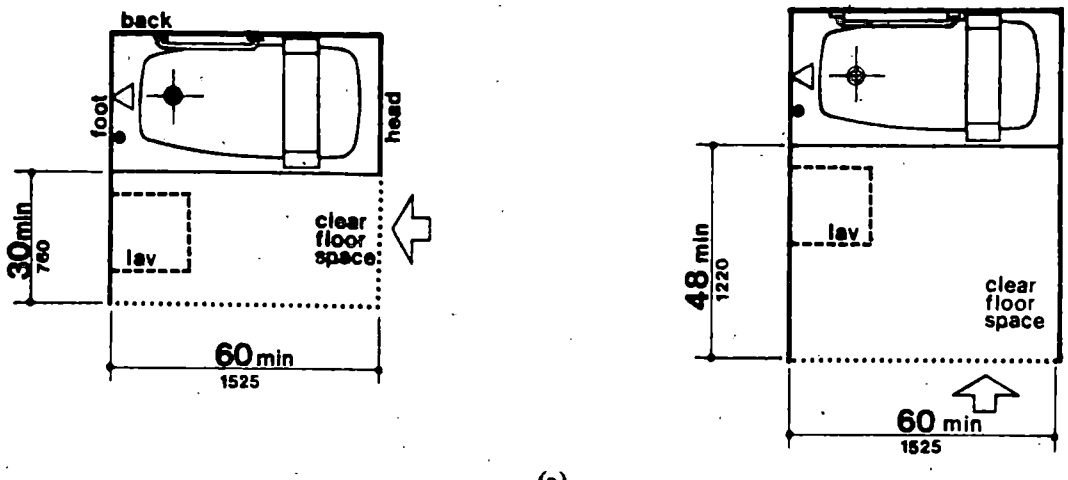
4.20.5 Controls. Faucets and other controls complying with 4.27.4 shall be located as shown in Fig. 34.

4.20.6 Shower Unit. A shower spray unit with a hose at least 60-in (1525 mm) long that can be used as a fixed shower head or as a hand-held shower shall be provided.

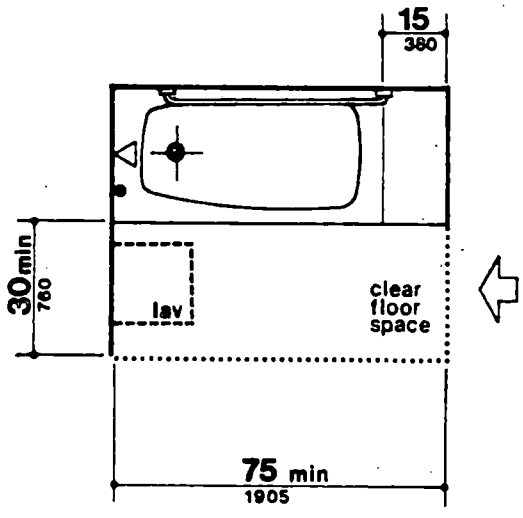
4.20.7 Bathtub Enclosures. If provided, enclosures for bathtubs shall not obstruct controls or transfer from wheelchairs onto bathtub seats or into tubs. Enclosures on bathtubs shall not have tracks mounted on their rims.

Existing ANSI Illustrations
Figs. 33 & 34

[Illustrations on following page]



(a)
With Seat in Tub

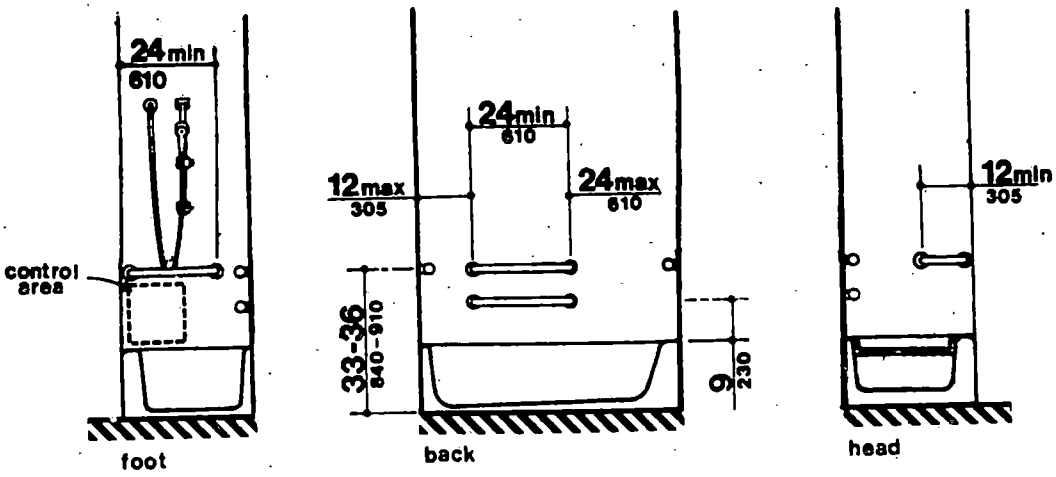


SYMBOL KEY:
- Shower controls
- Shower head
- Drain

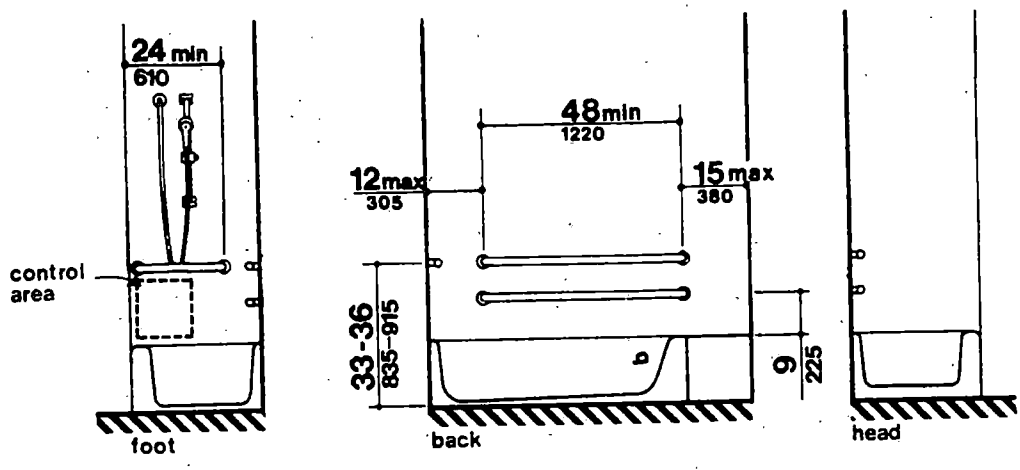
(b)
With Seat at Head of Tub

Fig. 33
Clear Floor Space at Bathtubs

[Illustration continued on following page]



(a)
With Seat in Tub



(b)
With Seat at Head of Tub

Fig. 34
Grab Bars at Bathtubs

ID14 Showers

Interpretive Comment
If showers are provided they should be designed in accordance with ANSI Criteria. See Appendix D.

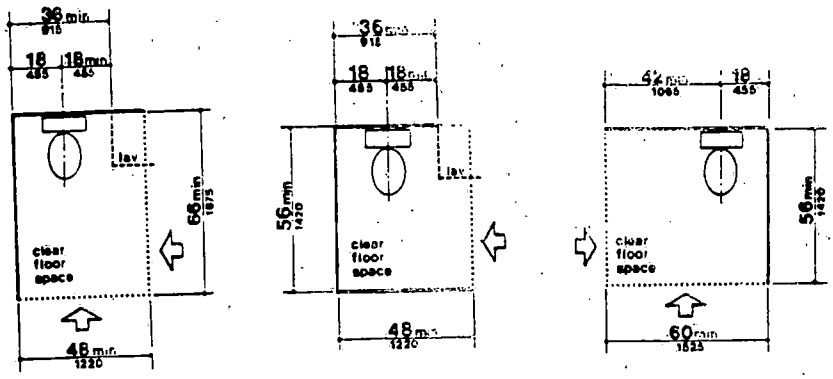
ID15 Toilet

Interpretive Comment
Toilets should be designed in accordance with the dimensions and clearances shown in these ANSI illustrations.

ANSI A117.1 (1980) Wording
No applicable wording.

Existing ANSI Illustrations
Figs. 47 (a), 30 (c & d)

[Illustrations on following page]



(a)
Clear Floor Space for Adaptable Bathrooms

Fig. 47
Water Closets in Adaptable Bathrooms

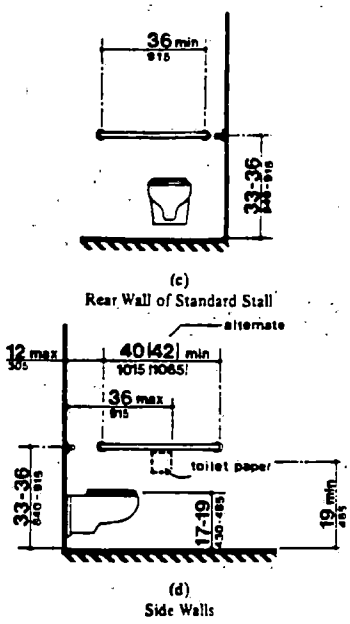


Fig. 30
Toilet Stalls

ID16 Emergency Warning Device for hearing impaired guests

Interpretive Comment
A visual alarm device with battery back-up for hearing impaired guests should be available upon request.

ANSI A117.1 (1980) Wording
No existing wording.

II RECREATION AREAS

IIA SWIMMING POOLS AND WHIRLPOOLS

IIA1 Location on Accessible Route of Travel

ANSI A117.1 (1980) Wording
4.1.2.(1) At least one accessible route complying with 4.3 shall connect accessible building or facility entrances with all accessible spaces and elements within the building or facility. See Appendix A for ANSI 4.3.

Interpretive Comment
At least one (preferably two) form(s) of accessible access other than stairs should be provided into every pool. Examples of acceptable alternatives include ramps, lifts, transfer tiers, and raised pool edge copings.

IIA2 Stairs and Handrails to get into the Pool

Interpretive Comment
If stairs are installed in the swimming pool they should comply with the ANSI criteria.

ANSI A117.1 (1980) Wording
4.9 Stairs

4.9.1 Minimum Number. Stairs connecting levels not connected by an elevator shall comply with 4.9. These specifications are not mandatory for stairs within dwelling units.

4.9.2 Treads and Risers. On any given flight of stairs, all steps shall have uniform riser heights and uniform tread widths. Stair treads shall be no less than 11-in (280 mm) wide, measured from riser to riser (see Fig. 18(a)).

4.9.3 Nosings. The underside of nosings shall not be abrupt. The radius of curvature at the leading edge of the tread shall be no greater than 1/2 in (13 mm). Risers shall be sloped or the underside of the nosing shall have an angle not less than 60 degrees from the horizontal. Nosings shall project no more than 1-1/2 in (38 mm) (see Fig. 18).

4.9.4 Handrails. Stairways shall have handrails at both sides of all stairs. Handrails shall comply with 4.26 and shall have the following features:

(1) Handrails shall be continuous along both sides of stairs. The inside handrail on switchback or dogleg stairs shall always be continuous (see Fig. 19(a) and (b)).

(2) If handrails are not continuous, they shall extend at least 12 in (305 mm) beyond the top riser and at least 12-in (305 mm) plus the width of one tread beyond the bottom riser. At the top, the extension shall be parallel with the floor or ground surface. At the bottom, the handrail shall continue to slope for a distance of the width of one tread from the bottom riser; the remainder of the extension shall be horizontal (see Fig. 19(c) and (d)). Handrail extensions shall comply with 4.4.

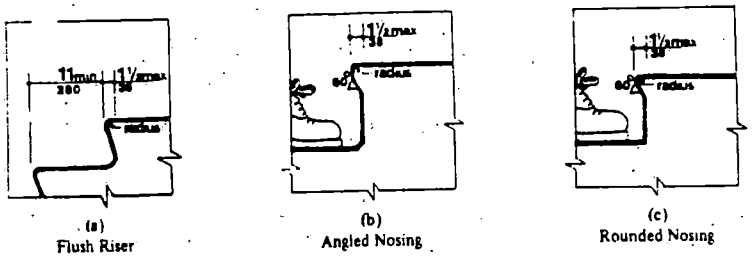
(3) The clear space between the handrail and the wall shall be 1-1/2 in (38 mm).

(4) Gripping surfaces shall be uninterrupted by newel posts, other construction elements, or obstructions.

4.9.6 Outdoor Conditions. Outdoor stairs and their approaches shall be designed so that water will not accumulate on walking surfaces.

4.29.4 Tactile Warnings at Stairs. All stairs, except those in dwelling units, in enclosed stair towers, or set ot the side of the path of travel, shall have a tactile warning at the top of stair runs (see Fig. 41).

Existing ANSI Illustrations
Fig. 18, 19 (a), (b), (c), (d), and 41.



(a) Flush Riser
(b) Angled Nosing
(c) Rounded Nosing

Fig. 18
Usable Tread Width and Examples of Acceptable Nosings

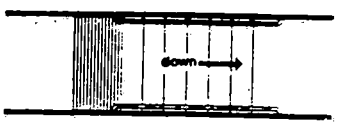
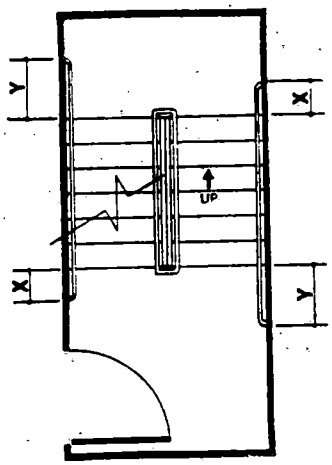
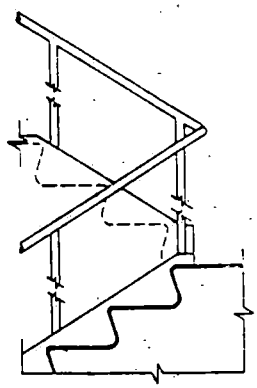


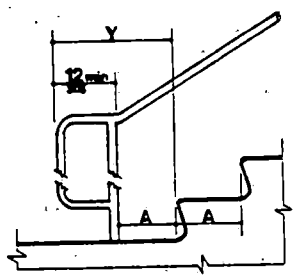
Fig. 41
Tactile Warning at Stairs



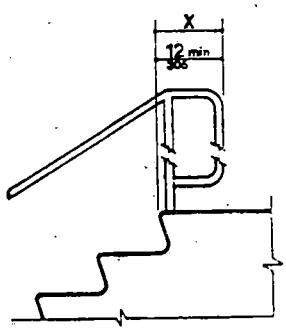
(a) Plan



(b) Elevation of Center Handrail



(c) Extension at Bottom of Run



(d) Extension at Top of Run

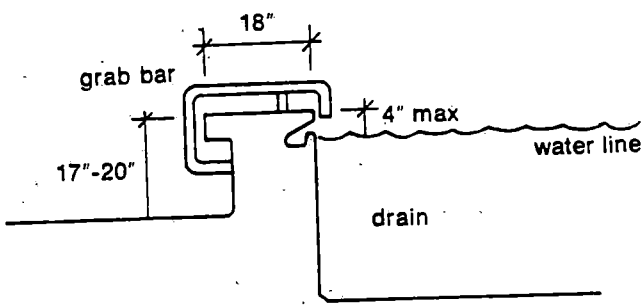
Fig. 19
Stair Handrails

IIA3 Raised Pool Edge Coping

Interpretive Comment
Raised pool edge copings with appropriate access and grab bars as illustrated should be considered to be one acceptable means of providing pool access for disabled people.

ANSI A117.1 (1980) Wording
No existing wording.

Illustration



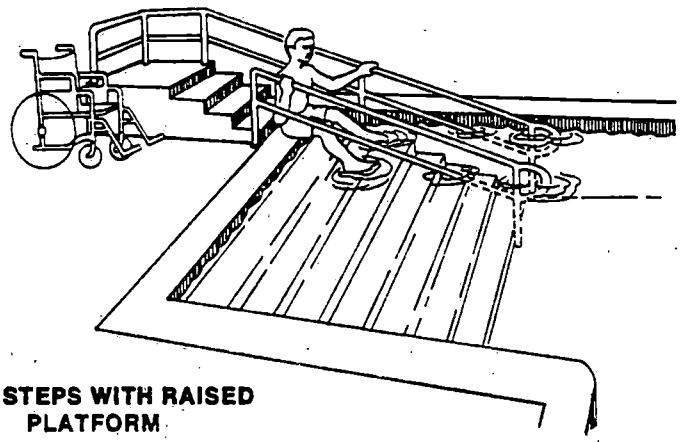
RAISED POOL EDGE COPING

IIA4 Transfer Tiers

Interpretive Comment
Raised transfer platforms with tiers as illustrated to allow access to the pool should be considered to be one acceptable means of providing access for disabled people.

ANSI A117.1 (1980) Wording
No existing wording.

Illustration



STEPS WITH RAISED PLATFORM

IIA5 Ramps

Interpretive Comment
Ramps used to provide access for disabled people to pools should comply with the ANSI criteria.

ANSI A117.1 (1980) Wording
4.8 Ramps

4.8.1* General. Any part of an accessible route with a slope greater than 1:20 shall be considered a ramp and shall comply with 4.8.

4.8.2* Slope and Rise. The least possible slope shall be used for any ramp. The maximum slope of a ramp in new construction shall be 1:12. The maximum rise for any ramp run shall be 30-in (760 mm) (see Fig. 16). Curb ramps and ramps to be constructed on existing sites or in existing buildings or facilities may have slopes and rises as shown in Table 2 if space limitations prohibit the use of 1:12 slope or less.

4.8.3 Clear Width. The minimum clear width of a ramp shall be 36 in (915 mm).

4.8.4 Landings. Ramps shall have level landings at the bottom and top of each run. Landings shall have the following features:

(1) The landing shall be at least as wide as the widest ramp run leading to it.
(2) The landing length shall be a minimum of 60-in (1525 mm) clear.
(3) If ramps change direction at landings, the minimum landing size shall be 60 in by 60 in (1525 mm by 1525 mm).

(4) If a doorway is located at a landing, then the area in front of the doorway shall comply with 4.13.6.

4.8.5* Handrails. If a ramp run has a rise greater than 6-in (250 mm) or a horizontal projection greater than 72-in (1830 mm), then it shall have handrails on both sides. Handrails are not required on curb ramps. Handrails shall comply with 4.26.2 and shall have the following features:

(1) Handrails shall be provided along both sides of ramp segments. The inside handrail on switchback or dogleg ramps shall always be continuous.

(2) If handrails are not continuous, they shall extend at least 12-in (305 mm) beyond the top and bottom of the ramp segment and shall be parallel with the floor or ground surface.

(3) The clear space between the handrail and the wall shall be 1-1/2-in (38 mm).

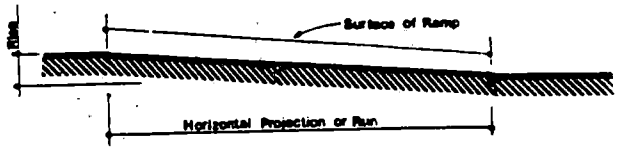
(4) Gripping surfaces shall be continuous.

4.8.6 Cross Slope and Surfaces. The cross slope of ramp surfaces shall be no greater than 1:50. Ramp surfaces shall comply with 4.5.

4.8.7 Edge Protection. Ramps and landings with drop-offs shall have curbs, walls, railings, or projecting surfaces that prevent people from slipping off the ramp. Curbs shall be a minimum of 2-in (50 mm) high (see Fig. 17).

4.8.8 Outdoor Conditions. Outdoor ramps and their approaches shall be designed so that water will not accumulate on walking surfaces.

Existing ANSI Illustrations
Figs. 16 and 17 and TABLE 2.



Slope	Maximum Rise in	Maximum Rise mm	Maximum Horizontal Projection ft	Maximum Horizontal Projection m
1:12	30	760	30	9
1:16	30	760	40	12
1:20	30	760	50	15

Fig. 16
Components of a Single Ramp Run and Sample Ramp Dimensions

Table 2
Allowable Ramp Dimensions for Construction in Existing Sites, Buildings, and Facilities

Slope*	Maximum Rise in	Maximum Rise mm	Maximum Run ft	Maximum Run m
Steeper than 1:10 but no steeper than 1:18	3	75	2	0.6
Steeper than 1:12 but no steeper than 1:10	6	150	5	1.5

*A slope steeper than 1:8 not allowed.

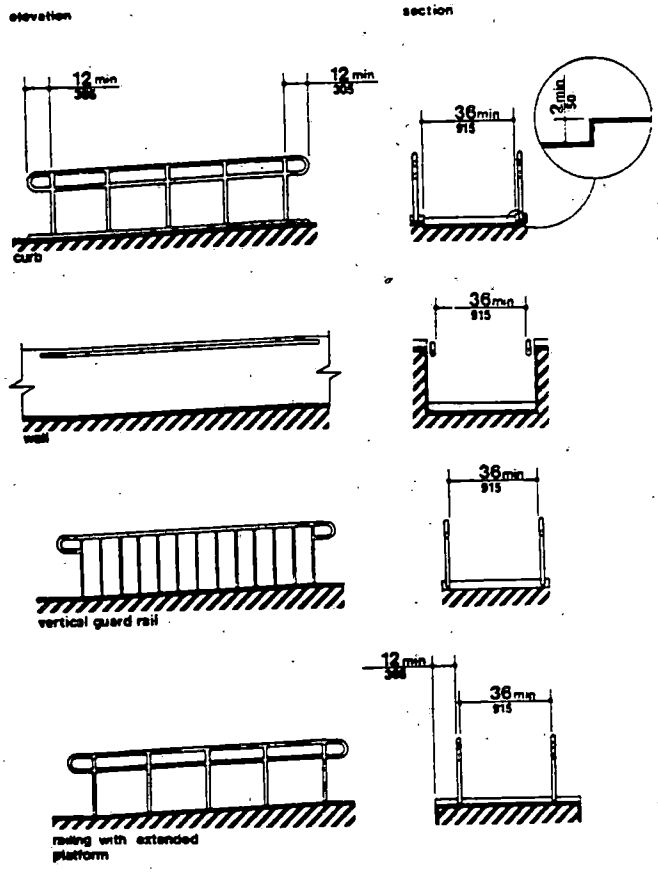


Fig. 17
Examples of Edge Protection and Handrail Extensions

IIB PLAYING COURTS

IIB1 On Accessible Routes of Travel

ANSI A117.1 (1980) Wording
4.1.2(1) At least one accessible route complying with 4.3 should connect accessible building or facility entrances with all accessible spaces and elements within the building or facility. See Appendix A for ANSI 4.3.

IIB2 Doors or Gates

ANSI A117.1 (1980) Wording
4.1.2 (7) All doors to accessible spaces along accessible routes shall comply with 4.13. (See Appendix B for ANSI 4.13)

IIC SAUNAS, STEAMBATHS AND EXERCISE ROOMS

IIC1 On Accessible Routes of Travel

ANSI A117.1 (1980) Wording
4.1.2(1) At least one accessible route complying with 4.3 should connect accessible building or facility entrances with all accessible spaces and elements within the building or facility. See Appendix A for ANSI 4.3.

IIC2 Doors

ANSI A117.1 (1980) Wording
4.1.2 (7) All doors to accessible spaces along accessible routes shall comply with 4.13. (See Appendix B for ANSI 4.13)

IIC3 Maneuvering Space and Access to Equipment & Seating

Interpretive Comment
A person in a wheelchair should be able to get close to and use these facilities. Appendix C gives ANSI Criteria for maneuvering spaces and clearances.

IIC4 Controls

Interpretive Comment
In hot areas such as saunas or steambaths, wood or plastic, rather than metal control operators should be provided for comfort and safety.

ANSI A117.1 (1980) Wording
4.27 Controls and Operating Mechanisms

4.27.1 General. Controls and operating mechanisms in accessible spaces, along accessible routes, or as part of accessible elements (for example, light switches, dispenser controls) shall comply with 4.27.

4.27.2 Clear Floor Space. Clear Floor space complying with 4.2.4 that allows a forward or a parallel approach by a person using a wheelchair shall be provided at controls, dispensers, receptacles, and other operable equipment.

4.27.3 Height. The highest operable part of all controls, dispensers, receptacles, and other operable equipment shall be placed within at least one of the reach ranges specified in 4.2.5 and 4.2.6. Except where the

use of special equipment dictates otherwise, electrical and communications system receptacles on walls shall be mounted no less than 15 in (380 mm) above the floor.

4.27.4 Operation. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf (22.2N).

IID LOCKER ROOMS

IID1 On Accessible Route of Travel

ANSI A117.1 (1980) Wording
4.1.2(1) At least one accessible route complying with 4.3 should connect accessible building or facility entrances with all accessible spaces and elements within the building or facility. See Appendix A for ANSI 4.3.

IID2 Locker room Doors

ANSI A117.1 (1980) Wording
4.1.2 (7) All doors to accessible spaces along accessible routes shall comply with 4.13. (See Appendix B for ANSI 4.13)

IID3 Maneuvering Space

Interpretive Comment
Accessible maneuvering space should be provided to and around all accessible elements in locker rooms, including: lockers, toilets, showers, and equipment. (See Appendix C for ANSI criteria)

IID4 Showers

Interpretive Comment
If showers are provided they should be designed in accordance with ANSI Criteria. See Appendix D.

IID5 Toilet Stalls

ANSI A117.1 (1980) Wording

4.17 Toilet Stalls

4.17.1 Location. Accessible toilet stalls shall be on an accessible route and shall meet the requirements of 4.17.

4.17.2 Water Closets. Water closets in stalls shall comply with 4.16.

4.17.3 Size and Arrangement. The size and arrangement of toilet stalls shall comply with either Fig. 30(a) or (b). Toilet stalls with a minimum depth of 56 in (1420 mm) (see Fig. 30(a)) or 66 in (1675 mm) (see Fig. 30(b)) shall have wall-mounted water closets. If the depth of toilet stalls is increased at least 3 in (75 mm), then a floor-mounted water closet may be used. Arrangements shown for stalls may be reversed to allow either a left- or a right-hand approach.

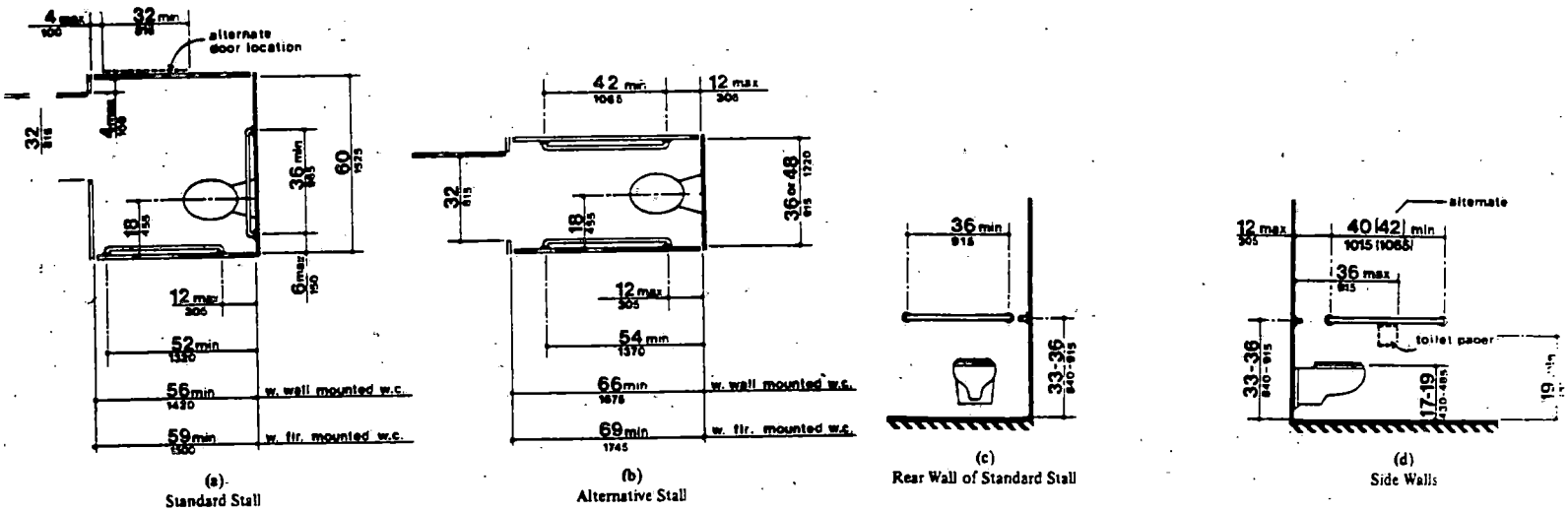
4.17.4 Toe Clearances. In standard stalls, the front partition and at least one side partition shall provide a toe clearance of at least 9 in (230 mm) above the floor. If the depth of the stall is greater than 60 in (1525 mm), then the toe clearance is not required.

4.17.5* Doors. Toilet stall doors shall comply with 4.13.

4.17.6 Grab Bars. Grab Bars complying with the length and positioning shown in Fig. 30(a), (b), (c), and (d) shall be provided. Grab bars may be mounted by any desired method as long as they have a gripping surface at the locations shown and do not obstruct the required clear floor area. Grab bars shall comply with 4.26.

Existing ANSI Illustrations

Fig. 30.



(a) Standard Stall

(b) Alternative Stall

(c) Rear Wall of Standard Stall

(d) Side Walls

Fig. 30
Toilet Stalls

IID6 Urinals

ANSI A117.1 (1980) Wording
4.18 Urinals

4.18.1 General. Accessible urinals shall comply with 4.18.

4.18.2 Height. Urinals shall be stall-type or wall-hung with an elongated rim at a maximum of 17 in (430 mm) above the floor.

4.18.3 Clear Floor Space. A clear floor space 30 in by 48 in (760 mm by 1220 mm) shall be provided in front of urinals to allow forward approach. This clear space shall adjoin or overlap an accessible route and shall comply with 4.2.4.

4.18.4 Flush Controls. Flush controls shall be hand operated, shall comply with 4.27.4, and shall be mounted no more than 44 in (1120 mm) above the floor.

IID7 Mirrors and Lavatories

ANSI A117.1 (1980) Wording
4.19 Lavatories and Mirrors

4.19.1 General. The requirements of 4.19 shall apply to lavatory fixtures, vanities, and built-in lavatories.

4.19.2 Height and Clearances. Lavatories shall be mounted with a clearance of at least 29 in (735 mm) from the floor to the bottom of the apron. Knee and toe clearance shall comply with Fig. 31.

4.19.3 Clear Floor Space. A clear floor space 30 in by 48 in (760 mm by 1220 mm) complying with 4.2.4 shall be provided in front of a lavatory to allow a forward approach. Such clear floor space shall adjoin or overlap an accessible route and shall extend a maximum of 19 in (485 mm) underneath the lavatory (see Fig. 32).

4.19.4 Exposed Pipes and Surfaces. Hot water and drain pipes under lavatories shall be insulated or otherwise covered. There shall be no sharp or abrasive surfaces under lavatories.

4.19.5 Faucets. Faucets shall comply with 4.27.4. Lever-operated, push-type, and electronically controlled mechanisms are examples of acceptable designs. Self-closing valves are allowed if the faucet remains open for at least 10 seconds.

4.19.6* Mirrors. Mirrors shall be mounted with the bottom edge no higher than 40 in (1015 mm) from the floor (see Fig. 31).

Existing ANSI Illustrations
Fig. 31 and 32.

[Illustrations on following page]

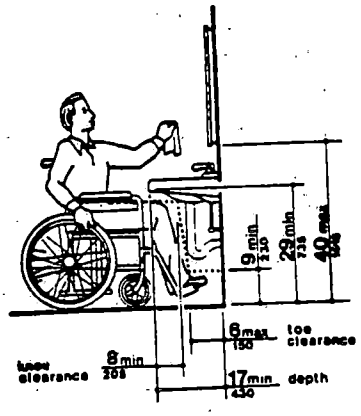


Fig. 31
Lavatory Clearances

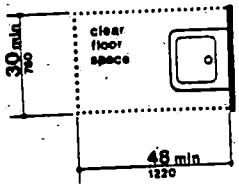


Fig. 32
Clear Floor Space at Lavatories

IID8 Locker Doors and Controls

Interpretive Comment
The doors and their operating hardware for all accessible lockers should comply with ANSI criteria.

ANSI A117.1 (1980) Wording
4.25 Storage.

4.25.1 General. Accessible storage facilities such as cabinets, shelves, closets, and drawers shall comply with 4.25.

4.25.2 Clear Floor Space. A clear floor space at least 30 in by 48 in (760 mm by 1220 mm) complying with 4.2.4 that allows either a forward or parallel approach by a person using a wheelchair shall be provided at accessible storage facilities.

4.25.3 Height. Accessible storage spaces shall be within at least one of the reach ranges specified in 4.2.5 and 4.2.6. Clothes rods shall be a maximum of 54 in (1370 mm) from the floor (see Fig. 38).

4.25.4 Hardware. Hardware for accessible storage facilities shall comply with 4.27.4. Touch latches and U-shaped pulls are acceptable.

4.27.4 Operation. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf (22.2 N).

Existing ANSI Illustrations
Fig. 38.

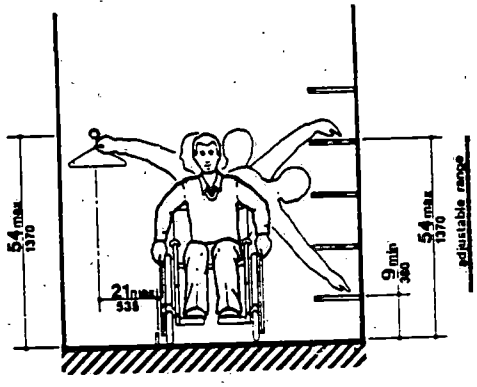


Fig. 38
Storage Shelves and Closets

III HAZARDS

IIIA VEHICULAR/PEDESTRIAN INTERFACE

Interpretive Comment
The drop off point should have a level or gently ramped (1:20 slope or less) surface with a surface texture and a contrasting color so that mobility impaired people will have no difficulty crossing the interface, and visually impaired people will have no difficulty recognizing that they are at a vehicular interface.

ANSI A117.1 (1980) Wording
No existing wording.

IIIB Kickplates on Glass Doors

ANSI A117.1 (1980) Wording
4.13.9* Door Hardware. Some disabled persons must push against a door with their chair or walker to open it. Applied kickplates on doors with closers can reduce maintenance by withstanding abuse from wheelchairs and canes. To be effective, they should cover the door width, less approximately 2 in (51 mm), up to a height of 16 in (405 mm) from its bottom edge and be centered across the top.

APPENDIX A

4.3 Accessible route

4.3.1 General. All walks, halls, corridors, aisles, and other spaces that are part of an accessible route shall comply with 4.3.

4.3.2 Location.

(1) At least one accessible route shall be provided from public transportation stops, accessible parking and accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance they serve.

(2) At least one accessible route shall connect accessible buildings, facilities, elements, and spaces that are on the same site.

(3) At least one accessible route shall connect accessible building or facility entrances with all accessible spaces and elements and will all accessible dwelling units within the building or facility.

(4) An accessible route shall connect at least one accessible entrance of each accessible dwelling unit with those exterior and interior spaces and facilities that serve the accessible dwelling unit.

4.3.3 Width. The miniumum clear width of an accessible route shall be 36 in (915 mm) except at doors (see 4.13.5). If a person in a wheelchair must make a turn around an obstruction, the minimum clear width of the accessible route shall be as shown in Fig. 7.

4.3.4 Passing Space. If an accessible route has less than 60 in (1525 mm) clear width, then passing spaces at least 60 in by 60 in (1525 mm by 1525 mm) shall be located at reasonable intervals not to exceed 200 ft (61 m). A T-intersection of two corridors or walks is an acceptable passing place.

4.3.7 Slope. An accessible route with a running slope greater than 1:20 is a ramp and shall comply with 4.8. Nowhere shall the cross slope of an accessible route exceed 1:50.

4.3.8 Changes in Level. Changes in level along an accessible route shall comply with 4.5.2. If an accessible route has changes in level greater than 1/2 in (13 mm), then a curb ramp, ramp, elevator, or platform lift shall be provided that complies with 4.7, 4.8, or 4.11, respectively. Stairs shall not be part of an accessible route.

4.3.9 Doors. Doors along an accessible route shall comply with 4.13.

4.3.10* Egress. A reasonable number, but always at least one, of accessible routes serving any accessible space or element shall also serve as a means of egress for emergencies or connect to an accessible place of refuge. Such accessible routes and places of refuge shall comply with the requirements of the administrative authority having jurisdiction.

4.4.2 Head Room Walks, halls, corridors, passageways, aisles, or other circulation spaces shall have 80 in (2030 mm) minimum clear head room (see Fig. 8(a)).

4.5 Ground and Floor Surfaces

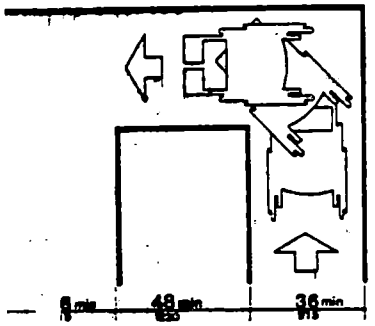
4.5.1* General. Ground and floor surfaces along accessible routes and in accessible rooms and spaces, including floors, walks, ramps, stairs, and curb ramps, shall be stable, firm, and relatively nonslip under all weather conditions and shall comply with 4.5.

4.5.2 Changes in Level. Changes in level up to 1/4 in (6 mm) may be vertical and without edge treatment. Changes in level between 1/4 in and 1/2 in (6 mm and 13 mm) shall be beveled with a slope no greater than 1:2. Changes in level greater than 1/2 in (13 mm) shall be accomplished by means of a ramp that complies with 4.7 or 4.8.

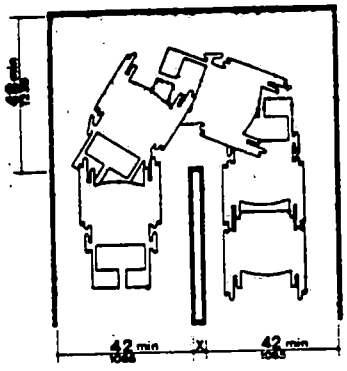
4.5.3* Carpet. If carpet or carpet tile is used on a ground or floor surface, then it shall be securely attached; have a firm cushion, pad, or backing or no cushion or pad; and have a level loop, textured loop, level cut pile, or level cut/uncut pile texture. The maximum pile height shall be 1/2 in (13 mm). Exposed edges of carpet shall be fastened to floor surfaces and have trim along the entire length of the exposed edge. Carpet edge trim shall comply with 4.5.2.

4.5.4 Gratings. If gratings are located in walking surfaces, then they shall have spaces no greater than 1/2-in (13 mm) wide in one direction. If gratings have elongated openings, then they shall be placed so that the long dimenstion is perpendicular to the doiminant direction of travel.

Existing ANSI Illustrations
Figures 7 and 8(a).



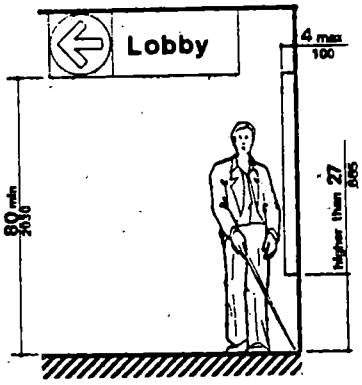
(a)
90° Turn



NOTE: Dimensions shown apply when x < 48 in (1220 mm).

(b)
Turns around an Obstruction

Fig. 7
Width of Accessible Route



(a)
Walking Parallel to a Wall

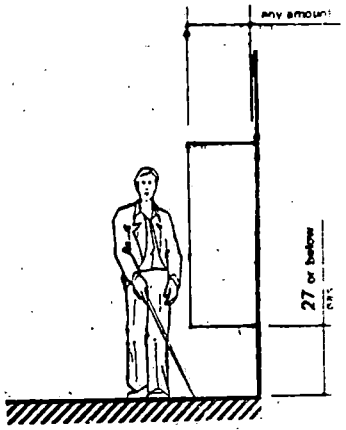


Fig. 8
Protruding Objects

Appendix B

4.13 Doors.

4.13.1 General. All doors to accessible spaces and elements and along accessible routes shall comply with the requirements of 4.13.

4.13.2 Revolving Doors and Turnstiles. Revolving doors or turnstiles shall not be the only means of passage at an accessible entrance or along an accessible route.

4.13.3 Gates. Gates, including ticket gates, shall meet all applicable specifications of 4.13.

4.13.4 Double-Leaf Doorways. If doorways have two door leaves, then at least one leaf shall meet the specifications in 4.13.5 and 4.13.6. That leaf shall be an active leaf.

4.13.5 Clear Width. Doorways shall have a minimum clear opening of 32 in (815 mm) with the door open 90 degrees, measured between the face of the door and the stop (see Fig. 24(a), (b), (c), and (d)). Openings more than 24 in (610 mm) in depth shall comply with 4.2.1 and 4.3.3 (see Fig. 24(e)).

4.13.6 Maneuvering Clearances at Doors. Minimum maneuvering clearances for doors that are not automatic shall be as shown in Fig. 25. The floor or ground area within the required clearances shall be be level and clear. Entry doors to acute care hospital bedrooms for in-patients shall be exempt from the requirement for space at the latch side of the door (see dimension "x" in Fig. 25) if the door is at least 44 in (1120 mm) wide.

4.13.7 Two Doors in Series. The minimum space between two hinged or pivoted doors in series shall be 48 in (1220 mm) plus the width of any door swinging into the space. Doors in series shall swing either in the same direction or away from the space between the doors (see Fig. 26).

4.13.8* Thresholds at Doorways. Thresholds at doorways shall not exceed 3/4in (19 mm) in height for exterior sliding doors or 1/2 in (13mm) for other types of doors. Raised thresholds and floor level changes at accessible doorways shall be beveled with a slope no greater than 1:2 (see 4.5.2).

4.13.9* Door Hardware. Handles, pulls, latches, locks, and other operating devices on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinchng, or twisting of the wrist to operate. Lever-operated mechanisms, push-type mechanisms, and U-shaped handles are acceptable designs. When sliding doors are fully open, operating hardware shall be exposed and usable from both sides. In dwelling units, only doors at accessible entrances to the unit itself shall comply with the requirements of this paragraph. Doors to hazardous areas shall have hardware complying with 4.29.3.

4.13.10* Door Closers. If a door has a closer, then the sweep period of the closer shall be adjusted so that from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 in (75 mm) from the latch, measured to the leading edge of the door.

4.13.11* Door Opening Force. The maximum force for pushing or pulling open a door shall be as follows:

(1) Fire doors shall have the minimum opening force allowable by the appropriate administrative authority.

(2) Other doors:
  (a) exterior hinged doors: 8.5 lbf (37.8 N)
  (b) interior hinged doors: 5 lbf (22.2 N)
  (c) sliding or folding doors: 5 lbf (22.2 N)

These forces do not apply to the force required to retract latch bolts or disengage other devices that may hold the door in a closed position.

4.13.12* Automatic Doors and Power-Assisted Doors. If an automatic door is used, then it shall comply with American Natonal Standard for Power-Operated Doors, ANSI A156.10-1979. Slowly opening, low-powered, automatic doors shall be considered a type of custom design installation as described in paragraph 1.1.1 of ANSI A156.10-1979. Such doors shall not open to back check faster than 3 seconds and shall require no more than 15 lbf (66.6 N) to stop door movement. If a power-assisted door is used, its door-opening force shall comply with 4.13.11 and its closing shall conform to the requirements in Section 10 of ANSI A156.10-1979.

Existing ANSI Illustrations
Figs. 24, 25, 26.

[Illustrations on following page]

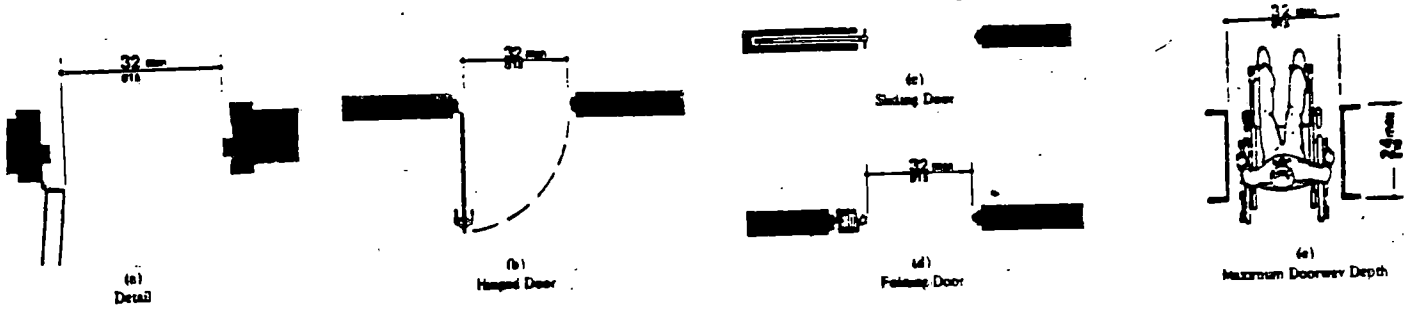
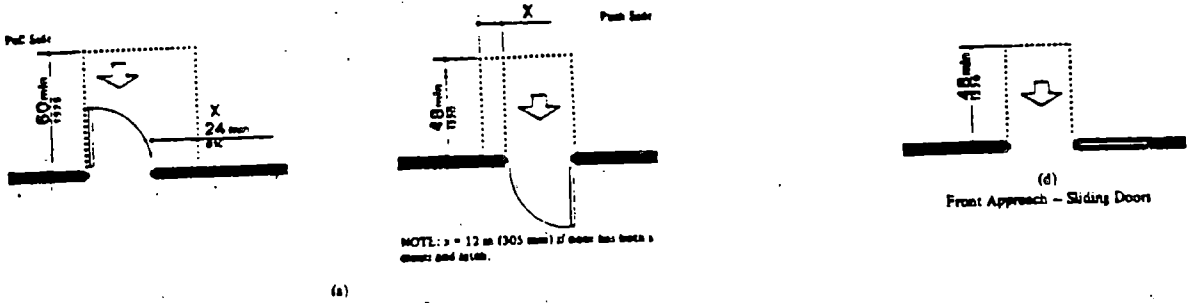
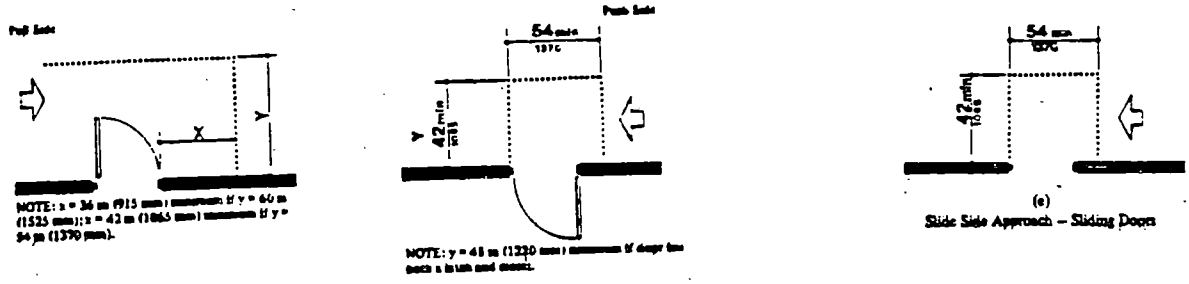


Fig. 24
Clear Doorway Width and Depth





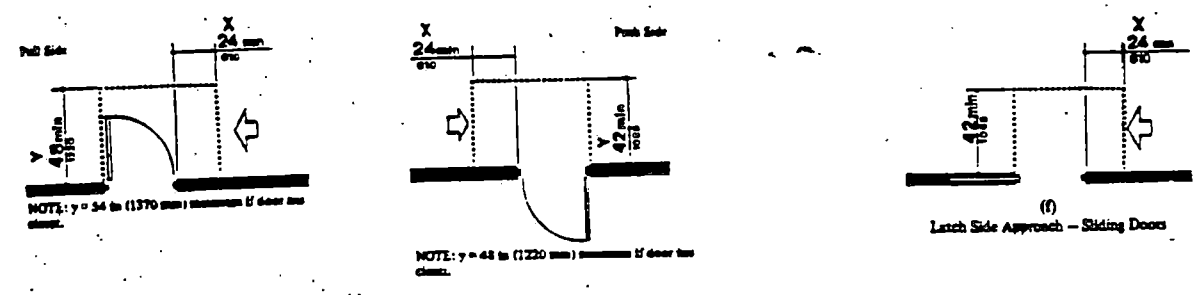


Fig. 25
Maneuvering Clearances at Doors

NOTE: All doors in alcoves shall comply with the clearances for front approaches.

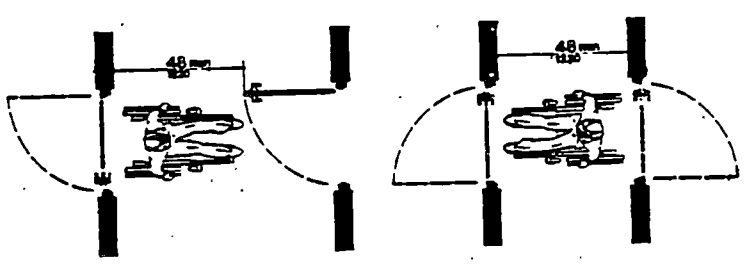


Fig. 26
Two Hinged Doors in Series

APPENDIX C

MANEUVERING CLEARANCES

4.2.1* Wheelchair Passage Width. The minimum clear width for single wheelchair passage shall be 32 in (815 mm) at a point and 36 in (915 mm) continuously (see Fig. 1).

4.2.2 Width for Wheelchair Passing. The minimum width for two wheelchairs to pass is 60 in (1525 mm) (see Fig. 2).

4.2.3* Wheelchair Turning Space. The space required for a wheelchair to make a 180 degree turn is a clear space of 60 in (1525 mm) diameter (see Fig. 3(a)) or a T-shaped space (see Fig. 3(b)).

4.2.4* Clear Floor or Ground Space for Wheelchairs.

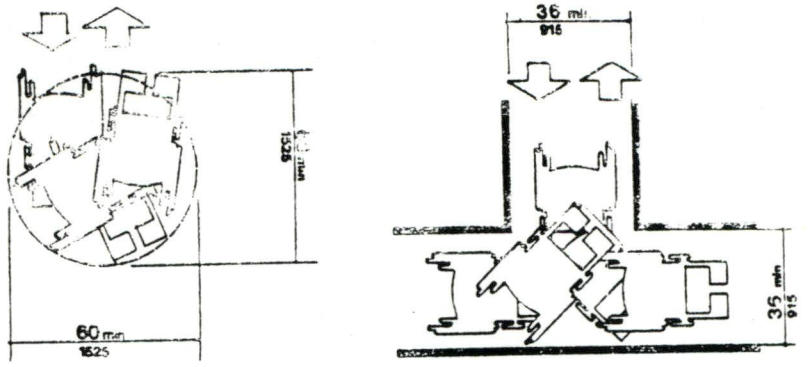
4.2.4.1 Size and Approach. The minimum clear floor or ground space required to accommodate a single, stationary wheelchair and occupant is 30 in by 48 in (760 mm by 1220 mm) (see Fig. 4(a)). The minimum clear floor or ground space for wheelchairs may be positioned for forward or parallel approach to an object (see Fig. 4(b) and (c)). Clear floor or gound space for wheelchairs may be part of the knee space required under some objects.

4.2.4.2 Relationship of Manuevering Clearances to Wheelchair Spaces. One full unobstructed side of the clear floor or ground space for a wheelchair shall adjoin or overlap an accessible route or adjoin another wheelchair clear floor space. If a clear floor space is located in an alcove or otherwise confined on all or part of three sides, additional manuevering clearances shall be provided as shown in Fig. 4(d) and (e).

4.2.4.3 Surfaces of Wheelchair Spaces. Clear floor or ground spaces for wheelchairs shall comply with 4.5.

Existing ANSI Illustrations
Figures 3,4,5,6,7, & A5.

[Illustrations on following page]



(a)
60-in (1525-mm) Diameter Space

(b)
T-Shaped Space for 180° Turns

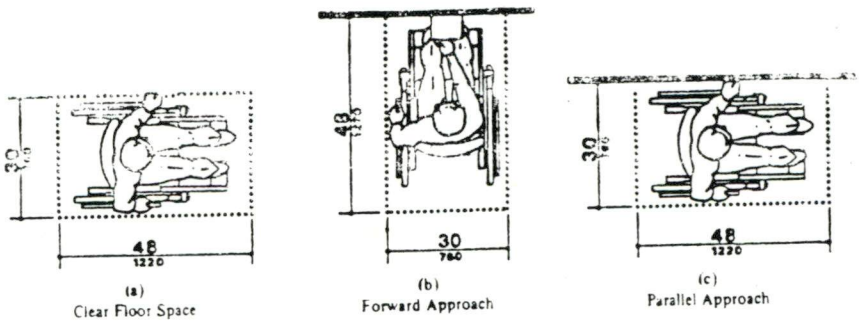
Fig. 3
Wheelchair Turning Space

4.2 Space Allowances and Reach Ranges

4.2.1* Wheelchair Passage Width. The minimum clear width for single wheelchair passage shall be 32 in (815 mm) at a point and 36 in (915 mm) continuously (see Fig. 1).

4.2.2 Width for Wheelchair Passing. The minimum width for two wheelchairs to pass is 60 in (1525 mm) (see Fig. 2).

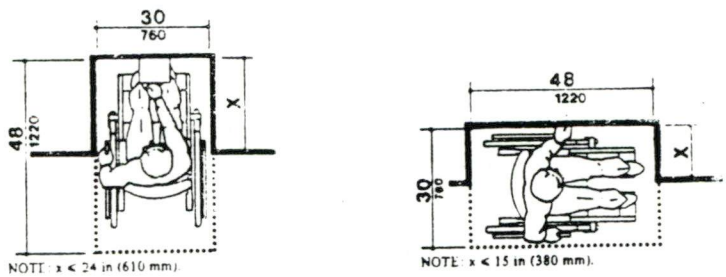
4.2.3* Wheelchair Turning Space. The space required for a wheelchair to make a 180-degree turn is a clear space of 60-in (1525 mm) diameter (see Fig. 3(a)) or a T-shaped space (see Fig. 3(b)).



(a)
Clear Floor Space

(b)
Forward Approach

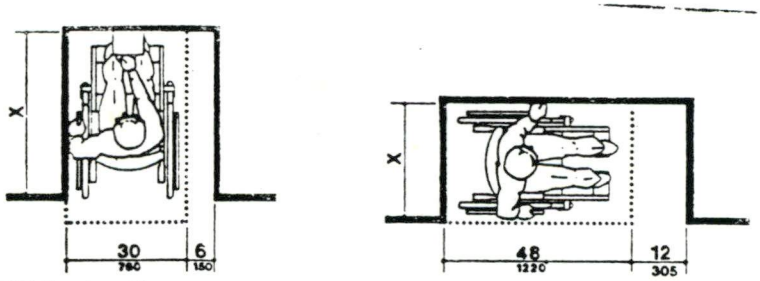
(c)
Parallel Approach



NOTE: x ≤ 24 in (610 mm).

NOTE: x ≤ 15 in (380 mm).

(d)
Clear Floor Space in Alcoves

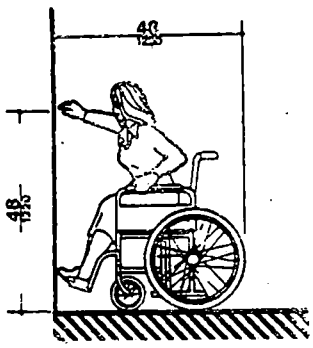


NOTE: If x > 24 in (610 mm), then an additional maneuvering clearance of 6 in (150 mm) shall be provided as shown.

NOTE: If x > 15 in (380 mm), then an additional maneuvering clearance of 12 in (305 mm) shall be provided as shown.

(e)
Additional Maneuvering Clearances for Alcoves

Fig. 4
Minimum Clear Floor Space for Wheelchairs



(a)
High Forward Reach Limit

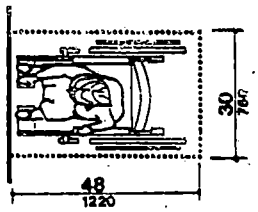
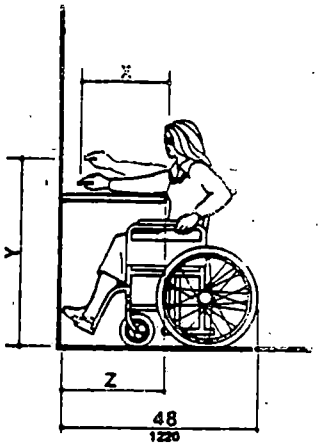
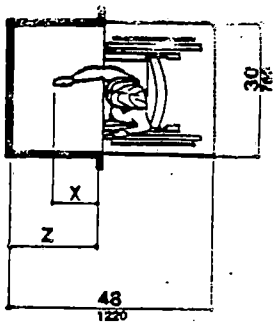


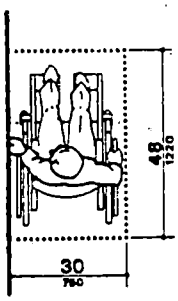
Fig. 5
Forward Reach



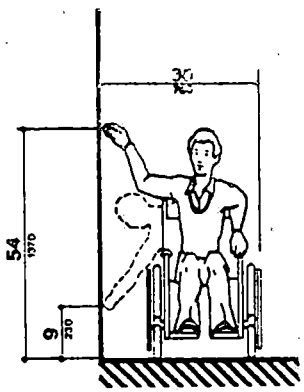
NOTE: x shall be ≤25 in (635 mm); z shall be ≥x. When x < 20 in (510 mm), then y shall be 48 in (1220 mm) maximum. When x is 20 to 25 in (510 to 635 mm), then y shall be 44 in (1120 mm) maximum.

(b)
Maximum Forward Reach over an Obstruction

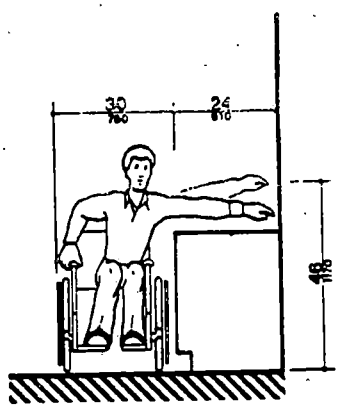




(a)
Clear Floor Space
Parallel Approach

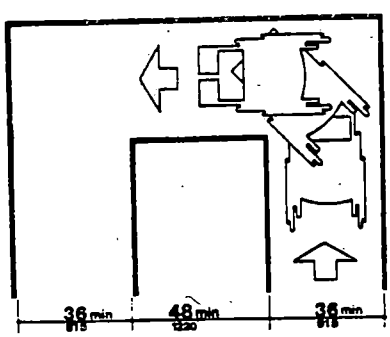


(b)
High and Low
Side Reach Limits

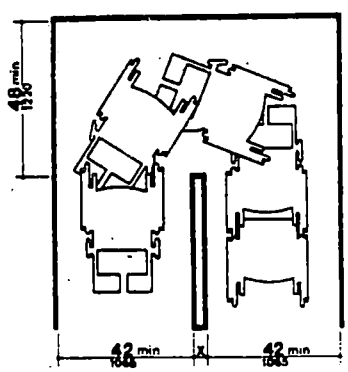


(c)
Maximum Side Reach
over Obstruction

Fig. 6
Side Reach



(a)
90° Turn



NOTE: Dimensions shown apply when x < 48 in (1220 mm).

(b)
Turns around an Obstruction

Fig. 7
Width of Accessible Route

APPENDIX D

4.21 Shower Stalls.

4.21.1* General. Accessible shower stalls shall comply with 4.21. For shower stalls in adaptable dwelling units, see 4.34.5.5.

4.21.2 Size and Clearances. Shower stall size and clear floor space shall comply with Fig. 35(a) or (b). The shower stall in Fig. 35(a) shall be 36 in by 36 in (915 mm by 915 mm). The shower stall in Fig. 35(b) will fit into the space required for a bathtub.

4.21.3 Seat. A seat shall be provided in shower stalls 36 in by 36 in (915 mm by 915 mm) and shall be as shown in Fig. 36. The seat shall be mounted 17 in to 19 in (430 mm to 485 mm) from the bathroom floor and shall extend the full depth of the stall. The seat shall be on the wall opposite the controls. The structural strength of seats and their attachments shall comply with 4.26.3.

4.21.4 Grab Bars. Grab bars complying with 4.26 shall be provided as shown in Fig. 37.

4.21.5 Controls. Faucets and other controls complying with 4.27.4 shall be located as shown in Fig. 37. In shower stalls 36 in by 36 in (915 mm by 915 mm), all controls, faucets, and the shower unit shall be mounted on the side wall opposite the seat.

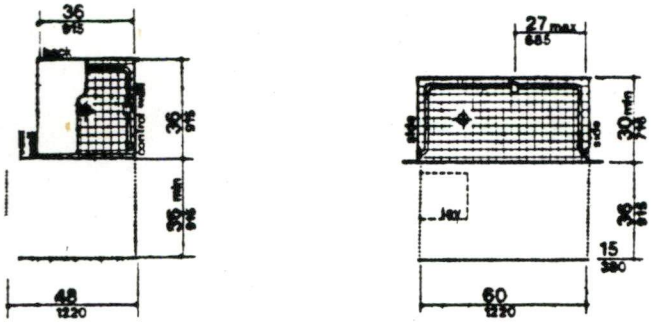
4.21.6 Shower unit. A shower spray unit with a hose at least 60 in (1525 mm) long that can be used as a fixed shower head or as a hand-held shower shall be provided.

4.21.7 Curbs. If provided, curbs in shower stalls 36 in by 36 in (915 mm by 915 mm) shall be no higher than 4 in (100 mm). Shower stalls that are 30 in by 60 in (760 mm by 1525 mm) shall not have curbs.

4.21.8 Shower Enclosures. If provided, enclosures for shower stalls shall not obstruct controls or obstruct transfer from wheelchairs onto shower seats.

Existing ANSI Illustrations
Figs. 35, 36 and 37

[Illustrations on following page]



(a)
36-in by 36-in
(915-mm by 915-mm) Stall

(b)
30-in by 60-in
(760-mm by 1525-mm) Stall

Fig. 35
Shower Size and Clearances

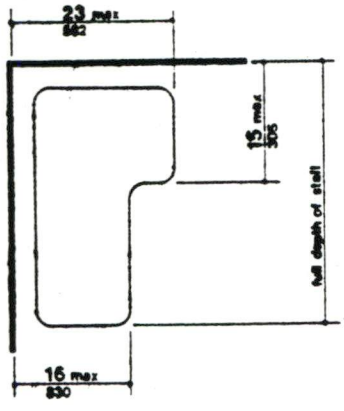
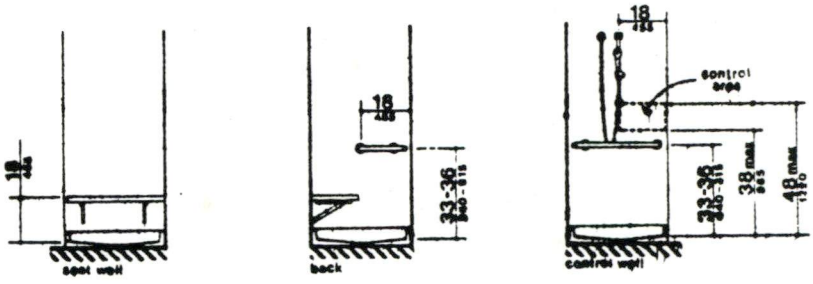
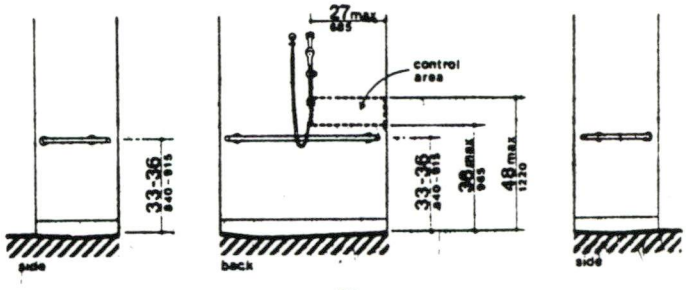


Fig. 36
Shower Seat Design



(a)
36-in by 36-in (915-mm by 915-mm) Stall

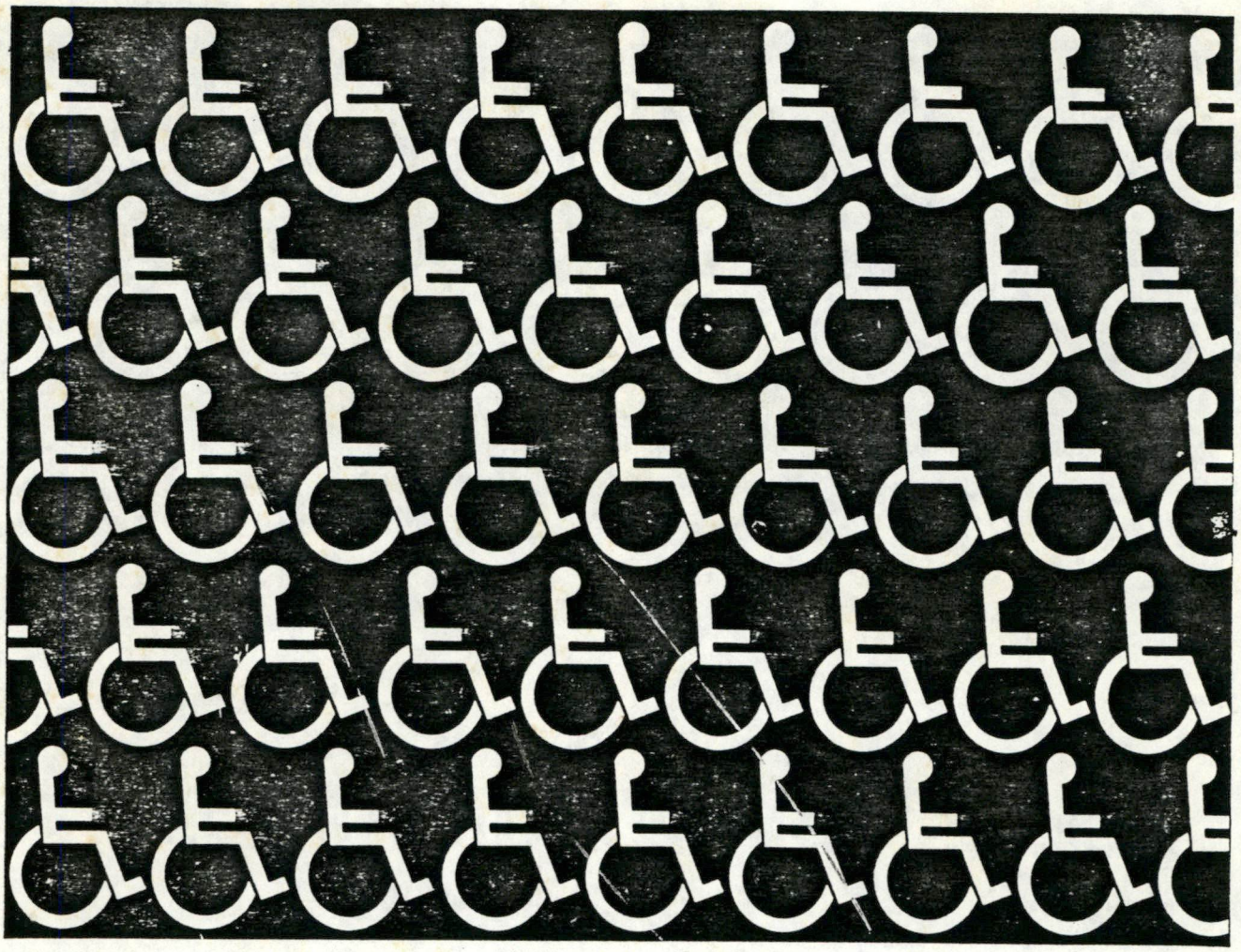


(b)
30-in by 60-in (760-mm by 1525-mm) Stall

Fig. 37
Grab Bars at Shower Stalls

0035B

Carol's Copy



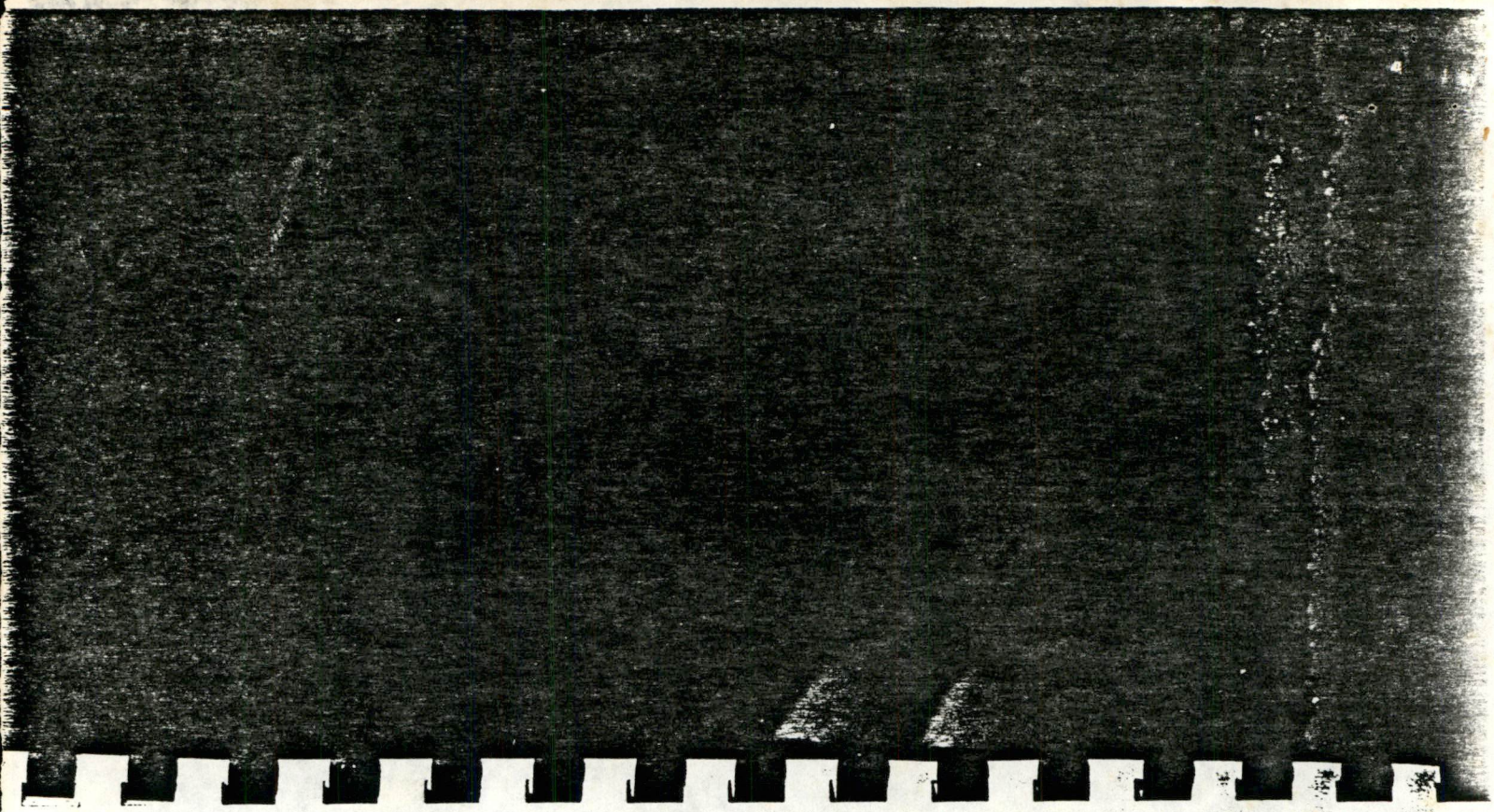
Accessibility Guidelines
for Meeting and Lodging Facilities

Arkansas Rehabilitation Continuing Education Program

Arkansas Rehabilitation Research and Training Center

University of Arkansas

Arkansas Rehabilitation Services



Accessibility Guidelines Manual: assessing the accessibility of lodging and meeting facilities

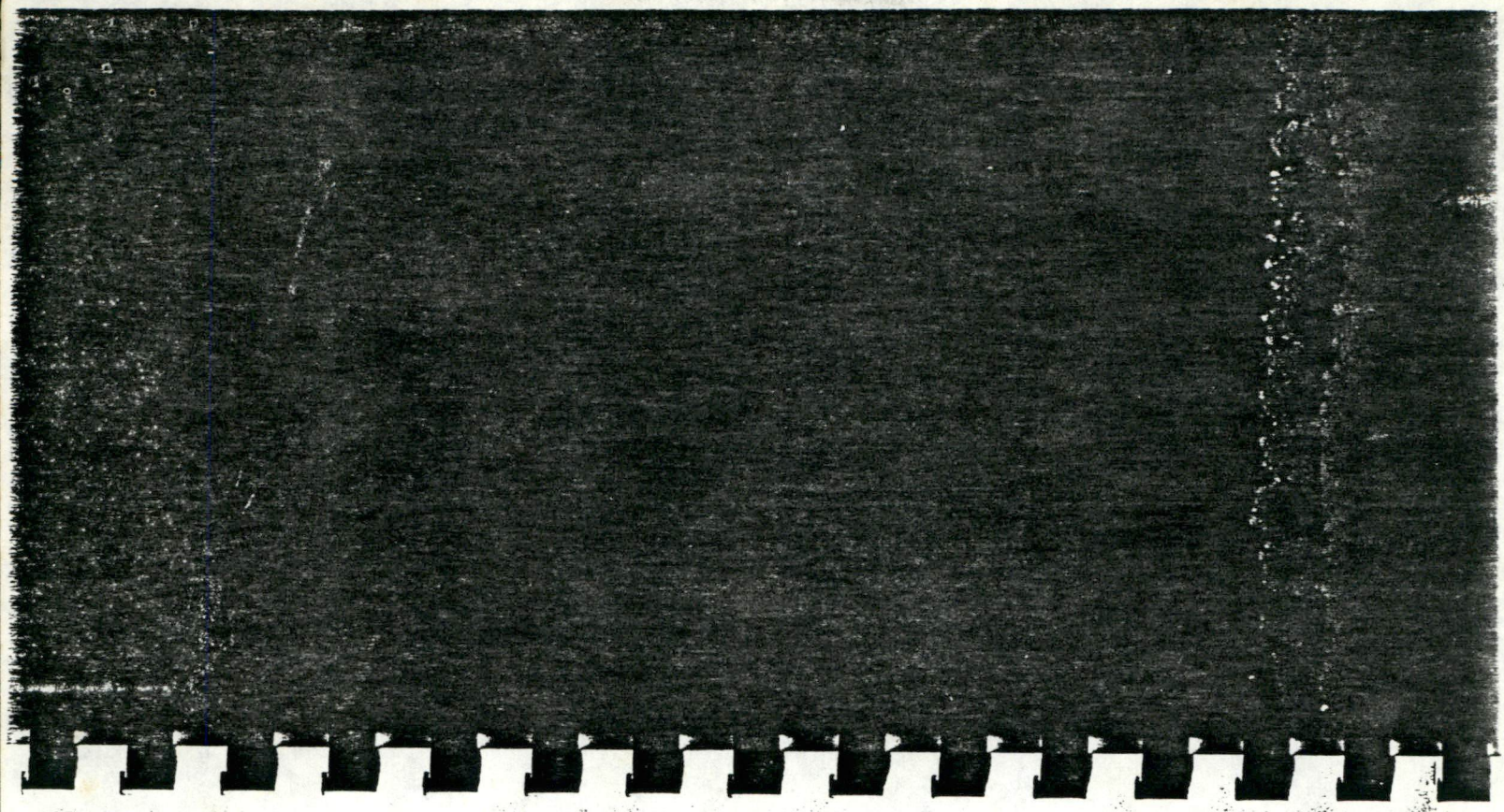
Edited by:
Leon Thornton
Thurber Owens

June 1981

Arkansas Rehabilitation Continuing Education Program
Arkansas Rehabilitation Research and Training Center
University of Arkansas
Arkansas Rehabilitation Services

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All programs administered and services provided by the Arkansas Rehabilitation Continuing Education Program, University of Arkansas, are rendered on a nondiscriminatory basis without regard to handicap, race, creed, color, sex, or national origin in compliance with the Rehabilitation Act of 1973 and Title VI of the Civil Rights Act of 1964. All applicants for program participation and/or services have a right to file complaints and to appeal according to regulations governing this principle.



Foreword

Several years ago the Region VI Office of Rehabilitation Services Administration recognized the need for the development of comprehensive guidelines that could be used in selecting the most accessible hotel/motel meeting facilities. The hotel/motel industry had encountered considerable difficulty in responding to numerous requests from agencies and individuals regarding different accessibility needs. Recent Federal Legislation, and in some instances State Legislation, necessitated that meetings and conferences be conducted in the most accessible facilities. These guidelines, therefore, were developed in response to increasing sensitivity and interest evidenced in public and private sectors at local, state, and federal levels, for accessibility guidelines that are consistent with current state-of-the-art knowledge and literature on barrier-free design.

Procedures were implemented within Region VI (LA, AR, OK, NM, and TX) to establish a broad base of involvement from professionals knowledgeable of the needs of the handicapped, including rehabilitation educators, handicapped individuals, representatives of the hotel/motel industry, and personnel from related public and private rehabilitation and social service agencies. The result has been the development of an instrument which provides a uniformly consistent approach to the selection and use of barrier-free facilities.

Although these guidelines were developed for use by individuals responsible for planning conferences and meetings, they will be beneficial to the hotel/motel industry in establishing basic standards regarding accessibility and accommodations for the needs of handicapped persons. In reviewing the guideline material one will note that many of the accessibility changes can be accomplished at minimal or no cost to hotel/motel management. Facilities implementing changes will directly benefit other hotel/motel patrons such as the elderly, and safety implications related to these changes will benefit all hotel/motel patrons. Accessibility for all patrons makes good practical business sense for this industry.

It is appropriate that these accessibility guidelines be viewed as a significant effort by handicapped persons, rehabilitation professionals, and non-disabled Americans, to contribute during the **International Year of Disabled Persons** (IYDP) to the fulfillment of a goal expressed by Rehabilitation International in its Charter for the 80's—"To take all necessary steps to ensure the fullest possible integration of and equal participation by people with disabilities in all aspects of the life of their communities."

Robert L. Davis
RSA Regional Commissioner

Acknowledgements

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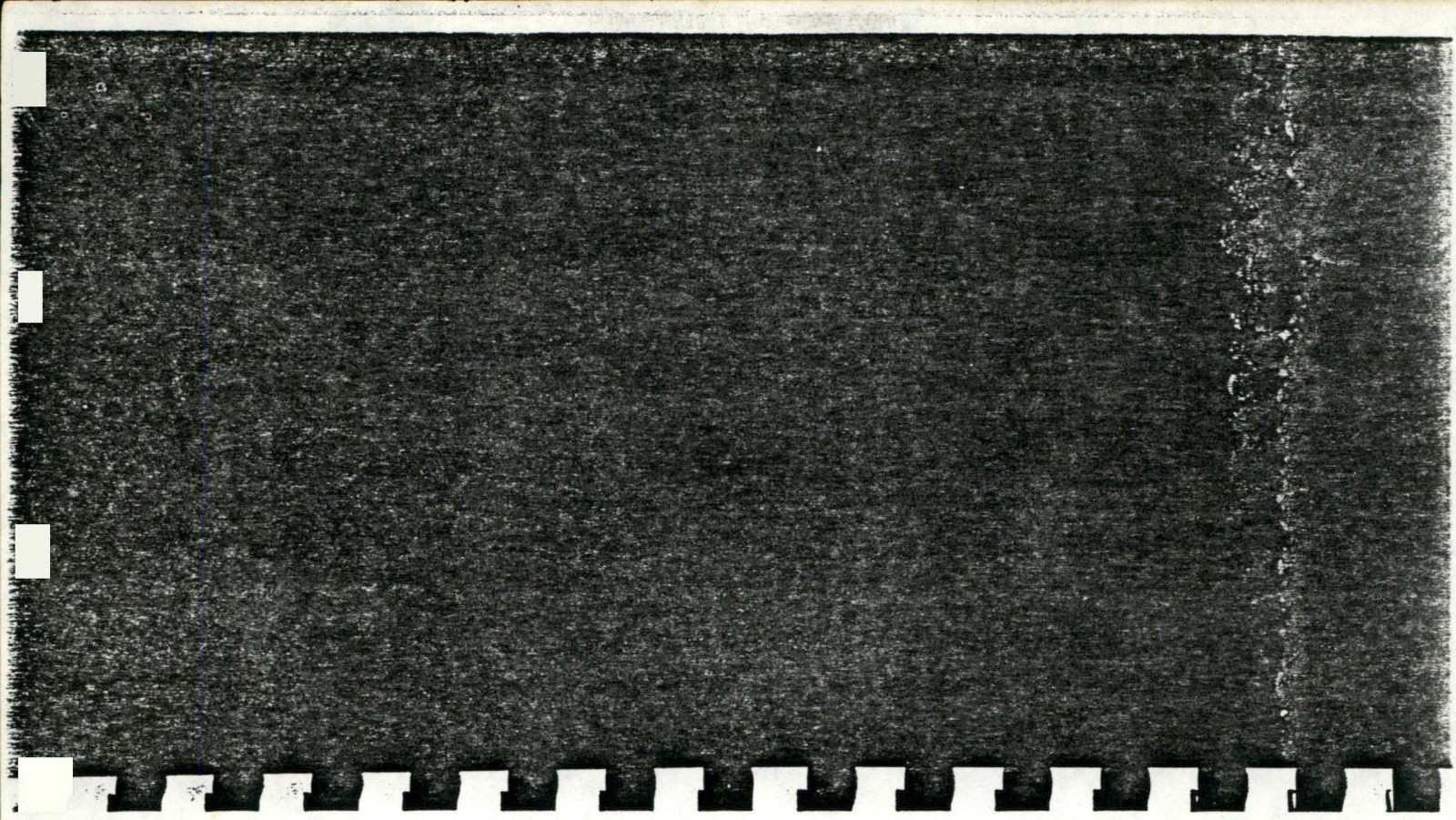
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The authors and developers hope this manual will be used to conduct site reviews and provide information regarding accessible accommodations for physically impaired persons. Therefore, permission is given for reproduction of this material for these purposes.

For information regarding additional copies of the materials, contact the Arkansas Rehabilitation Continuing Education Program, P.O. Box 1358, Hot Springs, Arkansas 71901, or the National Clearing House for Rehabilitation Training Materials, 115 Old USDA Building, Oklahoma State University, Stillwater, Oklahoma 74078.



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Introduction

Background

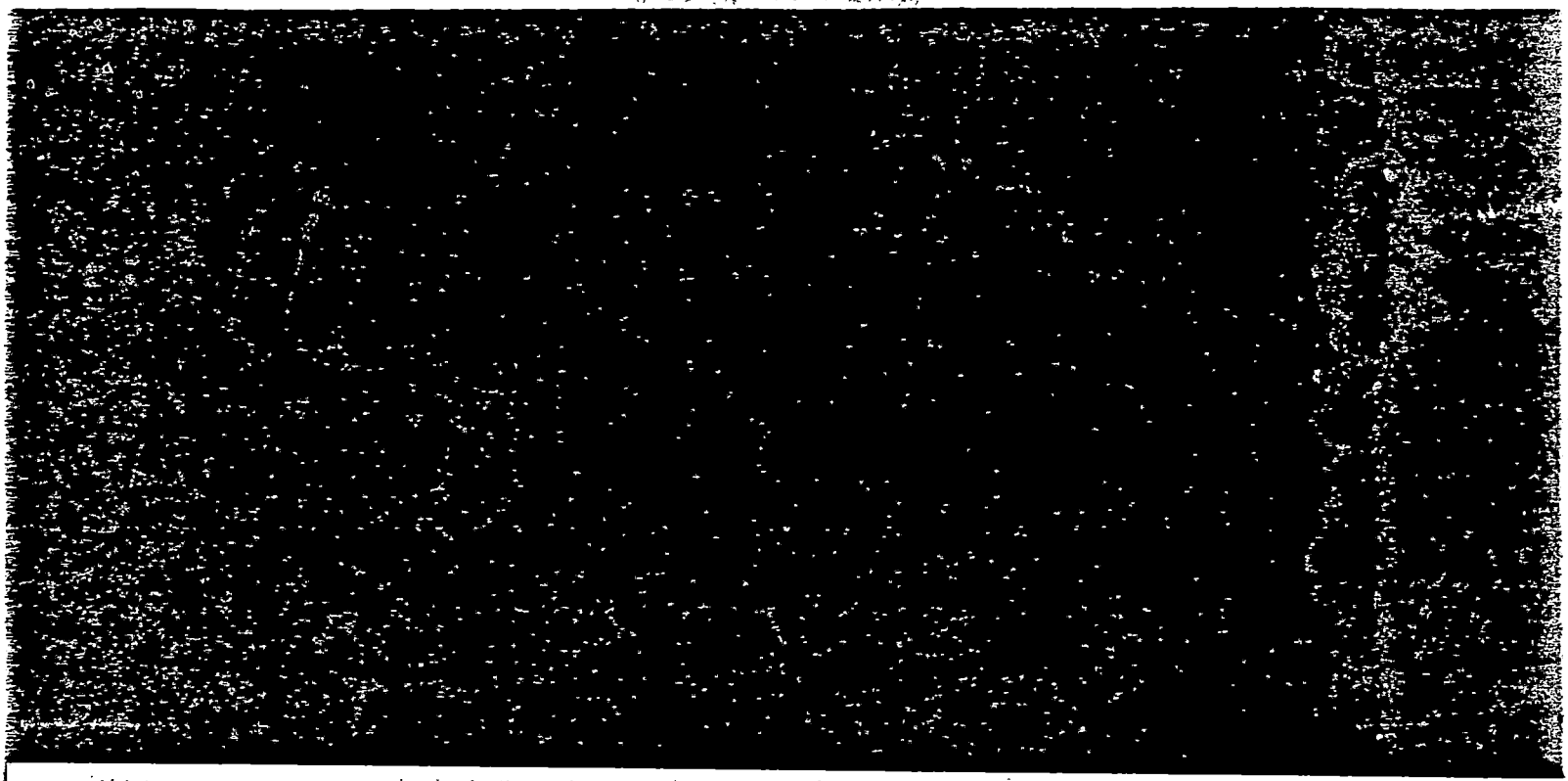
Federal Regulations require that recipients of Federal funds conduct conferences and meetings in facilities accessible to handicapped persons.

Recognizing the rights and needs of handicapped individuals to fully participate in a variety of activities, together with the problem of identifying accessible facilities, the Arkansas Rehabilitation Continuing Education Program, in cooperation with the Rehabilitation Services Administration, Region VI Office, and interested individuals, developed these **Accessibility Guidelines.**

Development

The **Accessibility Guidelines** is an evaluation instrument based upon the experiences of handicapped persons, professionals working in the field, and various materials and guides for accessibility. The principle materials used included: **Accessibility Survey Kit,** State Department of Health, California; **Accessibility Checklist,** RSA, Atlanta, Georgia; and **ANSI** A117.1 - 1980.

Prior to developing the **Guidelines** a study of the law and a variety of materials relative to accessibility and barrier removal was made by a special committee selected from rehabilitation agencies and consumer organizations. Committee members represented various levels of expertise, interest, and experiences regarding the needs of individuals with different disabling conditions. Thus, the **Guidelines** is to be considered "consensus" material since it represents a "concensus" of **required** and **desired** conditions regarding accessibility and accommodations.



Purpose

The **Guidelines** was developed to establish the degree of desired accessibility and accommodations of facilities for the handicapped and not to determine compliance with standards. Specifically, the **Guidelines** will aid in planning for meetings and conferences and assist facility managers to become more familiar with accessible accommodations for the handicapped.

The **Guidelines** is very comprehensive and detailed for the purpose of identifying facilities which provide the greatest degree of accessibility and accommodations; and secondly to identify a specific list of actions that may be taken by facility management. It is also anticipated that results from such a comprehensive review will serve to assist facilities in their response to the many diverse groups and organizations who also request reviews for accessibility.

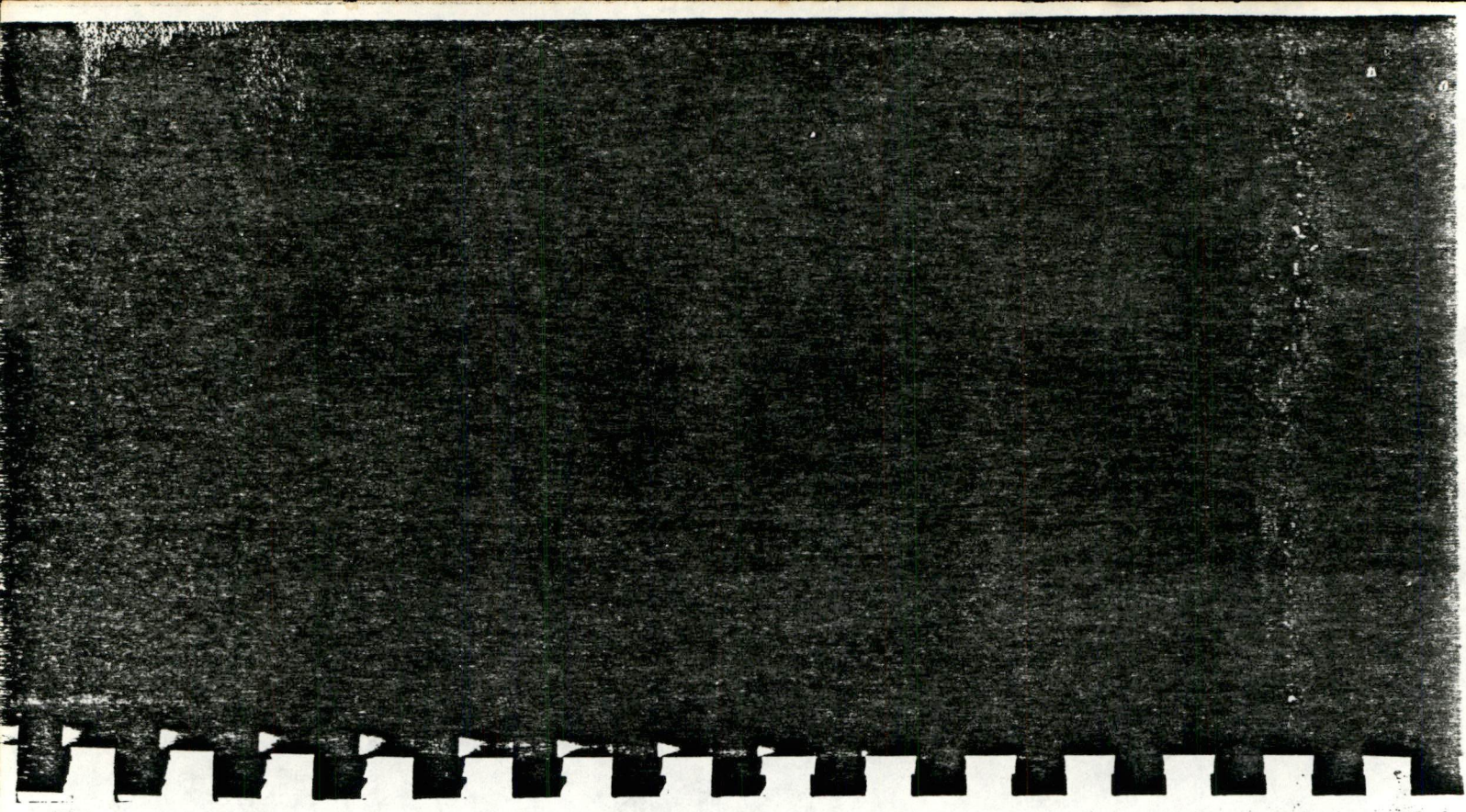
In developing the **Guidelines** the committee fully realized that all facilities will not meet all conditions listed, but we are both obligated and desire to identify facilities with the greatest degree of accessibility and accommodations.

Benefits

Experience has demonstrated that most changes and modifications required to increase accessibility and improve accommodations for handicapped individuals can be accomplished with minimal cost.

Several benefits should accrue to facilities providing accessible accommodations. Included are:

1. Increased utilization by handicapped and aged individuals and by governmental agencies mandated to use accessible accommodations for meetings, training programs, etc.
2. Tax deductions are made for expenses incurred (up to $25,000) to facilities making alterations and modifications which meet IRS regulations.
3. Architectural accessibility features for handicapped individuals also add to the convenience of other individuals, especially the aging.



Definitions

A. **Facility** - Any structure being reviewed for purposes of determining its accessibility. Generally refers to hotels, motels, restaurants, and meeting sites.

B. **Guidelines** - The instrument used to assess the accessibility of facilities.

C. **Accessible** - Describes a site, building, facility or portion thereof which complies with these **Guidelines** and/or standards and that can be approached, entered, and used by physically disabled people.

D. **Handicapped** - Those with significant limitations in using specific parts of the environment.

E. **Review** - The process of assessing the meeting site by applying the **Accessibility Guidelines.**

F. **Required** - Refers to the conditions established as required for accessibility, as generally referring to these **Guidelines** and/or standards.

G. **Optional** - Refers to the condition established as a choice alternative to the specifications.

H. **Not Applicable** - Refers to conditions determined as not related to the questions or required accommodations.

I. **Clear Opening** - That clearance representing unobstructed space in openings, i.e., doors, hallways, etc.

How to Use the Guidelines

1. The manual contains 114 illustrated review questions divided into the following sections.

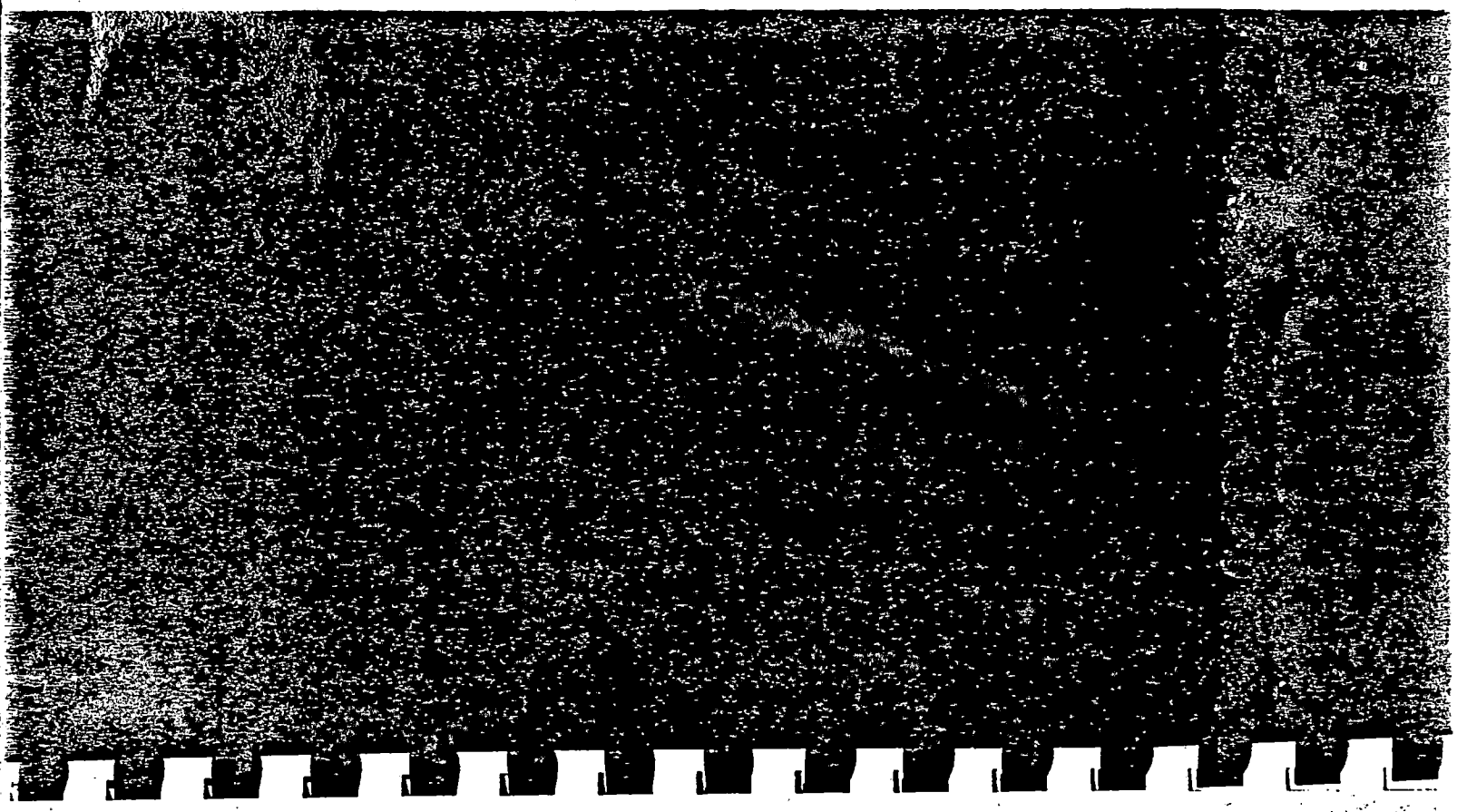
Section I - Parking
Section II - Walks, Curbs, & Ramps
Section III - Entrances, Corridors, & Stairs
Section IV - Public Restrooms
Section V - Public Telephones & Water Fountains
Section VI - Meeting Rooms
Section VII - Restaurants
Section VIII - Guest Rooms
Section IX - Hazards & Emergency Procedures
Section X - Elevators

2. **Preparation for the Review**

- Consult with the state vocational rehabilitation agency Architectural Barrier Specialist to determine if a review of the facility has been previously conducted.
- Become familiar with the **Guidelines** and other standards and materials available since you may be asked to provide additional information or explanation.
- Decide on the type meeting, i.e., type A, B, or C. These types of meetings are described as follows:

Type A - A meeting continuing for more than one (1) day and requiring accessible restrooms, meeting, eating, and sleeping accommodations.
Type B - A meeting for less than one (1) full day and requiring accessible restrooms, meeting and eating accommodations.
Type C - A meeting for less than one half (½) day and requiring only accessible public restrooms and meeting accommodations.

In most instances, the reviewer will survey the facility for eating, sleeping, and meeting accommodations.



3. The clear, shaded, and dark areas are used under columns A, B, and C respectively to assist the reviewer in responding to a specific type of meeting.
   - The clear areas ☐ indicate the survey question is a required condition for accessibility and should be circled as Yes, No, or N/A.
   - The shaded areas ▒ indicate the survey question is a desirable condition for accessibility.
   - The dark areas ■ indicate the survey question condition is not required for the type meeting planned and is not necessary to circle.

4. **Pre-Review**
   Ideally, the facility sales representative and manager should participate in the actual review. Prior to the review, the reviewer should conduct a "pre-review" session at which time the manager and/or sales representative are fully informed regarding the purpose of the review, legislation, and the review process.

5. **Conducting the Review**
   - The length of time required for the review varies depending upon the size of the facility. Based upon experiences, one and one-half hours should be allowed for conducting a thorough review using these **Guidelines.**
   - When possible, the facility manager or representative should participate in the total review. However, when this is not possible it is recommended that he/she participate in the review of sections on: Guest Rooms, Meeting Facilities, and Hazards and Emergency Procedures.
   - Unless the reviewer is experienced in architectural barrier removal and accommodations for the handicapped, he/she may wish to enlist the assistance of a handicapped individual(s) for the review.
   - The reviewer may also wish to utilize a standard size wheelchair to assist in determining adequate turning space, etc. This should also help the facility manager in gaining an understanding and appreciation of the concerns regarding barriers and accommodations.

- The reviewer will need:
  - Some type of measuring device. A retractable steel tape is suggested.
  - An extra copy of the **Guidelines** for the facility manager.
  - A small hand scale with a hook or attachment for measuring pounds of pull required to open doors.
  - Other material regarding architectural barriers and accommodations for disability groups is also suggested to make available to the facility manager.

6. **Post-Review**

The post-review activity is considered a critical phase of the review process since it may impact directly upon any actions or modifications made by the facility management. Several alternative steps are suggested for the reviewer. Included are:

A. That the reviewer schedule a post-review or exit session immediately following the review to discuss the results.

B. That the reviewer may wish to conduct a brief exit session with the manager and schedule a meeting at a later date to provide more detailed follow-up information and technical assistance.

C. That the reviewer provide a copy of the **Guidelines** complete with rating and results of the review.

D. That in addition, the reviewer provide a follow-up letter which includes specific suggestions or guidance regarding actions which could be taken to provide accessible accommodations.

E. A list of resources and/or identification of technical assistance available.

In providing follow-up information regarding the review, the reviewer should emphasize the strengths of the facility along with identification of any inaccessible areas and concerns regarding accommodations.

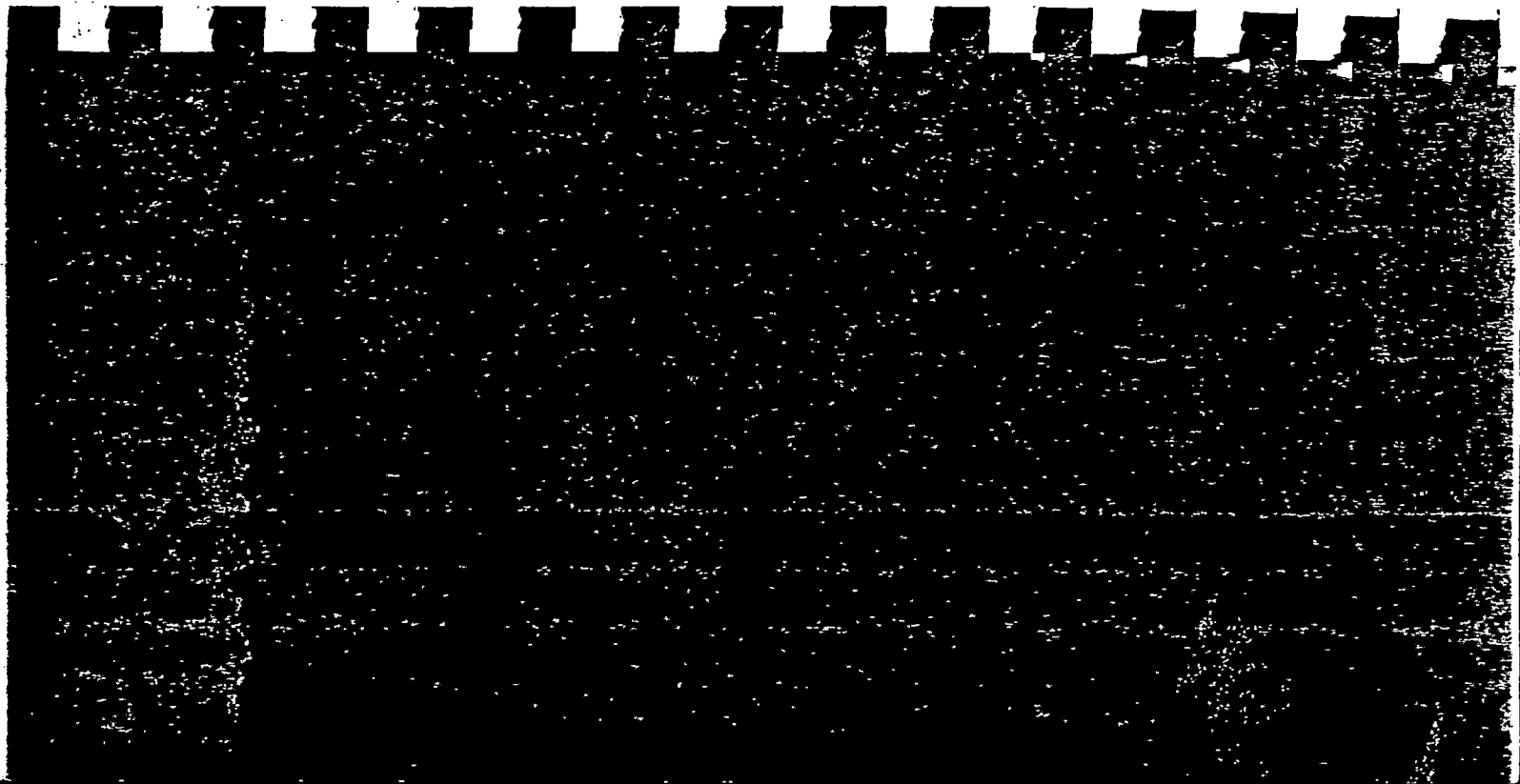
7. **Instructions for Completing the Questions**

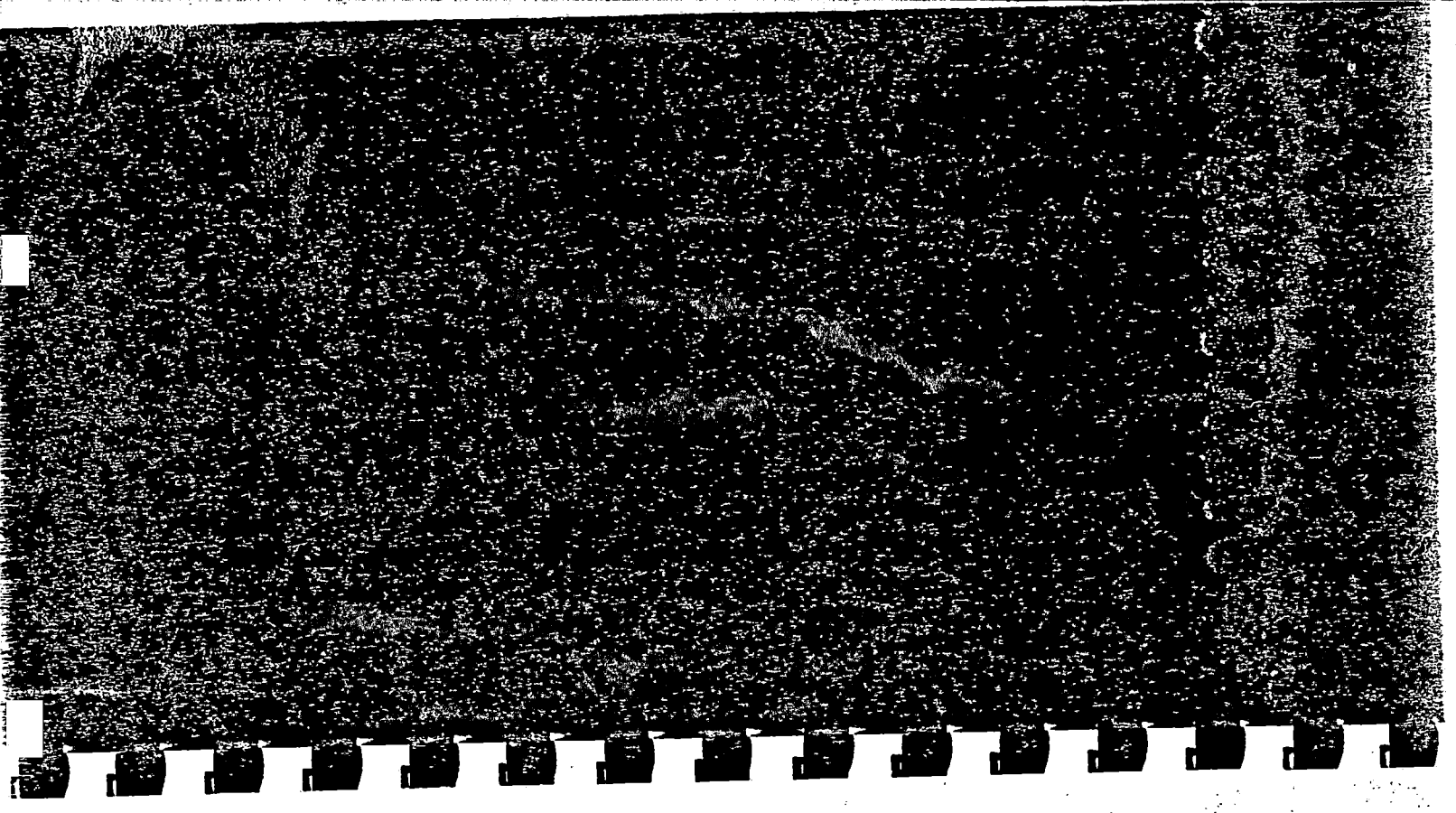
To complete the questions, please follow these special instructions.

A. Note and read any special instructions for each section.

B. Read each question noting the graphic illustration for clarification or if the question requires a response for the type meeting being considered.

C. If the question is not fully understood, please refer to available accessibility materials for additional explanation.





D. Score by circling the appropriate response to the question.
   - **Yes** indicates the conditions of the question are present/met.
   - **No** indicates the conditions are **not** present/met.
   - **N/A** indicates the question is **not applicable** (e.g., the questions regarding elevators in a one-story facility).

E. Some questions contain multiple conditions. In these instances if any part of the question is **no,** mark the response **no** and comment for clarification.

F. Use the space under the "comment" column to clarify or expand upon the question, response, or accessibility issue.

8. **Review Data**
   Please provide the information regarding the facility and reviewer.

Review Data

Facility _____

Address _____

Representative _____

Title _____

Telephone _____

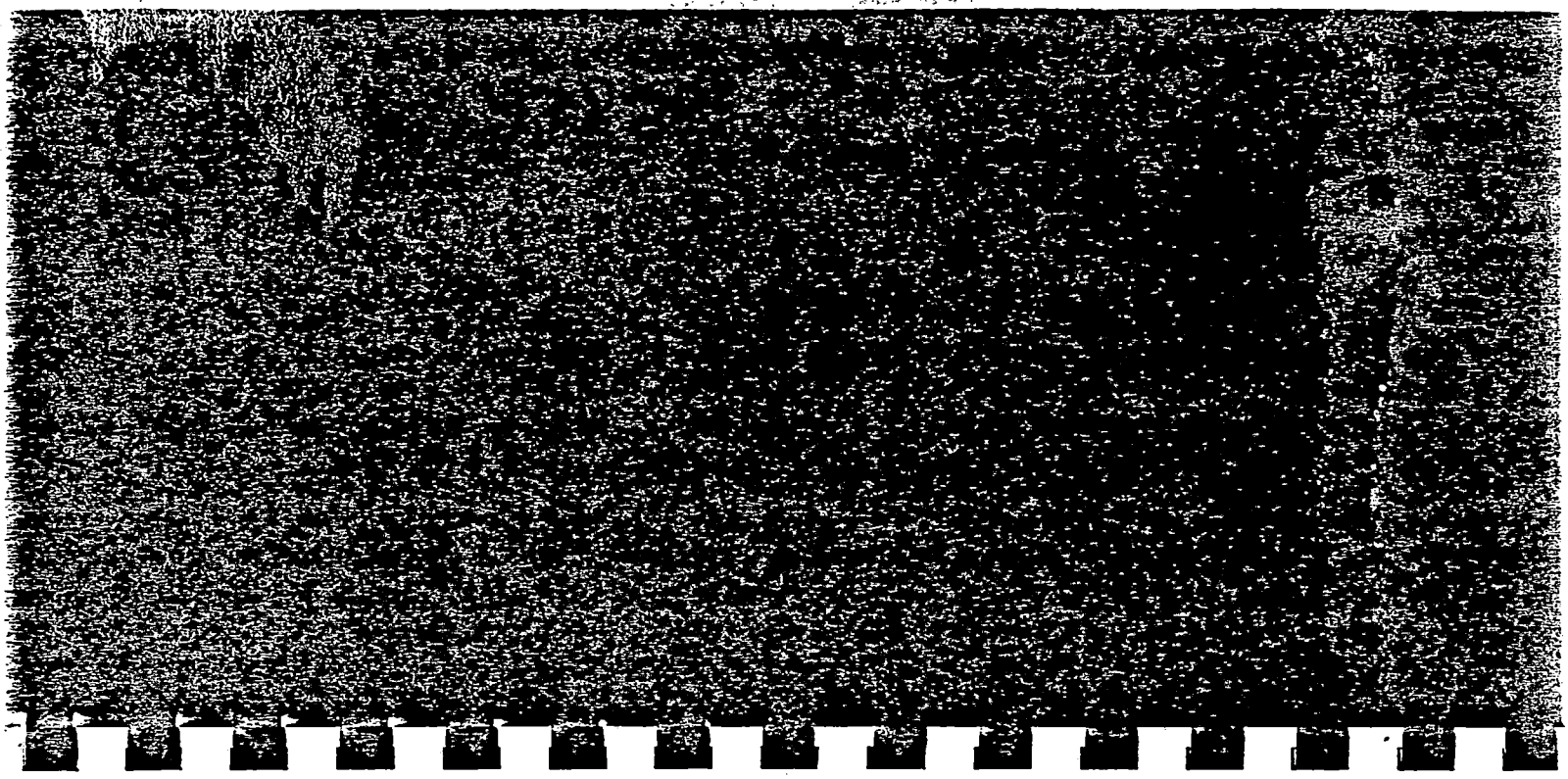
Facility reviewed for type of meeting Ⓐ Ⓑ Ⓒ

Date of Review _____

Reviewer _____

Address _____

Telephone _____

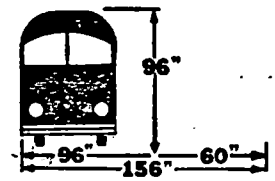


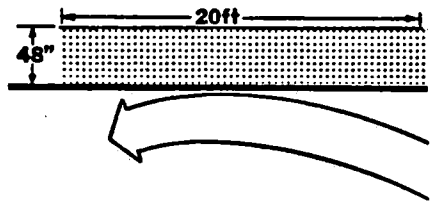
Section I: Parking

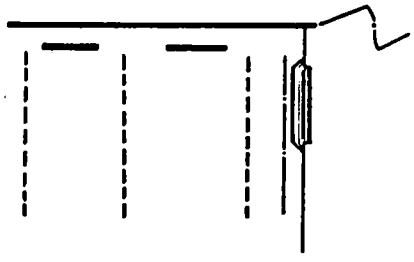
	Type Meeting A	B	C	Comments
1. Entrances to Parking Are international symbols designating parking spaces for the handicapped clearly marked at the lot entrance?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
2. Parking Identification Are reserved spaces identified by the international symbol of accessibility?	Yes	Yes	Yes	Number of Spaces: _____
	No	No	No	
	N/A	N/A	N/A	
3. Space Location Are reserved spaces for handicapped persons located on the shortest possible accessible route to an accessible building entrance?	Yes	Yes	Yes	Approximate Distance: _____
	No	No	No	
	N/A	N/A	N/A	

Section I: Parking

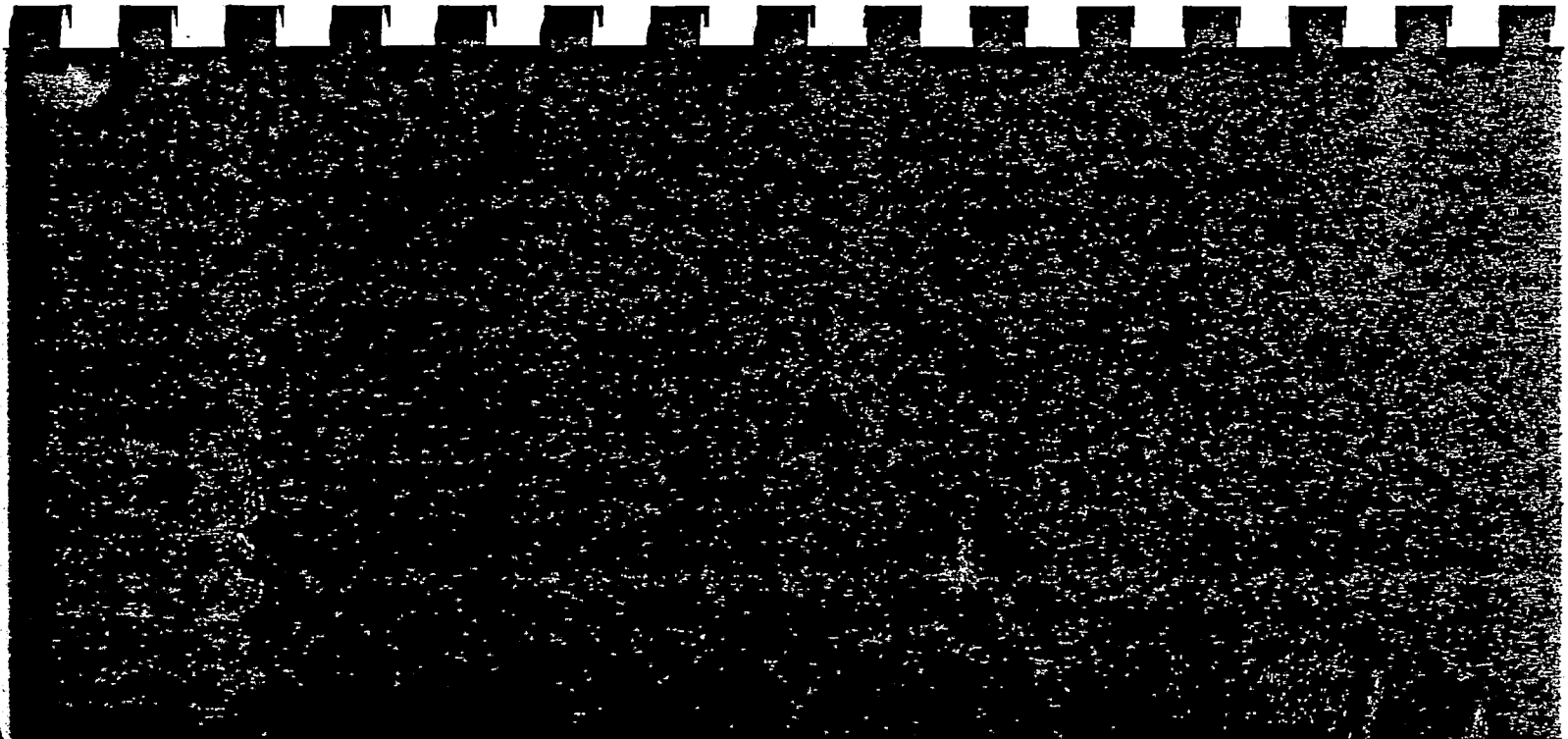
	Type Meeting A	B	C	Comments
4. Parking Space				
Do accessible parking spaces have adequate vertical and horizontal clearance? (minimum 96" high and 156" wide.)	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
5. Passenger Loading Zone				
Does the passenger loading zone have curb cuts and an unobstructed accessible aisle at least 48" wide and 20' long adjacent and parallel to the vehicle pull-up scale?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
6. Facility Parking				
Does the facility have parking accommodations?	Yes	Yes	Yes	
	No	No	No	

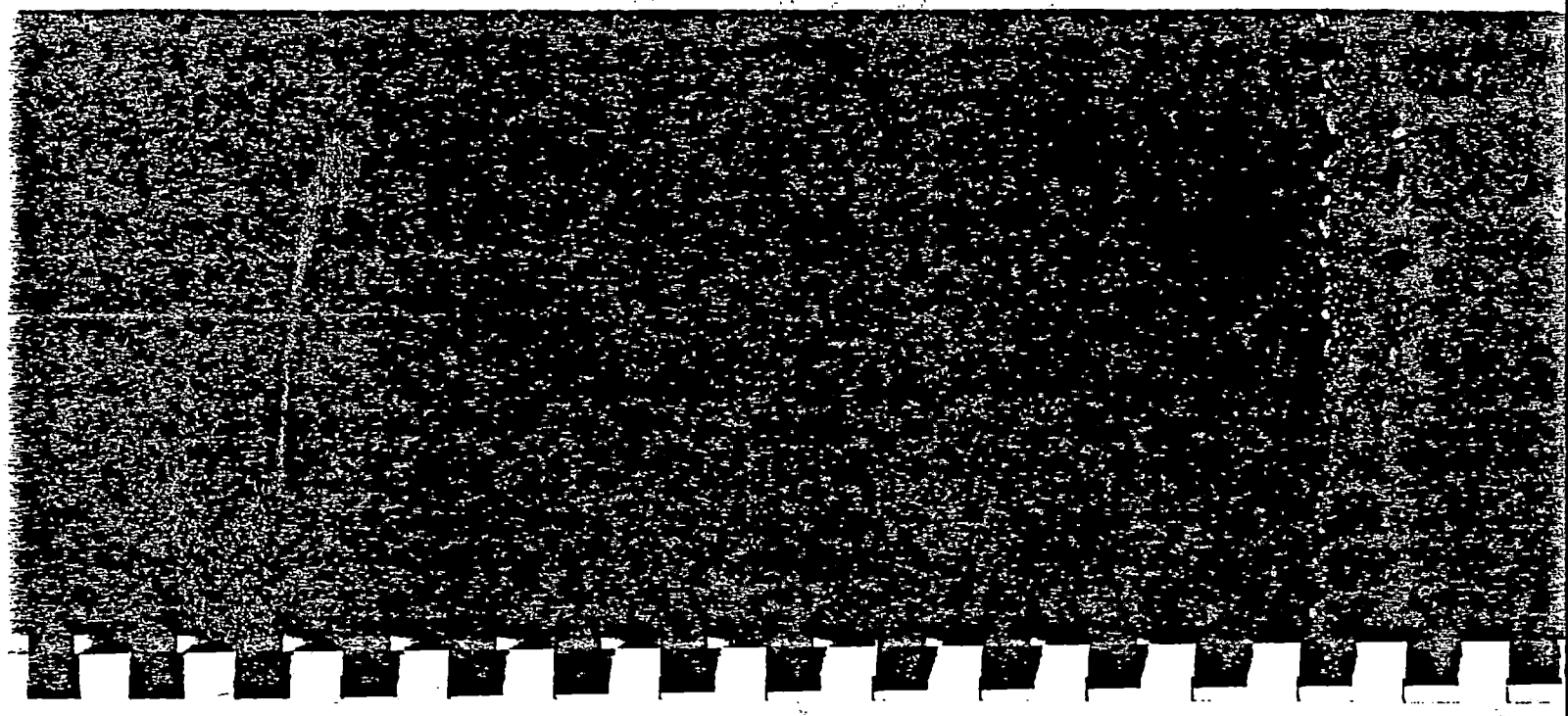






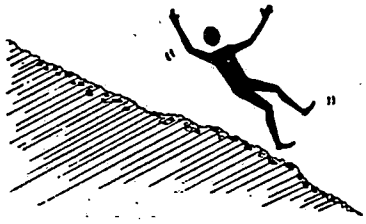
Summary:



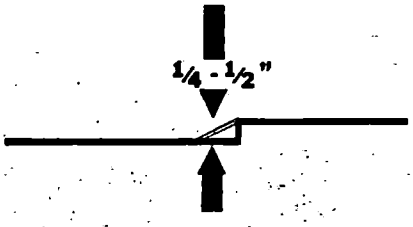


Section II: Walks, Curbs, & Ramps

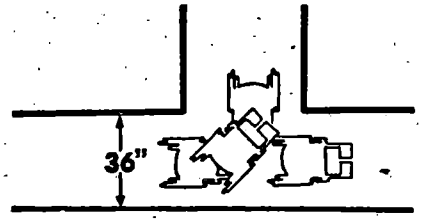
	Type Meeting A	B	C	Comments
1. Ground & Floor Surfaces				
Are grounds, walks, and floor surfaces along accessible routes stable, firm, and relatively non-slip under all weather conditions?	Yes	Yes	Yes	
	No	No	No	



2. Sidewalk Levels				
Are sidewalks from reserved parking area to the facility entrance free of abrupt changes in surface or are beveled with a slope when vertical changes are ¼" - ½"?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	

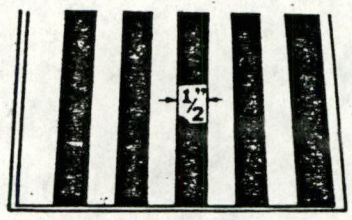


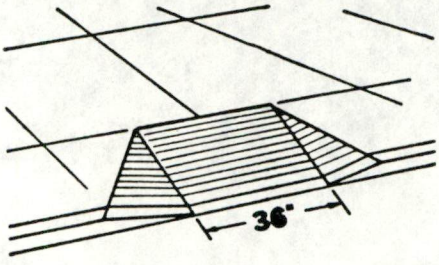
3. Sidewalk Widths				
Do sidewalks and ramps have a 36" clear opening with an occasional allowance for turning and passing?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	

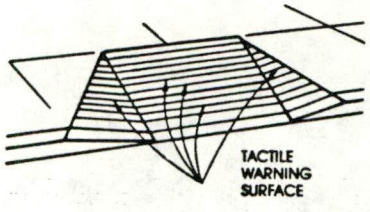


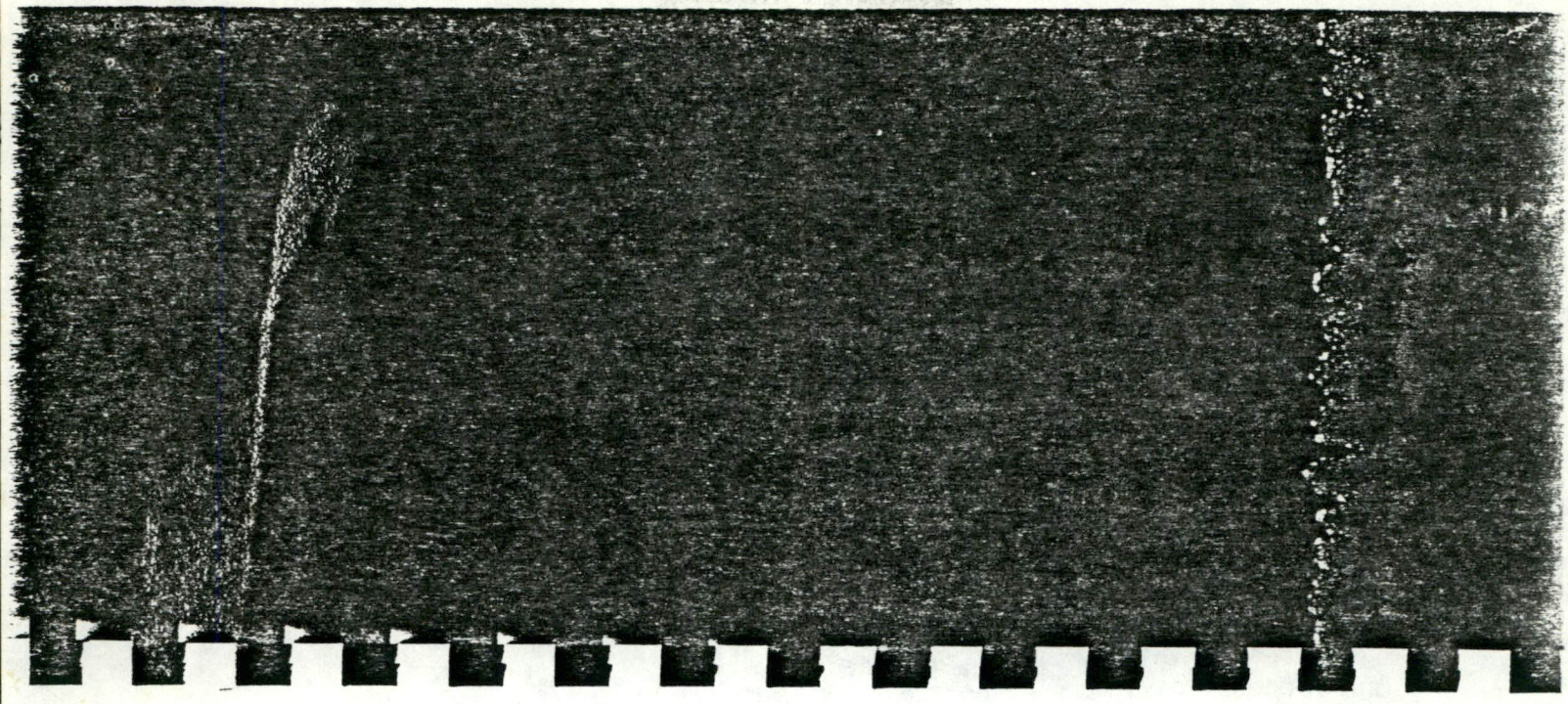
Section II: Walks, Curbs, & Ramps

	Type Meeting A	B	C	Comments
4. Gratings				
Are gratings designed so that openings do not exceed ½" (if elongated, perpendicular to direction of travel)?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
5. Width of Ramps & Curb Cuts				
Is the ramp cut a minimum of 36" wide?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
6. Ramp Warning Surfaces				
Does ramp have tactile warning surface?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	







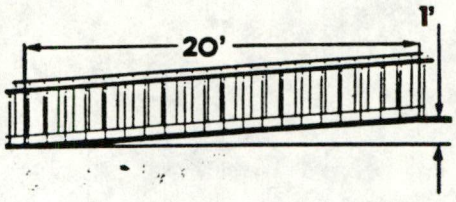


Section II: Walks, Curbs, & Ramps

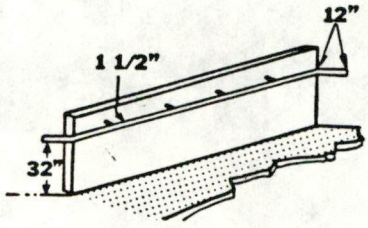
	Type Meeting A	B	C	Comments
7. Sides of Curb Ramps				
If curb ramps are recessed into sidewalks, do they have flared sides with a maximum slope of 1:10 (1″ rise to every 10″ of slope)?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
8. Gradient				
Is the maximum slope of all ramps 1:12 (1′ rise to every 12′ of run)?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
9. Landings				
Do ramps have a 5′ level landing at the top, bottom and at ramp direction change or at 30″ vertical intervals?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	

Section II: Walks, Curbs, & Ramps

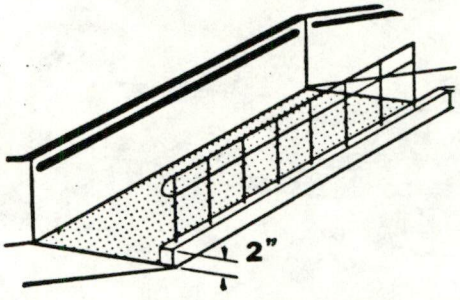
	Type Meeting A	B	C	Comments
10. Sidewalk & Ramp Handrails				
Do sidewalks and ramps with a slope greater than 1:20 have handrails on both sides?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	

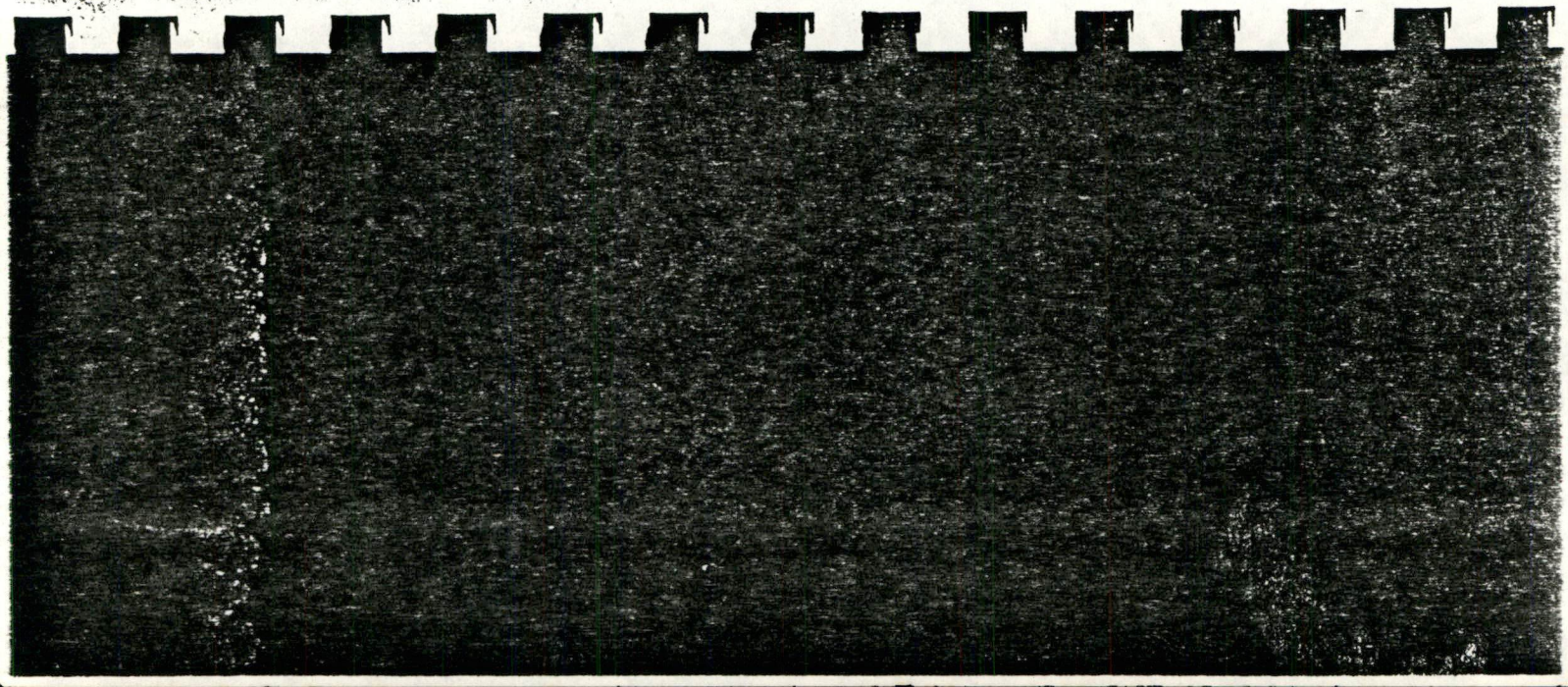


11. Handrail Location				
Are handrails mounted 32" above ramp surface - 1½" from wall, and extend 12" beyond top and bottom?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



12. Ramps Protective Edges				
Do ramps and landings with dropoffs have curbs (minimum 2"), walls, railings, or projecting surfaces that prevent people from slipping off?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	





Section II: Walks, Curbs, & Ramps

	Type Meeting A	B	C	Comments

13. Temporary Ramps

Do all temporary ramps meet standard ramp requirements, and are they securely anchored?



Yes	Yes	Yes	
No	No	No	
N/A	N/A	N/A	

Summary:

Section III: Entrances, Corridors, & Stairs

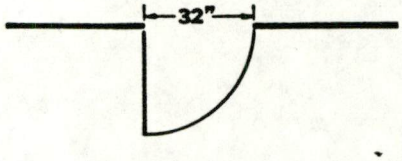
	Type Meeting A	B	C	Comments
1. Marked Route Is at least one accessible route from the parking area to the facility entrance clearly marked?	Yes No N/A	Yes No N/A	Yes No N/A	



2. International Symbol Is the international symbol of accessibility displayed at entrances?	Yes No N/A	Yes No N/A	Yes No N/A	

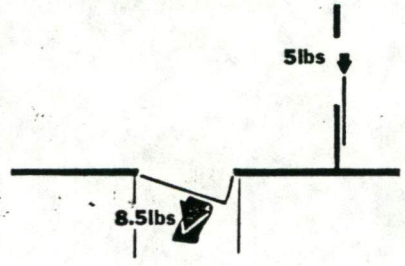


3. Doorway Width Is a primary entrance accessible with a clear opening of 32"?	Yes No N/A	Yes No N/A	Yes No N/A	Number of Accessible Entrances: _____

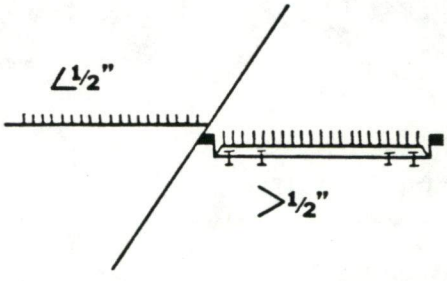


Section III: Entrances, Corridors, & Stairs

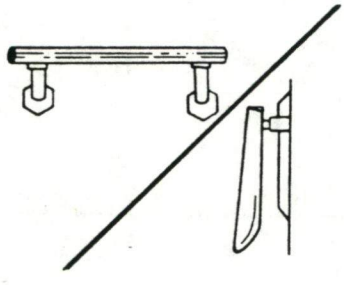
	Type Meeting A	B	C	Comments
4. Door Opening Force Are doors relatively easy to open (require no more than about 8.5 lbs. for push or pull and 5 lbs. for sliding doors)?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



5. Doormats Are doormats stationary, flat or recessed and less than ½" thick?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



6. Door Hardware Are handles, pulls, latches, locks, and other operating devices on accessible doors easily grasped and can be operated with a closed fist?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	

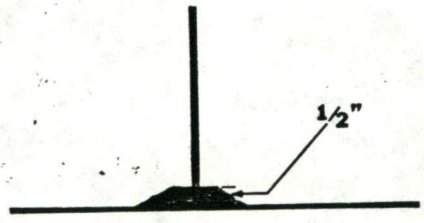


Section III: Entrances, Corridors, & Stairs

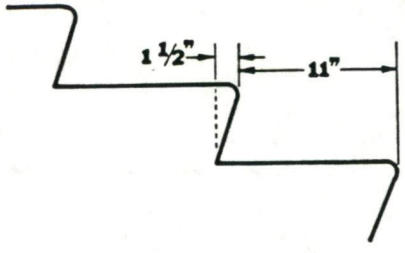
	Type Meeting A	B	C	Comments
7. Doors in Series Does approximately 48″ plus the width of inswing door(s) space exist between two doors in a series to allow backing and turning space for a wheelchair to clear the inswinging door?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
8. Automatic & Power Assisted Doors Do automatic and/or power assisted doors operate in a manner and direction which do not present a hazard to guests?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
9. Revolving Doors Is there an accessible door adjacent to all revolving doors?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	

Section III: Entrances, Corridors, & Stairs

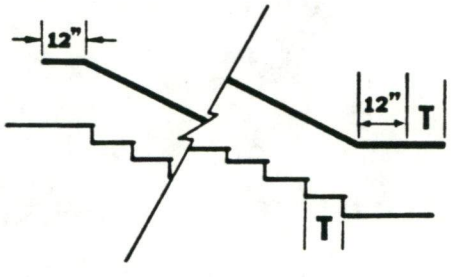
	Type Meeting A	B	C	Comments
10. Threshold				
Are thresholds at exterior doors flush with the floor or is there a maximum edge height of ½"?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



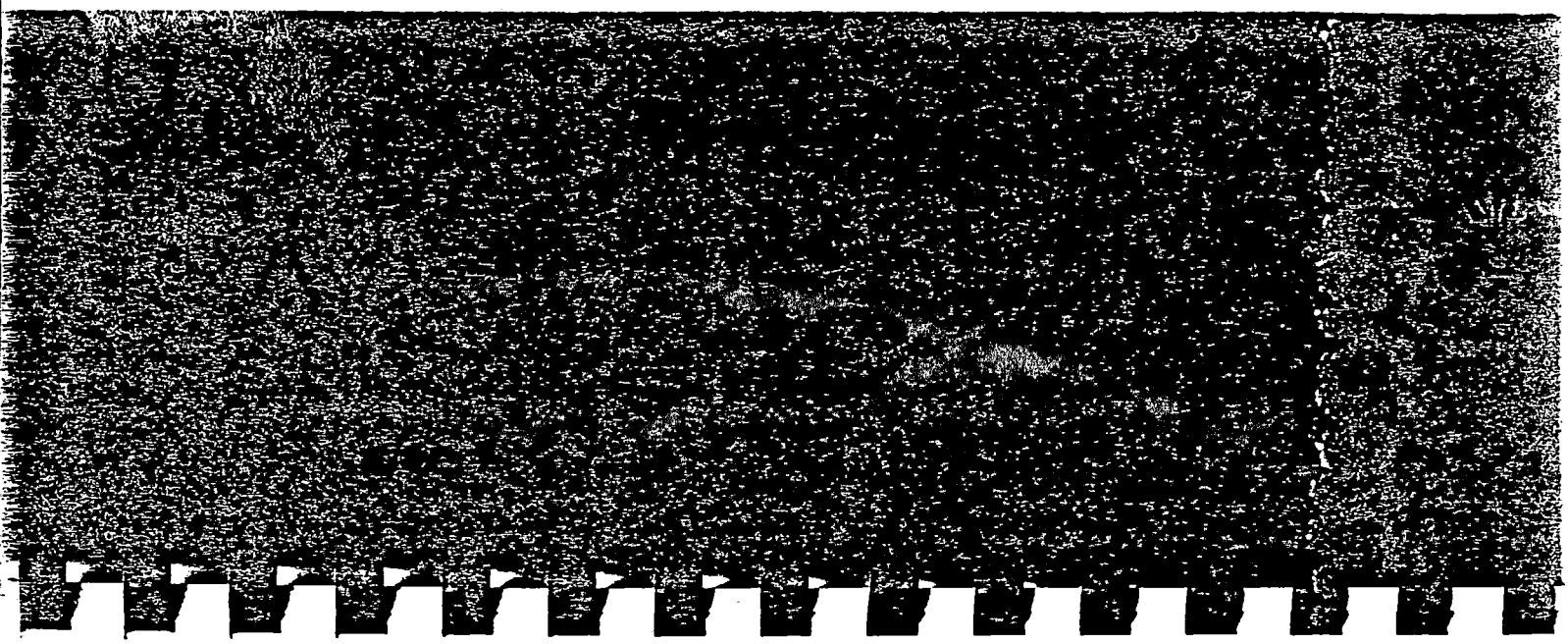
11. Stair Risers				
Do **all** steps and stairs have closed risers with uniform height; tread width no less than 11" and nosings that are not abrupt nor project more than 1½"?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



12. Location of Handrails				
Are handrails installed on both sides of all stairs and extend at least 12" beyond the top riser and 12" plus the width of one tread beyond the bottom tread?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	

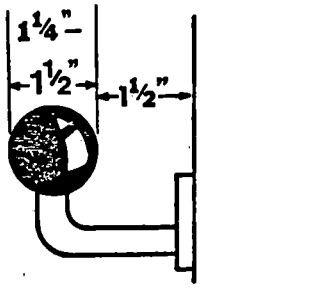


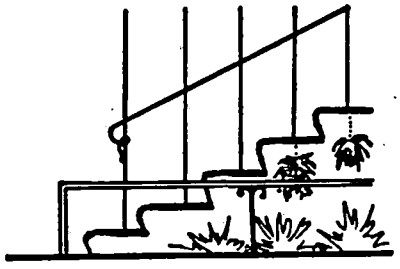


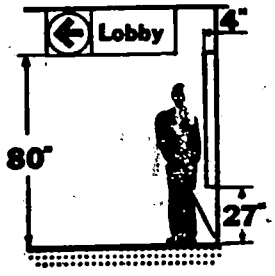


Section III: Entrances, Corridors, & Stairs

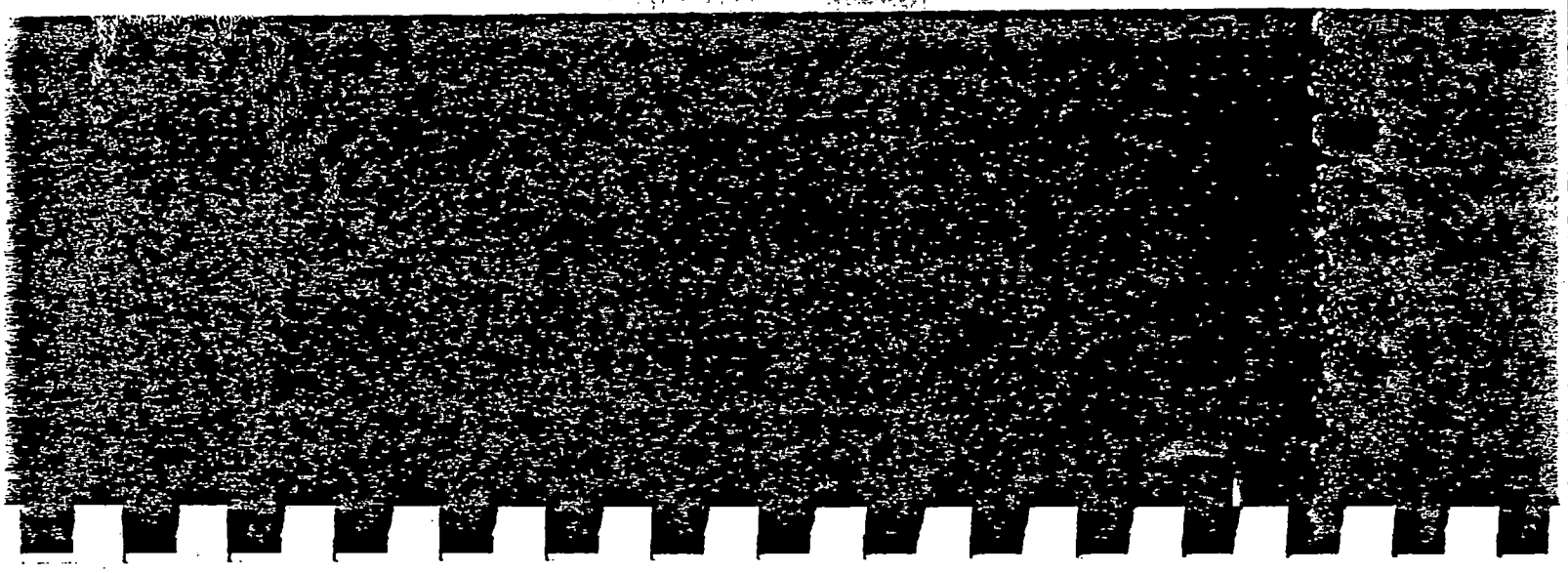
	Type Meeting A	B	C	Comments
13. Handrail Dimensions Are handrails 1¼" to 1½" in diameter and easy to grasp, and 1½" from the wall?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
14. Suspended Stairs Are **all** suspended stairs provided with sufficient warning devices, i.e., railing, floor, planters, etc., to alert the visually impaired?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
15. Protruding Objects Do protruding and hanging objects, (i.e., telephones, water fountains, etc.) with their leading edge 27" to 80" above the floor protrude not more than 4" in the path of travel?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	





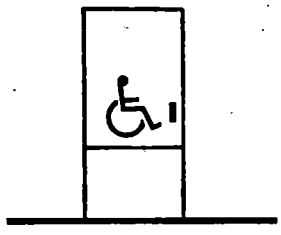


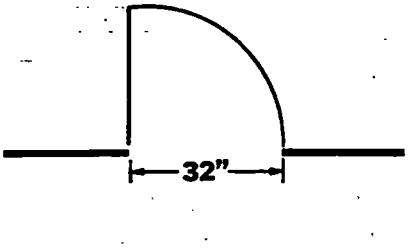
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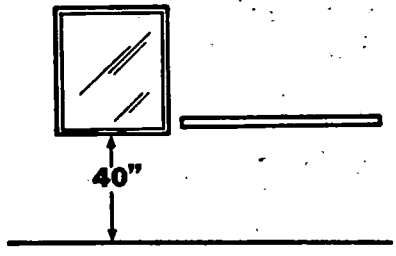


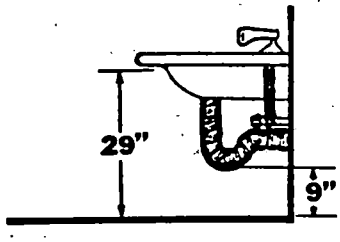
Section IV: Public Restrooms

	Type Meeting A	B	C	Comments
1. Restroom Identification Is there an accessible restroom for each sex clearly marked with an international symbol?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
2. Restroom Entrance Do restroom entrances have a clear opening of 32"?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
3. Restroom Mirror Is mirror mounted within 40" of the floor?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
4. Lavatory Heights Is the lavatory mounted at least 29" from the floor (measured from the bottom of the apron) for wheelchair knee clearance, and is the drain pipe at least 9" from floor for toe clearance?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



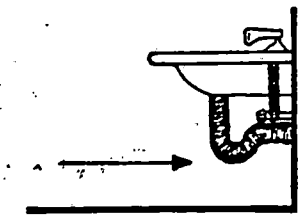


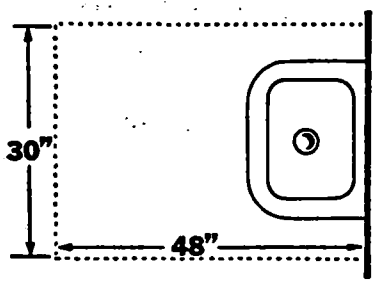


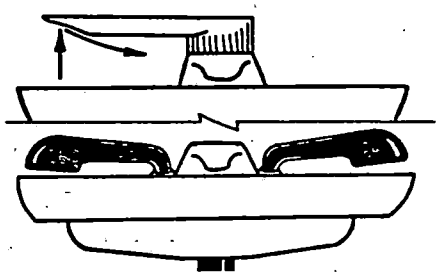


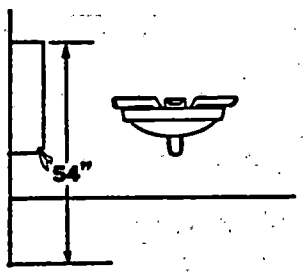
Section IV: Public Restrooms

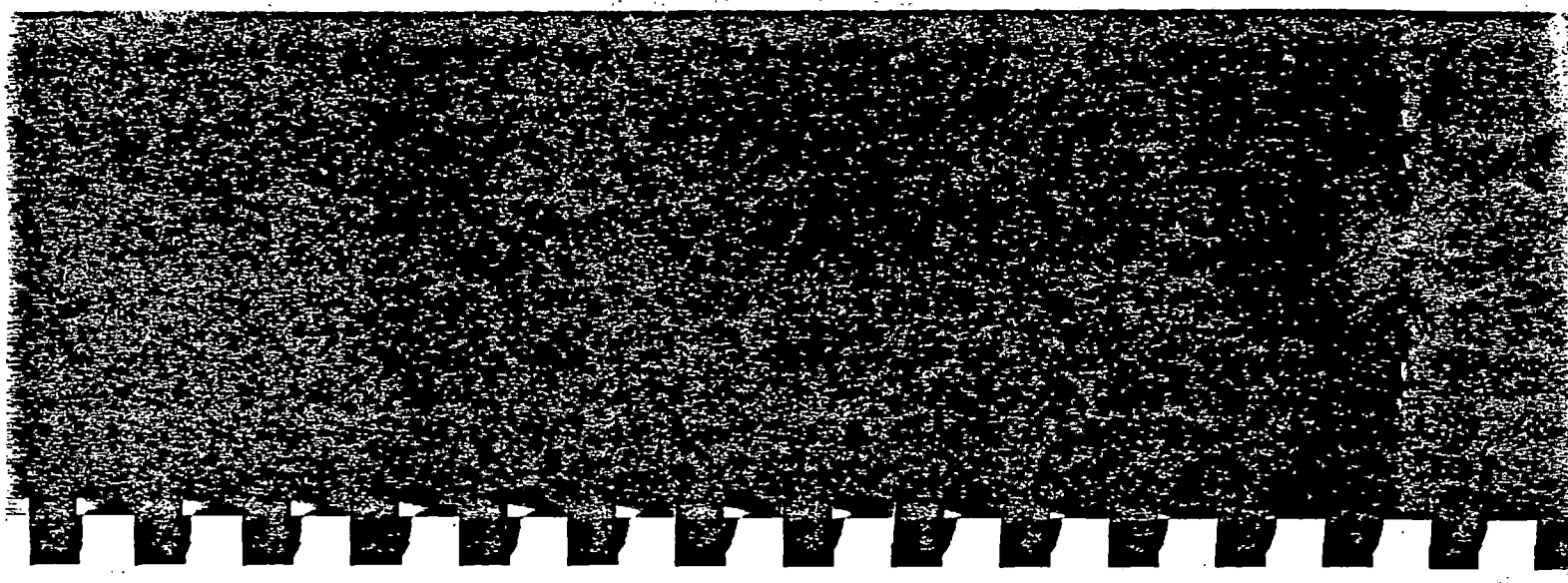
	Type Meeting A	B	C	Comments
5. Protective Pipe Covering Is insulation or protective covering used on bathroom hot water pipes under lavatory to prevent burns to persons in wheelchairs?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
6. Lavatory Space Is there clear floor space (30" x 48") provided in front of the lavatory to allow the forward approach of a wheelchair?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
7. Faucet Controls Are faucet controls of the push or lever type?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
8. Dispensers in Restroom Are restroom dispensers and accessories within reach of a person seated in a wheelchair no higher than 54" from floor?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	





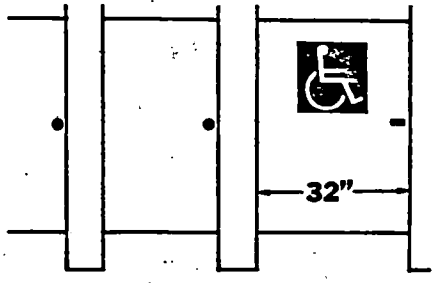




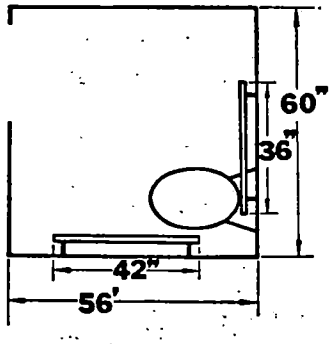


Section IV: Public Restrooms

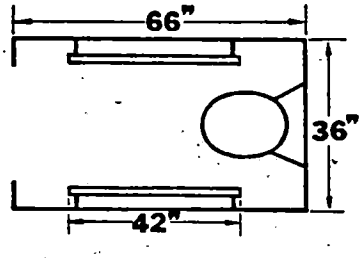
	Type Meeting A	B	C	Comments
9. Stall Door				
Is at least one restroom stall available with a clear opening of 32"?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



10. Stall Size				
Is the accessible toilet stall of the design and measurements identified in:	Yes	Yes	Yes	
A. **Side Approach** - a minimum depth of 56" & 60" width for wall mounted water closets, add 3" to depth if the water closet is floor mounted?	No	No	No	
	N/A	N/A	N/A	



11. Stall Size				
Is the accessible toilet stall of the design and measurements identified in:	Yes	Yes	Yes	
B. **Front Approach** - a minimum depth of 66" and width of 36-48" if water closets are wall mounted, add 3" to length if commode is floor mounted?	No	No	No	
	N/A	N/A	N/A	

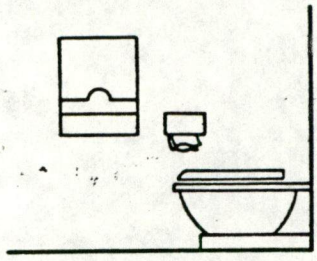


Section IV: Public Restrooms

	Type Meeting A	B	C	Comments

12. Dispensers in Commode Stall

Are toilet paper and seat cover dispensers located within easy reach of a person using the commode?



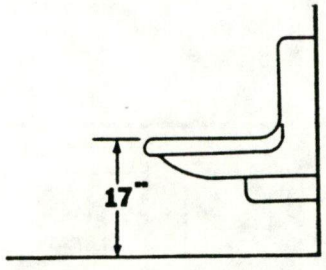
Yes Yes Yes

No No No

N/A N/A N/A

13. Urinals

Does the men's restroom have at least one stall type or wall-hung urinal with elongated rim at a maximum of 17" above the floor?



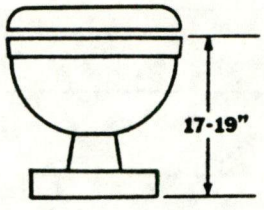
Yes Yes Yes

No No No

N/A N/A N/A

14. Commode Seat

Is top of commode seat between 17" and 19" from the floor?

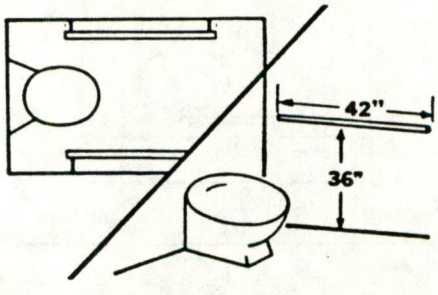


Yes Yes Yes

No No No

15. Grab Bars

Are grab bars of sufficient length located on both sides of stalls from wall, and 33" to 36" from floor?



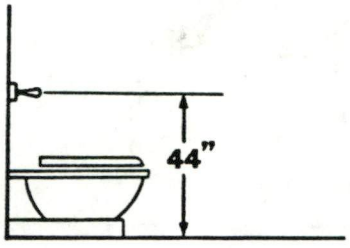
Yes Yes Yes

No No No

N/A N/A N/A

Section IV: Public Restrooms

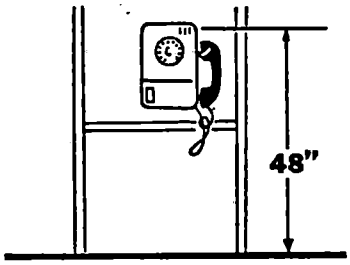
	Type Meeting A	B	C	Comments
16. Flush Control				
Are the flush controls hand operated and mounted no more than 44″ above the floor?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



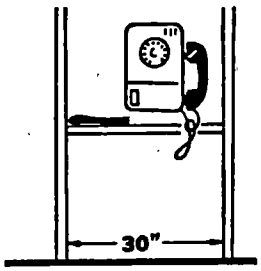
Summary:

Section V: Public Telephones & Water Fountains

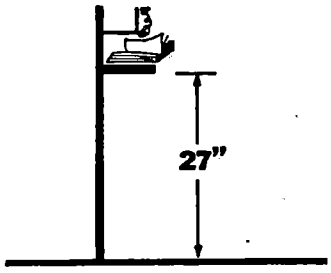
	Type Meeting A	B	C	Comments
1. Mounting If public telephones are provided, is one accessible - with phone dial and coin receiver within 48" of the floor and with a cord at least 29" long?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



2. Access Does the telephone enclosure have a clear path width of at least 30"?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



3. Directory Access Are phone directories useable at a wheelchair level?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	

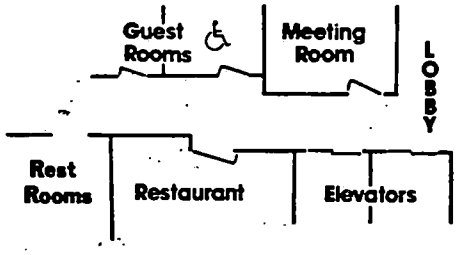


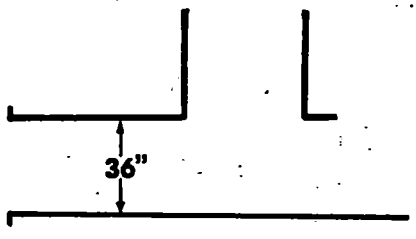
4. Auditory Amplification Are telephones equipped with an amplifier available for the hearing impaired?	Yes	Yes	Yes	Number of telephones equipped: _____
	No	No	No	
	N/A	N/A	N/A	

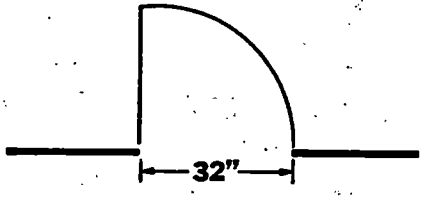


Section VI: Meeting Rooms

	Type Meeting A	B	C	Comments
1. Location Is the meeting room centrally located to prevent undue problem to the mobility impaired?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
2. Accessible Route Do hallways and corridors have a clearance of 36" with an occasional allowance space for turning and passing?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
3. Door Width Do the doors to meeting rooms have a clear opening of 32"?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
4. Thresholds Do thresholds of interior doors have a maximum edge height of ½"?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



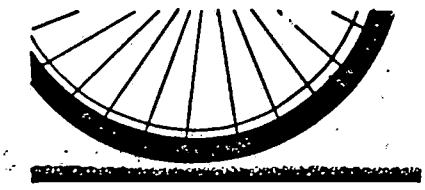


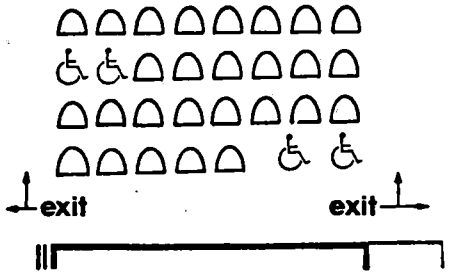


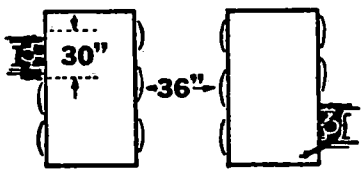


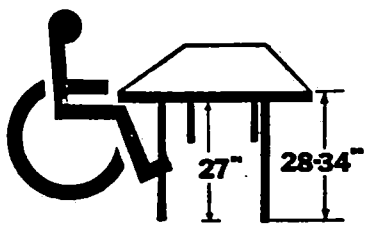
Section VI: Meeting Rooms

	Type Meeting A	B	C	Comments
5. Floor Is the meeting room floor non-slip, level, and independently negotiable by persons in wheelchairs?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
6. Placement of Wheelchairs Is there adequate space for at least two wheelchairs, are they dispersed throughout the room within easy viewing of the stage, and are they near accessible exits?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
7. Table Placement If tables are used in the meeting rooms as part of the meeting, is there 36" aisle clearance and a 30" table clearance for wheelchairs?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
8. Table Height Do tables have 27" clearance from floor to bottom of table and 28-34" from floor to top of table?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



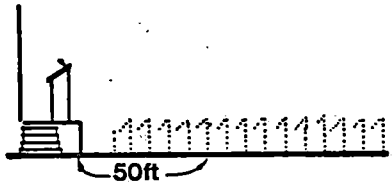




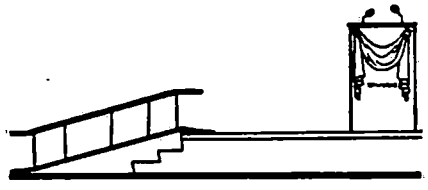


Section VI: Meeting Rooms

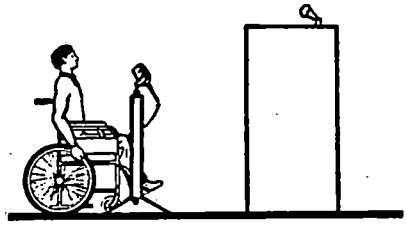
	Type Meeting A	B	C	Comments
9. Listening System If the hearing impaired are provided with interpreting or a listening system, are they seated within 50' of the stage for viewing?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



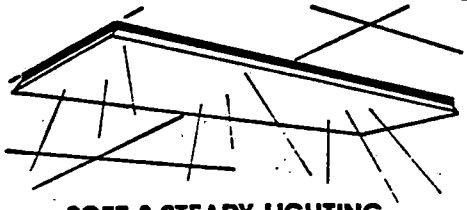
10. Temporary Ramp Is a temporary ramp for the podium or head table available?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



11. Microphones Are the mikes accessible and flexible for use?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



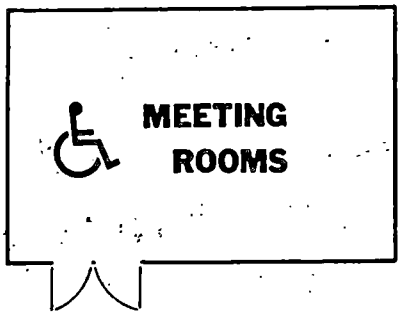
12. Lighting System Is the lighting non-glare, non-reflecting, and non-blinking?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	



SOFT & STEADY LIGHTING

Section VI: Meeting Rooms

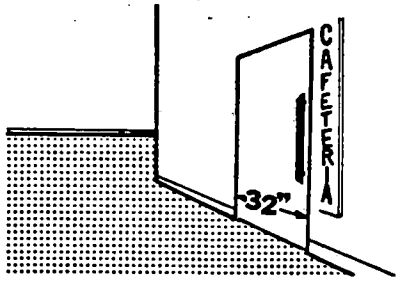
	Type Meeting A	B	C	Comments
13. Accessible Rooms				
Are accessible meeting rooms available?	Yes	Yes	Yes	Number available: _____
	No	No	No	Capacity or size: _____
	N/A	N/A	N/A	

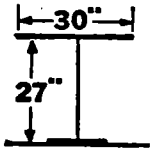


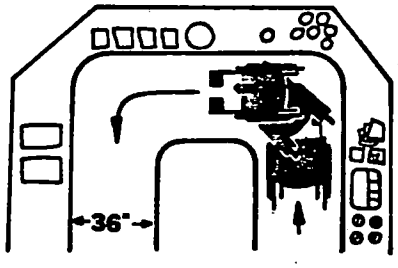
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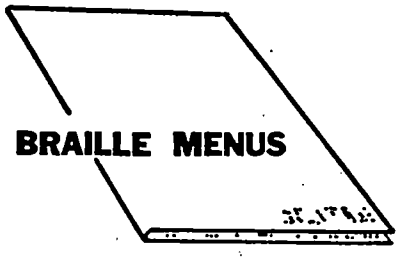
Section VII: Restaurants

	Type Meeting A	Type Meeting B	Type Meeting C	Comments
1. Entrance Do entrances to food service establishments have a door with a 32" clear opening, single effort door pull, and negotiable thresholds (½" or less in height)?	Yes No N/A	Yes No N/A		
2. Tables Are tables accessible - 30" table width and 27" vertical clearance?	Yes No N/A	Yes No N/A		
3. Cafeteria/Buffet Lines Are cafeteria/buffet lines accessible (at least 36" wide with adequate turning space at corners)?	Yes No N/A	Yes No N/A		
4. Menus Does the restaurant have menus in braille and large print?	Yes No N/A	Yes No N/A		

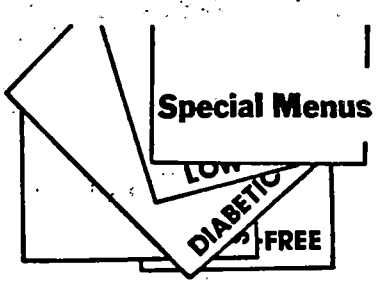








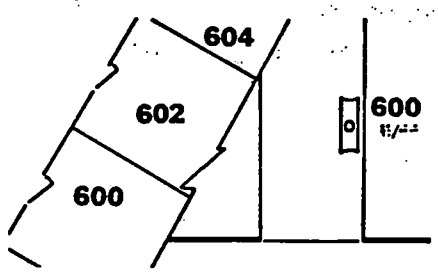
Section VII: Restaurants

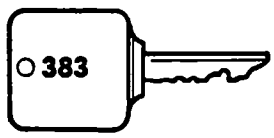
	Type Meeting A	B	C	Comments
5. Special Needs Is the restaurant staff able and willing to make reasonable accommodations (minor menu changes, reading menus, tray assistance)? 	Yes No N/A	Yes No N/A		
6. Lounge Is the lounge accessible, including tables and aisles? 	Yes No N/A			

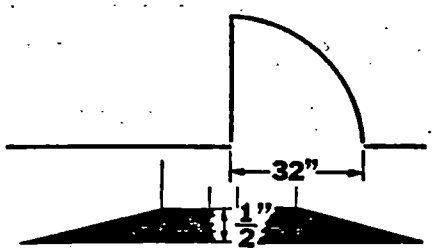
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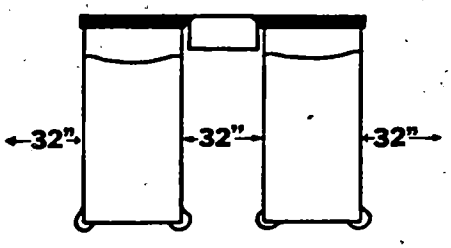
Section VIII: Guest Rooms

	Type Meeting A	B	C	Comments
1. Room Numbers Are guest rooms numbered in consecutive sequence (600, 602, 604, etc.) and are numbers raised for tactile identification?	Yes No N/A			
2. Keys Are room keys available with a large fixed handle for easy handling?	Yes No N/A			
3. Door Do entry, bathroom, and closet doors have a clear opening of 32" with maximum threshold height of ½"?	Yes No N/A			
4. Bed Spacing Is there a minimum of 32" opening by one side of bed?	Yes No N/A			







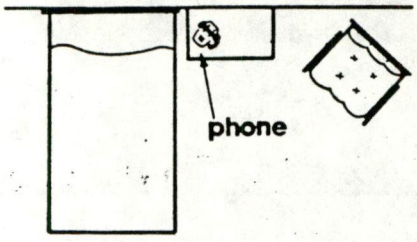


Section VIII: Guest Rooms

	Type Meeting A	B	C	Comments

5. Telephones

Are the telephones in rooms accessible when in bed?



Yes
No
N/A

6. Amplified Phone

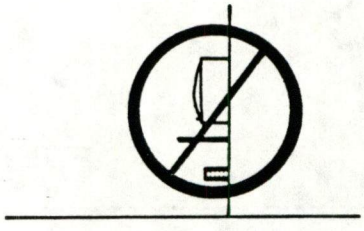
Are amplified phones available in the guest rooms?



Yes
No
N/A

7. Protruding Objects

Are rooms free of wall mounted protruding objects (such as televisions, hanging lamps, etc.)?



Yes
No
N/A

8. Switch Access

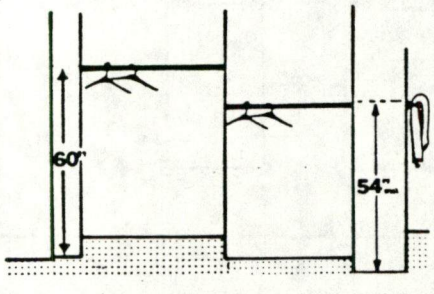
Are light switches, heating, cooling, drapery control, and other similar items accessible?



Yes
No
N/A

9. Closet & Towel Racks

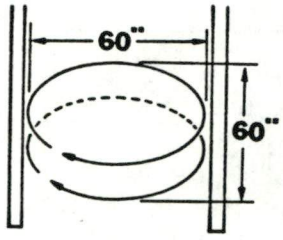
Are towel and closet racks located at a height not greater than 54"?



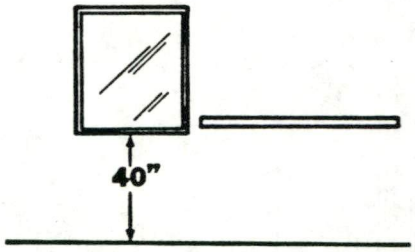
Yes
No
N/A

Section VIII: Guest Rooms

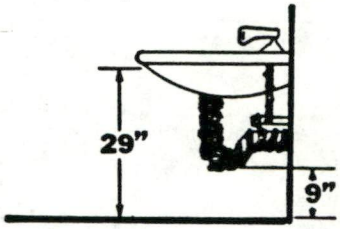
	Type Meeting A	B	C	Comments
10. Space for Wheelchair Do guest rooms and bathrooms allow sufficient turning space for wheelchair to move about (60" diameter preferred)?	Yes No N/A			



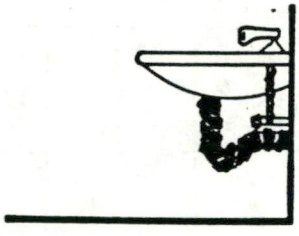
11. Mirrors Are mirrors mounted within 40" of the floor?	Yes No N/A			



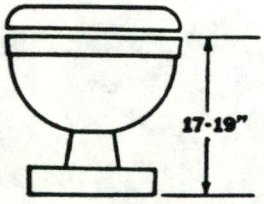
12. Lavatory Clearance Is the lavatory mounted at least 29" from the floor measured from the bottom of the apron for wheelchair knee clearance, and is the drain pipe at least 9" high for toe clearance?	Yes No N/A			



13. Exposed Hot Water & Drain Pipes Is insulation or protective covering used on bathroom hot water pipes under lavatory to prevent burns to persons in wheelchairs?	Yes No N/A			

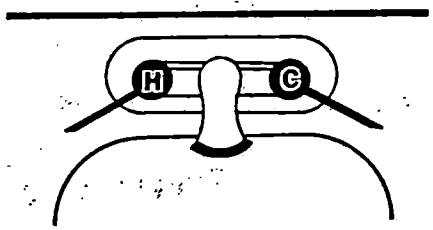


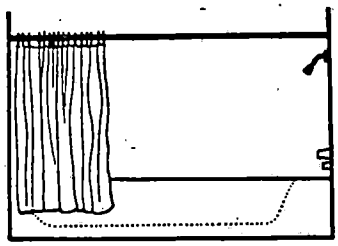
14. Commode Seat Is commode seat between 17" and 19" high?	Yes No N/A			

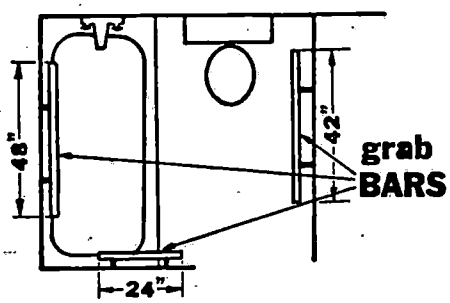


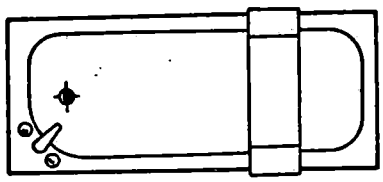
Section VIII: Guest Rooms

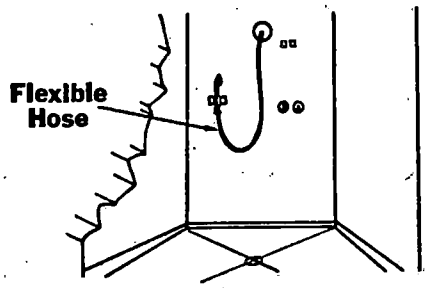
	Type Meeting A	B	C	Comments
15. Faucet Controls Are lavatory and tub controls easy to operate with a closed fist? (Blade type or single control.)	Yes No N/A			
16. Shower & Tub Combination Do shower and tub combinations have curtains rather than glass doors?	Yes No N/A			
17. Grab Bars Are grab bars of sufficient length by commode and in tub or shower 33-36" from floor?	Yes No N/A			
18. Bath Tub Bench Is there a bench available for use in the tub?	Yes No N/A			
19. Flexible Hose Shower Is a flexible hose with handheld shower head available?	Yes No N/A			



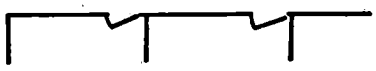








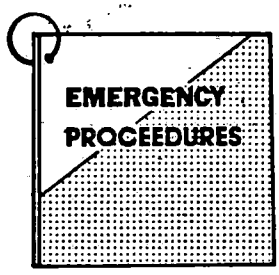
Section VIII: Guest Rooms

	Type Meeting A	B	C	Comments
20. Number of Rooms Are accessible guest rooms available? 	Yes			Total number of rooms: _____
	No			Total accessible: _____
	N/A			

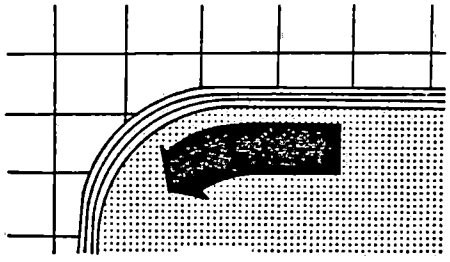
Summary:

Section IX: Hazards & Emergency Procedures

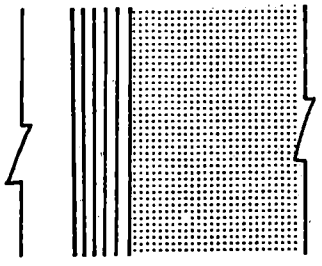
	Type Meeting A	B	C	Comments
1. Staff Awareness Has the hotel/motel staff received special instruction about the special needs of handicapped people, particularly emergency procedures?	Yes No N/A	Yes No N/A	Yes No N/A	



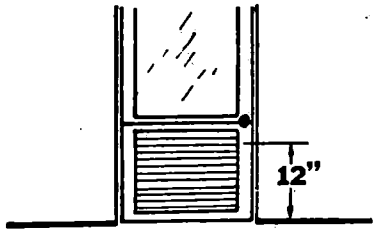
2. Hazardous Vehicular Area Is the boundary between pedestrian and vehicle area marked with some type of tactile warning?	Yes No N/A	Yes No N/A	Yes No N/A	



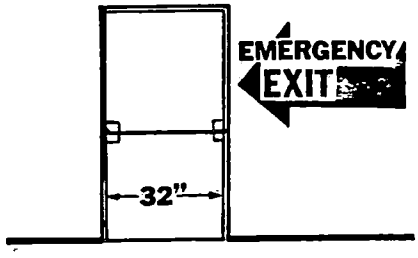
3. Standard Warnings Are standardized/textured surfaces for tactile warnings present for hazardous conditions, i.e., fountains, stairs pools, floors, doors, etc.?	Yes No N/A	Yes No N/A	Yes No N/A	



4. Glass Panels in Doors Are all glass panels in doors located within 12" of floor protected by kick plate on the push side?	Yes No N/A	Yes No N/A	Yes No N/A	

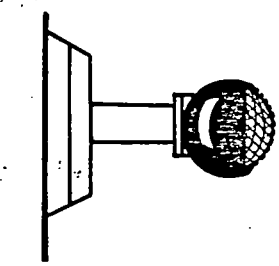


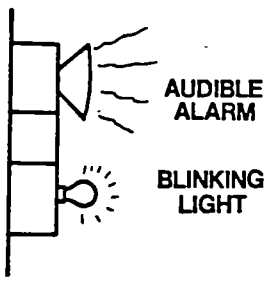
5. Emergency Exits Are all emergency exit doors clearly marked with a 32" clear opening and equipped with a crash (panic) bar?	Yes No N/A	Yes No N/A	Yes No N/A	



Section IX: Hazards & Emergency Procedures

	Type Meeting A	B	C	Comments
6. Knurled Door Knobs				
Are doors leading to potentially dangerous areas identifiable to the touch by textured surface on the handle, knob, or pull?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
7. Audible/Visual Alarm Signals				
Are all audible alarms accompanied by simultaneous visual signals?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	





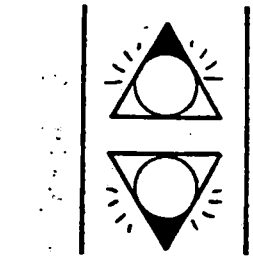
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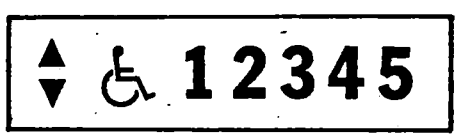
Section X: Elevators

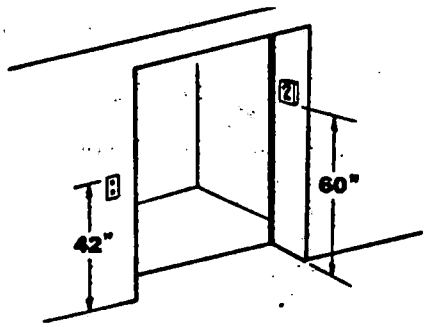
1. **Does the facility have elevator(s)?** Yes No
2. **Is an elevator required for accessibility to all levels of the facility?** Yes No

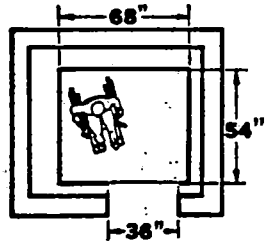
(If the response to question #1 is **NO**, the reviewer need not complete the remainder of Section X.)

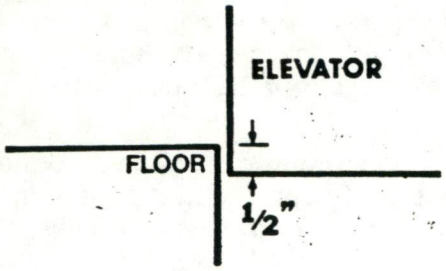
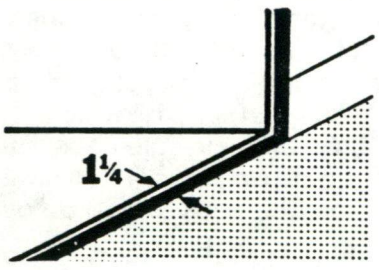
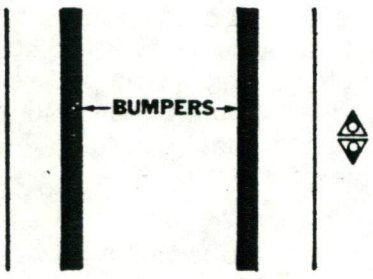
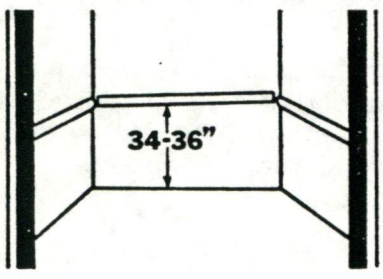
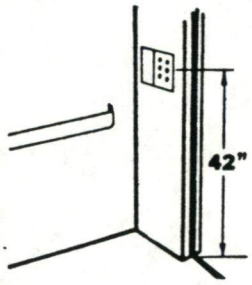
	Type Meeting A	B	C	Comments
3. Signals Identification Is a visual as well as an audible signal used to identify direction of elevator travel? (Sound once for up and twice for down.)	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
4. Accessible Routes Are the accessible elevators on a normally used accessible route?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
5. Call Buttons/Floor Numbers Are call buttons in lobbies and halls located 42" above the floor with raised, indented or braille floor designations on both elevator jambs 60" from floor?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	
6. Car Dimensions Does the elevator accommodate a wheelchair with inside dimensions no less than 54" x 68" and a clear door opening of 36"?	Yes	Yes	Yes	
	No	No	No	
	N/A	N/A	N/A	









: Elevators		Type Meeting A	B	C	Comments
elevator stop within s on each level?		Yes No N/A	Yes No N/A	Yes No N/A	
tween Elevator ce between the floor levator platform no an 1¼"?		Yes No N/A	Yes No N/A	Yes No N/A	
ective ng Device evator doors equipped with atic Bumper; Safety Electric eye		Yes No N/A	Yes No N/A	Yes No N/A	
elevator's interior drails mounted 34- the floor?		Yes No N/A	Yes No N/A	Yes No N/A	
Call Buttons, ls, call buttons, and tons ¾" in print and ated at a convenient ")?		Yes No N/A	Yes No N/A	Yes No N/A	

Designing for Visually Impaired or Blind Persons

The following recommendations are neither standards nor requirements, but they will provide greater accessibility and comfort for blind and visually impaired persons. Attention to these details will allow and encourage patrons to move about the facility with greater assurance.

Square or rectangular floor plans are preferred over round, wheel, or spoke type patterns having multiple hallways. The floor plan should provide an uncomplicated path from the entryway to the registration desk and from there to the elevators and other amenities. Right angle pathways provide much better orientation information than do curved paths.

The floor plan should also provide restrooms close to meeting rooms and an eating facility in the same building. The room numbering system should be consistent from floor to floor and the doors should open into rooms rather than into the hallway. Ideally, the primary pathways would be of a contrasting color from the rest of the flooring and use of materials which give a different sound impression or "feel" (springiness, hardness, etc.) is often helpful. Wall mounted projections into travel space (water coolers, television sets, fire extinguishers, etc.) should be kept to an absolute minimum. When they are necessary, they should extend to within a few inches of the floor so they can be detected with a cane. Also, suspended stairways, low hanging beams, or any such protuberances should be avoided.

A good level of lighting, without dazzle or glare, is very important to a person with impaired vision. This should be considered in locating completely glassed areas such as large windows and glass doors. Even highly polished floors can reflect ceiling lights and cause problems. The lighting and color scheme should be coordinated so that contrasts and intensities are enhanced instead of diminished. The telephone, located adjacent to the bed, should be well lighted and have large numerals with high contrast. Elevators should have visual as well as auditory signals. Clear tactile identification with braille symbols or raised numbers will help in operating the elevator independently. The light switches and controls inside rooms should be uniform, preferably of the flat plate type, and should all have the same position for "off" and "on."

Outside walkways should be bordered by contrasting colors and materials to be more easily detectable. Odd or unexpected grade level changes should be avoided. If it crosses a street, the walkway should be clearly marked, and if possible, separated from bicycle pathways.

These design suggestions are not to be considered as standards, but they can eliminate or minimize many orientation and mobility problems for blind or visually impaired persons. They are based on material from "The Physical Environment and the Visually Impaired," by Per Gunnar Braf, distributed by the ICTA Information Center in Sweden.

Accommodating Hearing-Impaired Persons

Areas of consideration which should be addressed for hearing-impaired persons fall into three major categories: communication, orientation/mobility and safety. The most persuasive of the three, communication, will affect many aspects of the hearing-impaired person's functioning, but specific attention should be given to the following needs.

Visual directions to major areas of the hotel (registration desk, meeting rooms, restrooms, etc.) should be appropriately placed for immediate recognition upon entering the hotel. Registration staff should be comfortable using paper and pencil or hand movements to direct the actions of the guest. Special skills such as "lip reading" should not be assumed, but used if present. In some instances, the staff may need to recognize and work with a person whose speech is limited or absent because of a hearing loss.

Some system should be devised by which the guest would be aware of messages or potential visits to his or her room by hotel staff or guests. It has been suggested that the red "message light" be used to advise the guest of potential visitors, and that a note be passed under the door to indicate arrival. Portable flashing light devices are available which can be attached to the door or phone to indicate ringing or knocking. A method for providing wake-up services might also be explored.

At least one public phone should be equipped with an amplifying headset to accommodate persons with residual hearing. From time-to-time, a deaf person may request a member of the hotel staff to act as an intermediary in making a phone call for a taxi, airline reservations, or some other service. A teletype device located at the registration desk would be nice to have and might be available locally on a temporary basis.

Meeting rooms should be equipped with dimmer switches that would allow a minimal light level to be maintained during movies or slide presentations so that the interpreter will remain visible. Sometimes, a "busy" wallpaper or light colored background behind the interpreter will cause eye strain for the hearing-impaired participant. Arrangements should be made to set up a temporary dark screen or cloth to serve as a background.

When considering orientation/mobility accommodations, it should be remembered that the hearing-impaired person is visually oriented. Most modern elevators have visual floor indicators inside and lighted "up" and "down" arrows in the waiting areas, but these should be confirmed. Hotels or motels with complicated or unusual floor plans should provide a map showing location of guest rooms and key areas (meeting rooms, bar, restaurant, swimming pool, etc.) in relation to the lobby.

From a safety perspective, a system should be established so that a deaf person would receive notification of emergencies such as fire, severe weather (tornadoes) etc. This might be accomplished by having the guest agree to allow the hotel staff to enter his/her room with a pass key if necessary to provide emergency instructions.

Finally, to help the hotel become more comfortable in their interactions with deaf or hearing-impaired persons, the conference coordinator might consider a short training session which would make use of the resources of a local organization of the deaf or the offices of the state vocational rehabilitation agency.

Mobility Impairments

When discussions arise about architectural accessibility for handicapped persons, mobility impairments are the type of handicap most commonly considered. Most accessibility standards are geared toward the needs of persons in wheelchairs. Other mobility aids such as crutches, canes, and walkers should also be considered. Special needs of the mobility impaired vary with the disabled person. However, there are some factors which are not easily or practically addressed by formal standards. Awareness of these will help the conference coordinator to select not only the most accessible but also the most useable, comfortable, and convenient hotel or motel facility available for the meeting being scheduled.

Floor surfaces are of considerable importance. Carpeted floors can make it very difficult and tiring for a person in a manual wheelchair to propel himself/herself. The deeper the carpet padding and carpet pile, the more of a hindrance it poses to a wheelchair user. For persons in electric wheelchairs, carpets do not present the same barrier as to those in manual chairs, but they do slow down the electric wheelchairs and cause the batteries to discharge more rapidly than hard surface floors. Deeply padded carpets pose a hazard to some persons who use crutches, canes, or walkers. This is especially true if the person's balance is unsteady or if he/she is unable to lift his/her feet or walking aid well above the level of the floor. Brick floors or tile floors laid with mortar may also pose a hazard to persons using crutches, canes, or walkers. The tip of these aids may catch in the indentation between bricks or tiles. The toe of a shoe can catch in the same way and cause the mobility impaired person to stumble. It is essential that all hard surface floors have non-slip finishes.

In restaurants and bars, seating available to patrons in wheelchairs should be well integrated into the usual seating arrangement. When evaluating an eating or drinking establishment, the conference manager should be aware that high bars with immovable stools cannot be used by persons with mobility impairments. Booths generally pose a significant inconvenience. Pedestal type tables may also be a problem, particularly if the table is small and the flare at the lower part of the pedestal begins 6" or more above the floor. In either case, the footrests of the wheelchair may strike the pedestal and prevent the person from getting close enough to the table to use it. Also, persons using crutches or canes often use table tops for support when being seated or arising. The most convenient tables are round or square with four legs and no crossbars underneath. Small pedestal tables usually lack stability.

In areas such as lobbies, lounges, and guestrooms, it is desirable to have chairs and couches of various styles, heights, and firmness. Deep, soft, low chairs and couches, especially those without armrests, can be very difficult to get in and out of if a person has a mobility impairment, spinal problems, or limited strength. At least one firm chair of standard height with armrests should be available in public areas.

In general, a person evaluating a hotel or motel for use by mobility impaired persons should observe spatial factors and relationships which are not always spelled out in written standards. The best final test is usually whether a person in a wheelchair could get in the area in question—is there enough space to maneuver a wheelchair? This encompasses more than the width and length of a chair. It also includes the turning radius and the space required to maneuver a chair back and forth to parallel park between objects.

The relative width of halls and doorways and major aisles to secondary aisles must be considered when right angle turns are necessary. Another consideration is the width of aisles and the type of desks or tables provided—narrow aisles and narrow, closed front tables are not useable by persons in wheelchairs. If the conference manager selecting a single site has questions concerning the accessibility and useability of a specific hotel or motel, securing the services of a qualified mobility impaired person, preferably one in a wheelchair, to tour the facility in question will probably be the best way to resolve questions not specifically addressed by the standards.

Technical Assistance

Technical assistance is usually provided on-site and tailored to address a specific problem. Quite often, technical assistance is needed to help in identifying problems and identifying alternative solutions. This is frequently the type of assistance sought for the removal of architectural barriers.

In most states, technical assistance may be available at little or no cost. Following are some sources for additional information and/or technical assistance.

Governor's Committee on Employment of the Handicapped
Each state has such an office. Look in the white pages under the name of the state and then the title.

Office of Rehabilitation Services
Each state has an office for Vocational Rehabilitation. There is probably a local office in your town which can give you some direction.

Regional Office for Rehabilitative Services
This office is located at 1200 Main Tower in Dallas. The regional office serves the states of Oklahoma, Arkansas, New Mexico, Louisiana, and Texas. Their phone number is (214) 767-2961.

Regional Operations Facilities Engineering and Construction
This office (ROFEC) is responsible for assuring that all HEW facilities are accessible to the physically handicapped. They are located in Dallas at 1200 Main Tower. The office suite is 1635, and the zip code is 75202. The phone number is (214) 767-3491.

Architectural Barrier Removal Information Center
This information center is operated as a function of the Human Resources Institute at East Central University in Ada, Oklahoma 74820. The phone number is (405) 332-8000, ext. 470.

American Coalition of Citizens with Disabilities
1346 Connecticut Avenue, N.W., Washington, DC 20036.

Office of Handicapped Individuals
Room 338D, HHH Building, Department of Health, Education & Welfare, Washington, DC 20201.

National Center for a Barrier-Free Environment
Suite 1006, 1140 Connecticut Avenue, N.W., Washington, DC 20015.

Committee on Barrier-Free Design
President's Committee on Employment of the Handicapped, 1111 20th Street, N.W., Washington, DC 20210.

Architectural and Transportation Barrier Compliance Board
330 C Street, S.W., Rm. 1010
Washington, D.C. 20202

Local Advocacy and Consumer Organizations
Within recent years, numerous advocacy and consumer organizations have been established at local levels. Most of these groups have expertise and information and should be contacted regarding technical assistance on barrier removal concerns.

In addition to the agencies and organizations named above, you may also find help from local chapters of national organizations such as Easter Seals or Goodwill Industries. There is an office, National Center for a Barrier Free Environment, located at 7315 Wisconsin Avenue, Washington, DC 20014.

If you are concerned about design problems affecting the visually impaired or the deaf, your state rehabilitation agency can assist you in getting in touch with people who are experienced in these fields.

Costs of Barrier Removal

One of the most frequently asked questions about barrier removal is, "What will that cost?" The answer, of course, must vary according to the nature of the particular job. Installing an elevator is expensive whereas a doorway can be widened at a fairly low cost. Our present economy prevents the listing of cost estimates which could remain accurate for any length of time. A local contractor can give you an estimate of the cost for a particular modification job. There are other considerations which must be taken into account. One of the main ones is the building material used in the original construction. Obviously, wood and sheetrock represent a rather low cost compared to marble or similar building materials. The cost of tearing out existing fixtures will also vary, depending on the material and how well replacement materials can be located to match the original. Most facilities will be able to reuse the doors and other fixtures which are removed in replacement jobs elsewhere in the building. Labor costs will differ from one part of the country to another, so local conditions will greatly affect costs. In opposition to the costs are the benefits you should experience as a result of making your facility accessible. The first, of course, is increased business. Federal agencies now require that meeting sites for conferences and conventions be accessible.

Another avenue you will want to explore is the tax credit you may be eligible for when you make your facility accessible. This can amount to $25,000 amortized over five-year period. The credit amount is not to exceed the cost of modifications. Inquiries regarding tax credits for expenditures to remove architectural barriers to handicapped and elderly individuals should be directed to Internal Revenue Service, 1111 Constitution Avenue, N.W., Washington, DC 20220. The phone number is (202) 566-4473.

References and Resources

ANSI, 1980
Specifications for Making Buildings and Facilities Accessible to and Useable by the Physically Handicapped
American National Standards Institute, Inc.
1430 Broadway, New York, NY 10018

An Illustrated Handbook of the Handicapped Section of North Carolina State Building Code.
Ronald L. Mace, AIA, and Betsy Laslett
North Carolina Department of Insurance
Engineering Division
P.O. Box 26387
Raleigh, NC 27611

Accessibility Survey List
State Department of Health
California Governor's Committee for Employment of the Handicapped
800 Capitol Mall
Sacramento, CA 95814

Accessibility Checklist
OHDS, Rehabilitation Services Administration
Region IV
Atlanta, GA

Design Criteria: New Public Building Accessibility
General Services Administration
Public Building Service
7th and D Streets, SW
Washington, DC 20407

Environmental Modification for the Visually Impaired
A Handbook. American Foundation for the Blind
15 W. 16th Street, New York, NY 10011

Federal Register, Vol. 44, No. 43, 7/24/79
Rules and Regulations, Department of the Treasury, IRS
Expenditures to Remove Architectural Barriers and Transportation Barriers to Handicapped and Elderly, 26 CRF, Parts 1, 7.

Guide to ANSI Standard for Public Schools
Barrier Removal Information Center
East Central University
Ada, OK 74820

Including Everyone - A Conference Planner's Guide to Including People with Handicaps
MRC, 1900 Chicago Avenue
Minneapolis, MN 55404

Manual for Accessibility
Wisconsin Rehabilitation Association
University of Wisconsin-Stout
Menomonie, WI 54751

Resource Guide to Literature on Barrier Free Environment
Architectural and Transportation Barriers Compliance Board
330 C Street, S.W.
Washington, D.C. 20202

Tooling up for Accessibility
National Easter Seal Society for Crippled Children and Adults
2023 West Ogden
Chicago, IL 60612

Sample Items for Accessible Meetings

Hotel should register guests noting their disability, in order to provide assistance in case of emergency.
The meeting planner or hotel can always provide a disabled guest with staff assistance.

For the Mobility Impaired

Does the hotel have these major accommodations?:

Level access from parking lot to lobby
Level access into and out of ballrooms and meeting rooms
Wheelchair accessible toilet rooms near meeting rooms and restaurants (toilet stalls and lavatory clearance)
Accessible speakers' platform and adjustable podium/microphone heights
Level access to a variety of seating locations in the restaurants and bars
Low height registration counter
Non-slip floor finishes
Elevator service to guestrooms or other public area floors; reachable controls
Guestrooms with entrance and bathroom doors that are a minimum of 2'-10" wide
Guestrooms with telephone, TV control, and light switch by the bed

If not, try to provide these accommodations:

Portable ramps (1:12)
Concierge desk check in service or clipboard
Cordless phones
Lanyard microphones/speakers seated vs. standing
Remove bath door to gain 2" in clearance
"Sheltering arms"/riser toilet seat
Remote control TV
Cover hot water pipes in bathroom in guest bath, in tub seat
Handheld shower

For the Hearing Impaired

Closed captioned TV decoding equipment
Meeting room audio augmentation listening systems
Fire alarms that flash as well as ring
Hearing amplification public and guestroom phones

Portable amplification equipment
Portable guestroom smoke detectors that flash and buzz (for hearing and vision impaired person)

For the Vision Impaired

Tactile signage
Lack of head-high obstructions in walking areas (such as hanging signage) that would not be detected by cane
Elevator - tactile numbers and braille numbers; two audible tones for car direction (up and down)

Staff escorts to front desk, guestroom, etc.
Braille hotel information, menus

Susan E. Kary, AIA, Executive Director Technical Services, Marriott Corporation

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