

WalkerGroup

INTRODUCTION TO
ADAAG

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1.GENERAL

Objectives

Learn human factors and needs for accessibility standards and universal design.

Understand differing accessibility requirements according to Codes and Laws

Learn about the American with disabilities act accessibility guidelines (ADAAG)

ADAAG applied to specific use facilities.

Demographics

The 1996 census bureau data states that **19.7 %** of the general population, about **52.6 million** people live with some level of disability.

Medical technology; More people are surviving previously fatal accidents and illnesses.

Definition of disability

Any mental or physical impairment that substantially limits one or more major life activities. This includes orthopedic, visual, speech, mental retardation, hearing, cancer, heart and muscular diseases, epilepsy, psychological disorders, AIDS, learning disabilities, etc.

Federal Law & Design Guidelines

1973: Rehabilitation Act of '73: Uniform Federal Accessibility Standards UFAS, American National Standards Institute ANSI

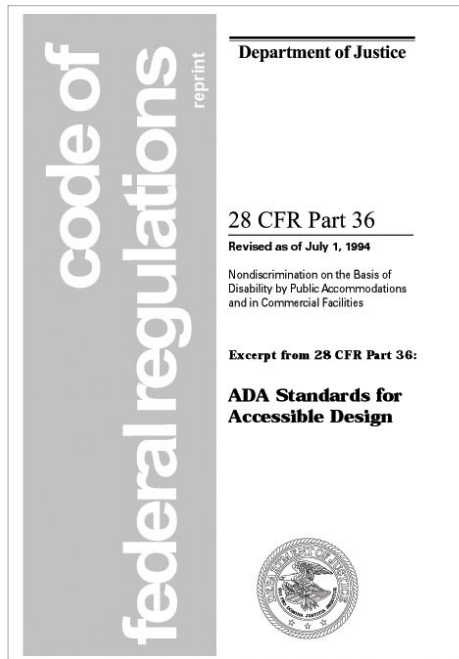
1988: Fair housing act of '88: Fair housing amendments act accessibility guidelines FHAAG

1990: American with Disabilities Act of '90: American with Disabilities Act Accessibility Guidelines ADAAG.

2.GUIDELINES vs. LAWS

ADA (American with Disabilities Act)

<http://www.usdoj.gov/crt/ada/adahom1.htm>



Legislation signed into law July 26, 1990 (last revised 1994)

Uses building guidelines to assist integration

Designed to level the playing field for people with disabilities, not supply extra benefits.

Title I – Employment

Prohibits discrimination on the basis of disability in the work place for qualified individuals that can perform the essential function of the job.

Requires reasonable accommodations be provided to allow employment of qualified individuals.

Restricts type of questioning referring to an individual's disability.

Title II – State and Local Governments

Program accessibility

Architectural Access

General Non-discrimination Requirements

Communication
Evaluations requirements

Title III – Public accommodations

Three levels of accessibility standards

New Construction

Alterations

Existing Facilities

Important definitions from the ADA;

New construction: All newly constructed facilities must be readily accessible to and usable by individuals with disabilities.

Alterations: If an alteration is begun after 1/26/92 that alteration must be readily accessible to and usable by individuals with disabilities.
Additions are considered alterations

Existing Facilities: Readily accessible barrier Removal, Easily accomplishable and without much difficulty or expense, Ongoing accessibility process since 1993, responsibility of building owner

Alterations Triggering additional requirements: Alterations to primary functions areas trigger a requirement to make the path of travel from the entrance to the altered area accessible costing up to 20% of the cost of the original alteration.

Equivalent Facilitation: Departures from the ADA are permitted where the alternative design will provide substantially equivalent or greater access to and usability of the facility.

Historic Preservation: Historic building must comply with the accessibility requirements of an altered facility. Unless the alteration would destroy the historic significance of the building then the alternative requirements may be used.

<http://www.usdoj.gov/crt/ada/adahom1.htm>

ADAAG (American with Disabilities Act Accessibility Guidelines)

<http://www.access-board.gov/>



The ADAAG is the actual guidelines for structural accessibility under the ADA by the access board.

The Access Board is an independent Federal agency devoted to accessibility for people with disabilities. It operates with about 30 staff and a governing board of representatives from Federal departments and public members appointed by the President. Key responsibilities of the Board include:

Developing and maintaining accessibility requirements for the built environment, transit vehicles, telecommunications equipment, and for electronic and information technology.

Providing technical assistance and training on these guidelines and standards.

Enforcing accessibility standards for federally funded facilities.

Important Definitions and key concepts;

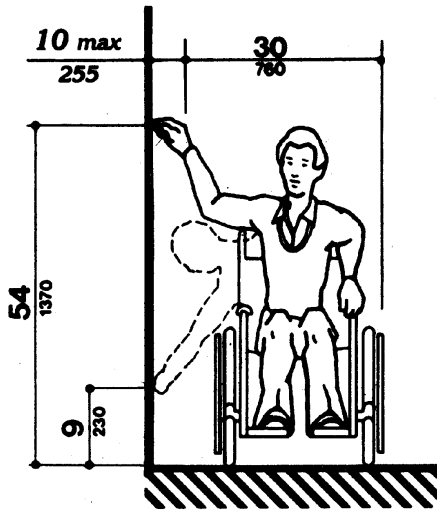
Anthropometry

The field that deals with the physical dimensions, proportions, and composition of the human body, as well as the study of related variables that affect them.

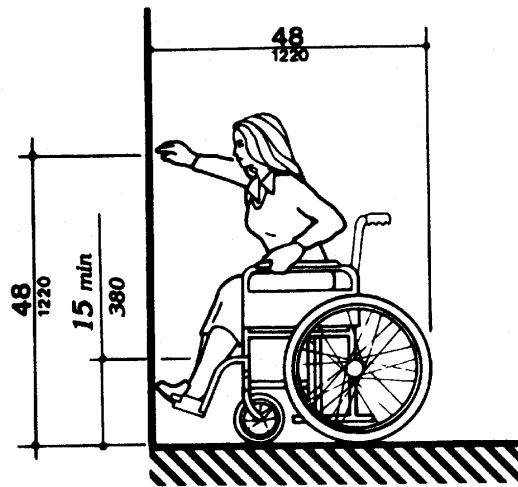
Universal Design

Design that provides access to objects, technological devices, urban spaces and learning environments, for as broad a range of people as possible without the need for assistive devices or where this is not possible it is at least compatible with the use of assistive devices.

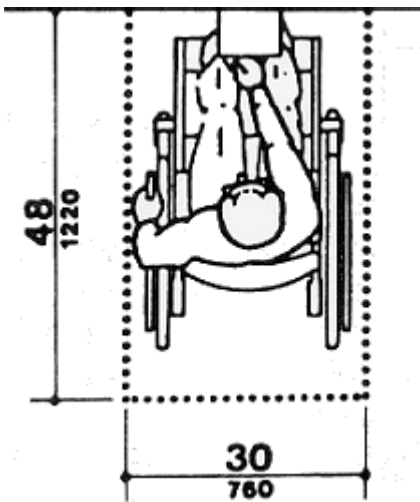
Anthropometrics



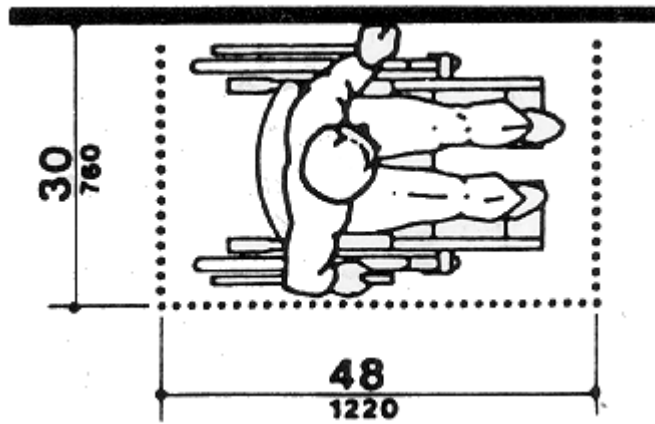
High and low side reach limits



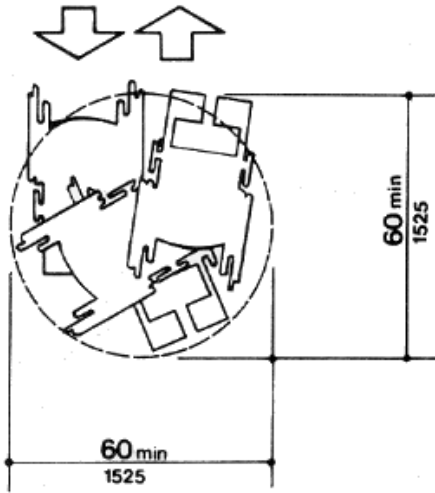
High and low forward reach limits



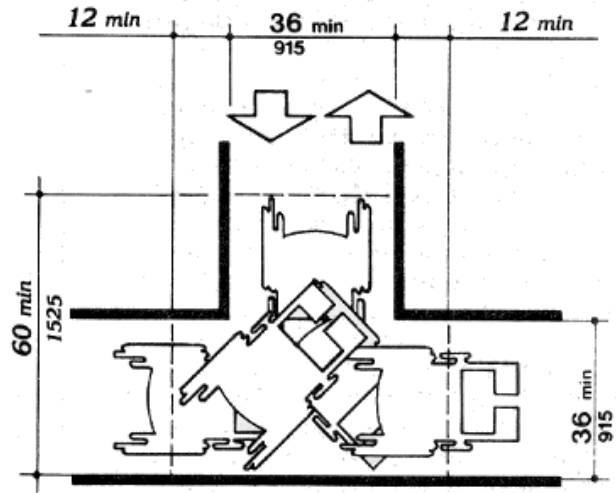
Forward Approach



Parallel Approach



Turning Space 60" diameter space



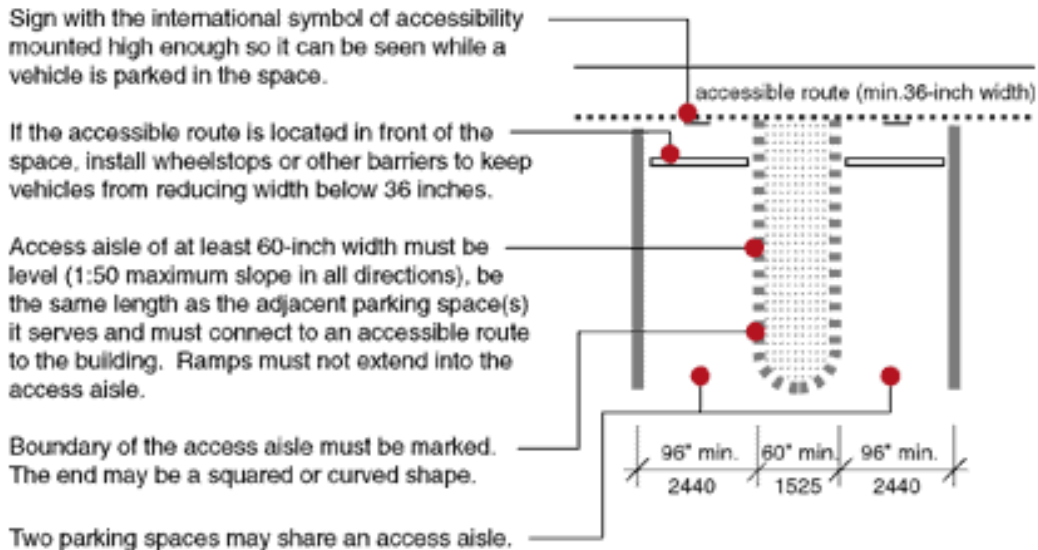
Turning Space T-Shaped space for 180 degree turns.

<http://www.access-board.gov/>

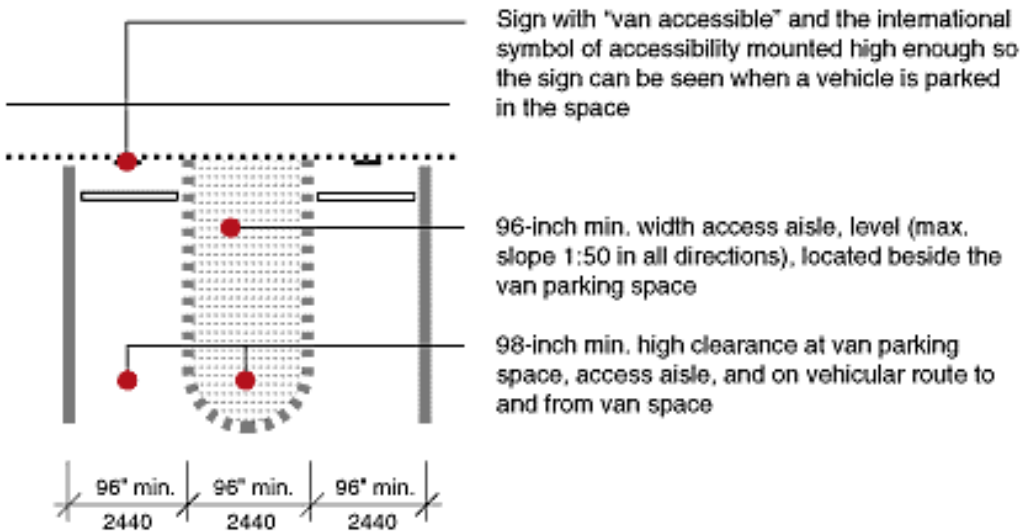
3.GENERAL ADAAG REQUIREMENTS

ARRIVAL

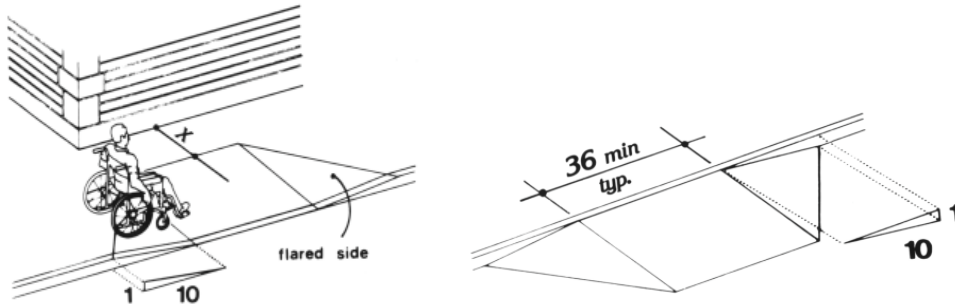
Parking



Parking-Van Accessible

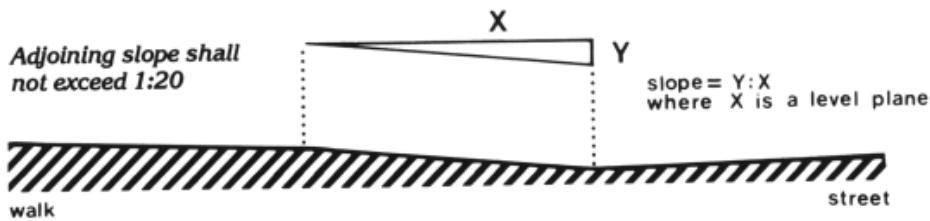


Exterior Path of travel, curb cuts



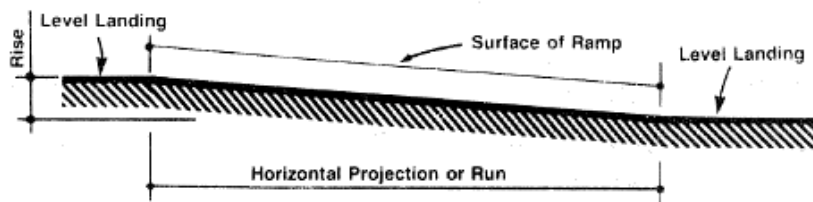
x = 36 in. Requirements for whenever an accessible route crosses a curb.

Slope



-Any part of an accessible route with a slope greater than **1:20** shall be considered a **ramp** and shall comply with the ADAAG's ramp requirements.

Ramps



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

-Maximum slope in new construction shall be **1:12**; minimum clear width of a ramp shall be 30 in.

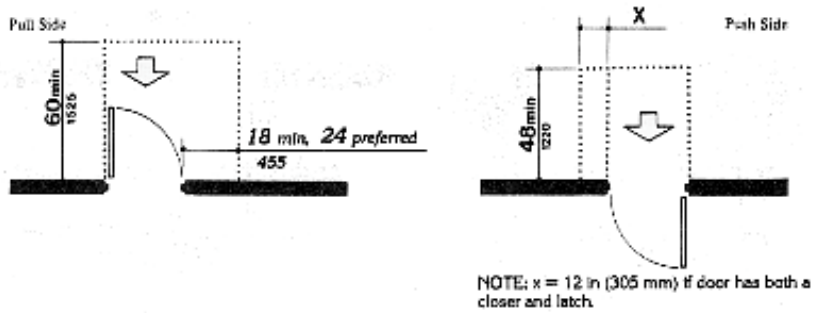
-Surfaces: Stable firm, slip-resistant.

ENTRANCES

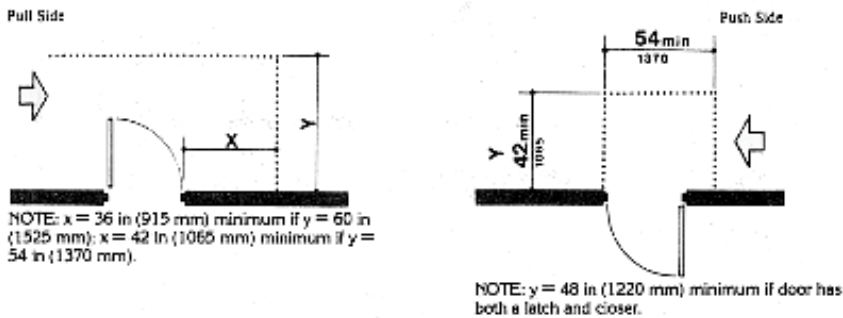
Level landing

-The floor or ground area within required maneuvering clearances shall be level and clear.

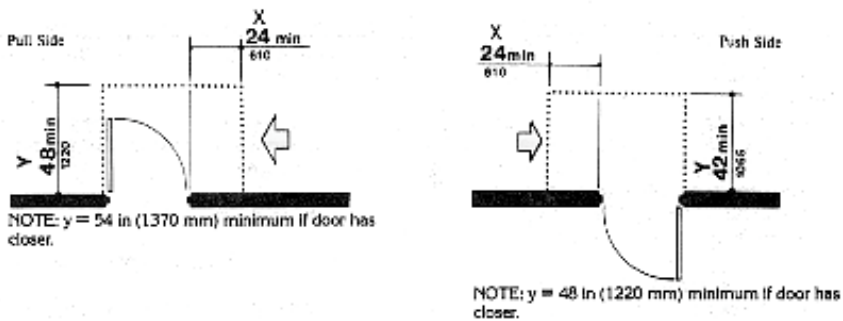
Door maneuvering clearances



(a) Front Approaches — Swinging Doors



(b) Hinge Side Approaches — Swinging Doors



(c) Latch Side Approaches — Swinging Doors

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

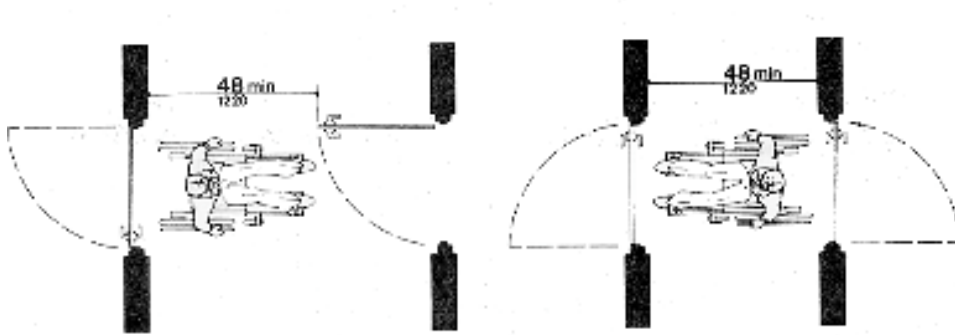
Doors

- All doors must be accessible and usable by individuals with disabilities.
- Door opening force requirements:
 - Exterior hinged doors- none
 - Interior Hinged door – 5lbf (22.2N)
 - Sliding or folding doors- 5lbf (22.2 N)

Power Doors

- Such Doors shall not open to back check faster than 3 seconds.
- Shall require no more than 15-lb./f (66.6N) to stop door movement.

Vestibules



-The minimum 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.

Signage



(a)
Proportions
International Symbol of Accessibility



(b)
Display Conditions
International Symbol of Accessibility

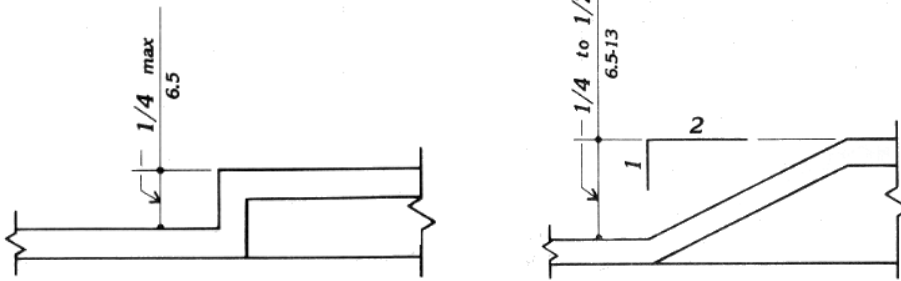
-Required by accessible doors

Hardware



- Easy to grasp
- No tight grasping, pinching, or twisting of the wrists.
- Mounted no higher than 48 in above finished floor
- (Shall be able to operate with a close fist).

Threshold



-Threshold at doorway shall not extend $\frac{3}{4}$ in. in height for exterior sliding doors or $\frac{1}{2}$ in. for other types of doors.

-Raised threshold and floor level changes at accessible doorways shall be beveled with a slope no greater than 1:2.

INTERIOR CIRCULATION

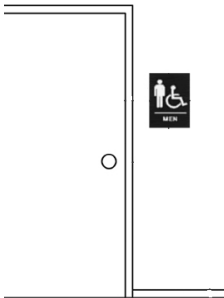
Ramps

- The least possible slope shall be used for any ramp.
- The maximum slope of the ramp in new construction shall be 1:12
- The maximum rise for any run shall be 30 in.

Vertical Access

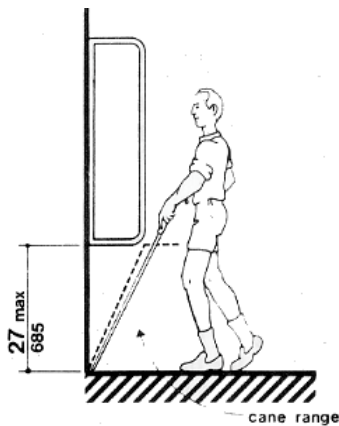
- Stairs** must meet ADAAG requirements.
- If **lifts or elevator** are supplied stairway requirements are optional, but are recommended.

Signage

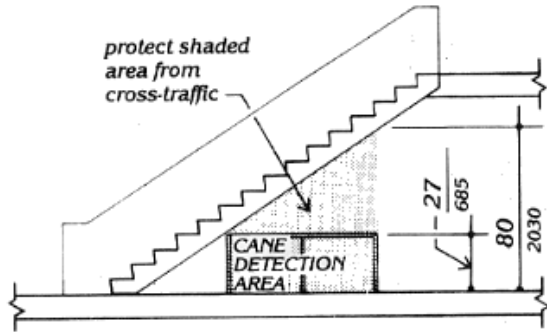


Side of door handle.

Hazard obstacles

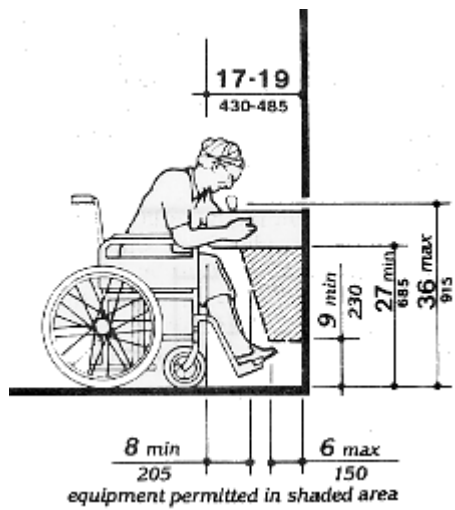


Cone Range



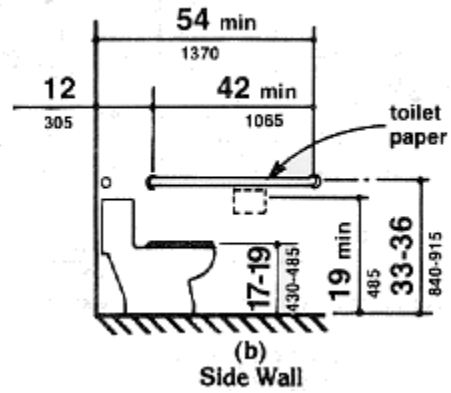
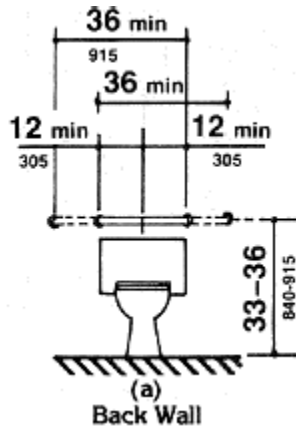
Below stair protection

Drinking Fountains

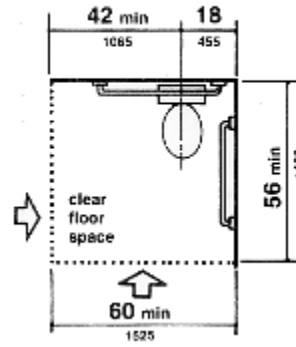
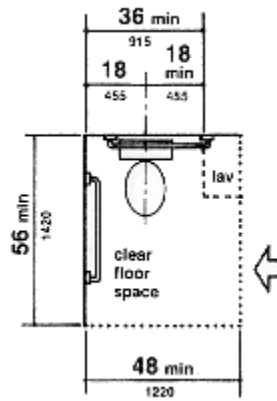
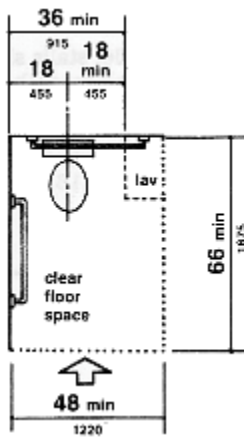


- Spout shall not be higher than 36 in.
- Units shall have clear knee space.

WATER CLOSETS

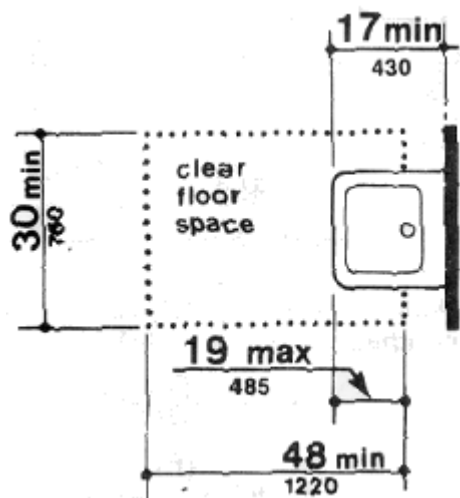


Grab Bars

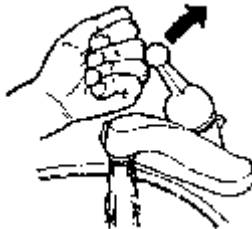
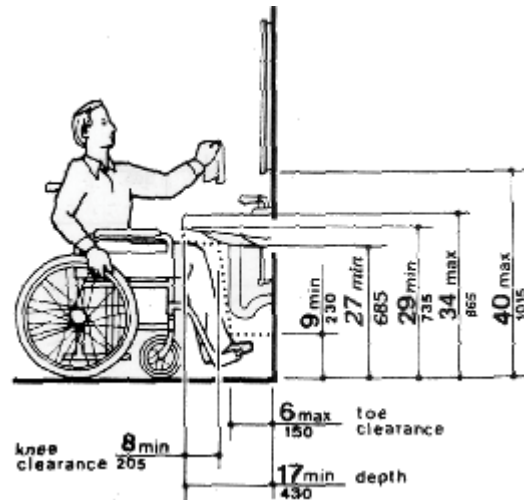


Maneuvering Clearance

Lavatories



Heights and Clearances



-Controls and operating mechanism shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist.

Clear Floor Space Requirements for all Water Closets

DO'S

- 5 foot turning radius can overlap clear floor space (Sink and toilet).
- Clear floor spaces can overlap.
- Door swing can overlap (no limit) 5 foot turning radius.

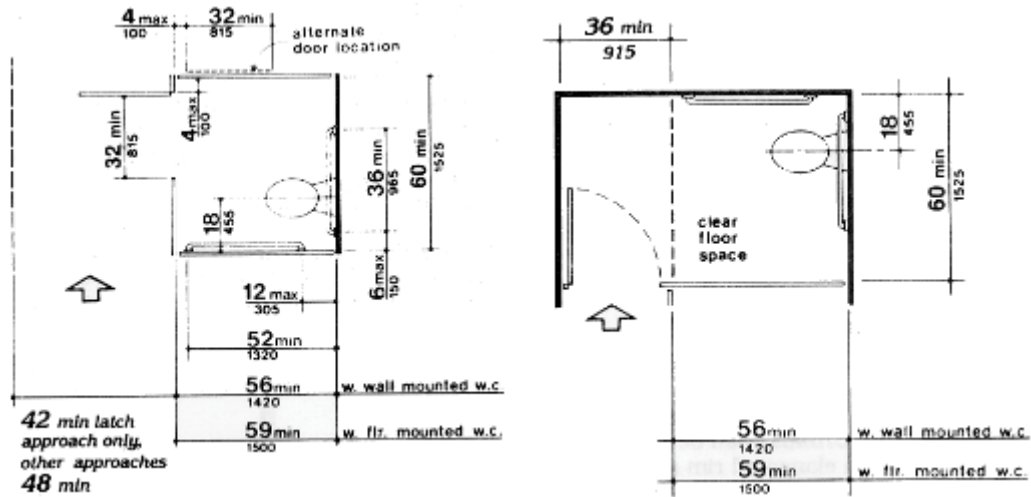
DON'TS

- Doors can't swing into clear floor spaces (Sink and toilet).
- Overlap fixture clearance into the doors Maneuvering Clearance.

Urinals

- Elongated rim at a max. of 17 in. (430 mm) above the finish floor.
- Clear floor space 30 in by 48 in.
- Flush control shall be hand operated or automatic and mounted no more than 44 in. (1120 mm) above the finish floor.

Toilet Stalls



Mirrors

- Mirrors shall be mounted with the bottom edge of the reflecting surface no higher than 40 in above the finished floor.

Bathtubs-Clear Floor Space

- An in-tub seat or a seat at the head end of the tub shall be provided.
- Seat shall be mounted securely and shall not slip during use.
- A shower spray unit with a hose at least 60 in. long that can be used both as fixed showerhead and as hand-held shower shall be provided.

Locker Rooms

- Where dressing and fitting rooms are provided for use by the general public, patients, customers or employees, **5 percent**, but not less than one, of dressing room for each type of use in each cluster of dressing rooms shall be accessible and shall comply with ADA.

Dressing rooms

Clear floor space allowing a person using a wheelchair to make a 180-degree turn shall be provided in every accessible dressing room entered through a swinging or sliding door.

- No door shall swing into any part of the turning space.
- Not required in a private dressing room entered through the curtained opening at least 32-in. wide if clear floor space renders the dressing room usable by a person using a wheelchair.

Work Areas

- Required to have accessible approach, entrance and exit.
- Workstations are individualized according to requested reasonable accommodations.

Break Rooms

Employees with disabilities must have equal access to break rooms, lounges, cafeterias, and any other non-work facilities that are provided by an employer for use by his employees.

- Proper table heights with knee clearance.
- Accessible counter heights 34 in.
- Accessible sinks and adjacent preparation area.
- Vending Machine control and dispenser with reach ranges.
- etc.

Storage areas

- A clear floor space at least 30 in by 48 in that allows either a forward or parallel approach by a person using a wheelchair shall be provided at accessible storage facilities.
- Accessible Storage spaces shall be within at least one of the of the reach ranges.
- Clothes rods or shelves shall be a maximum of 54 in above the finish floor for a side approach.
- Hardware for accessible storage facilities shall be accessible. Touch latches and u shaped pulls are acceptable.

Telephones

- If 4 or more public pay telephones are provided at a site, and at least one is in an interior location, then **at least one** interior public text phone (TTY) shall be provided.
- If an interior public pay telephone is provided in a building of a public facility, at least one interior public text telephone (TTY) shall be provided.
- The highest operable part of the telephone shall be within the reach ranges.
- Hearing aid compatible and capable of volume control.
- Pushbutton controls where service for such equipment is available.
- The cord from the telephone to the handset shall be at least 29 in long.
- Text telephone (TTY's) permanently affixed within or adjacent to, the telephone enclosure.
- Equivalent facilitation may be provided.

Alarms

- Visual alarm signal appliances shall be integrated into the building of facility alarm system. If single station audible alarms are provided then single station visual alarm signals shall be provided.

4.SPECIFIC USE FACILITIES

RESIDENTIAL

No further requirements besides general ADAAG.

ASSEMBLY AREAS

- At least **one percent** of the seating must be wheelchair-seating locations
- Accessible seating must be integrated in to the seating plan.
- Companion seating must be provided.
- At least one percent of all fixed seating must be aisle seats with removable or no armrest.
- Seating locations must provide comparable **line of sight**.

RESTAURANTS

- At least **5 percent**, of the fixed tables (or a portion of the dinning counter) shall be accessible and proportionally distributed.
- A minimum portion of counters and bars must be 34 inches in height, which is 60 inches in length.
- Access aisles of at least 36 inches to all accessible areas.
- Dinning areas, including raised or sunken dining areas, loggias, and outdoor seating areas, shall be accessible. Unless.
 1. the area of mezzanine seating measures no more than 33 percent of the area of the total accessible seating area:
 2. The same services and décor are provided in an accessible space usable by the general public.
 3. Where a head table or speaker's lectern is located on a raised platform shall be accessible.
 4. Self-service shelves and dispensing devices for tableware, dishware, condiments, food and beverages shall be installed to comply with reach ranges.
 5. Spaces for vending machines and other equipment shall comply with be with reach ranges and shall be located on an accessible route.
 6. Food service lines shall have a minimum clear width of 36 in, with a preferred clear width of 42 in.
 7. Tray slides shall be mounted no higher than 34 in.
 8. In self-service shelves are provided, at least 50 percent of each type must be within reach ranges.

MEDICAL CARE FACILITIES

-Long term care facilities, nursing homes- At least **50 percent** of patient bedrooms and toilets, and all public use and common use areas as required to be designed and constructed to be accessible.

-Where toilet/bath rooms are provided as a part of a patient bedroom, each patient bedroom that is required to be accessible shall have an accessible toilet/bath room.

BUSINESS, MERCANTILE AND CIVIC

-In areas where counters have cash registers **at least one of each type** shall have a portion of the counter which is at least 36 in length with a maximum height of 36 in above the finish floor. In service areas without cash registers equivalent facilitation can be used.

-Where counters or teller windows have security glazing to separate personal from public, at least on of each type provide a method to facilitate voice communication that is accessible to both individuals who use wheelchairs and individuals who have difficulty bending or stopping.

-Use table to determine number of accessible checkout aisles per total aisles.

LIBRARIES

-At least **5 percent** or a minimum of one of each element of fixed seating, tables, or study carrels shall be accessible.

-At least one lane of each checkout area shall be accessible. Any traffic control or book security gates or turnstiles shall be accessible.

-Minimum clear aisle space at card catalogs and magazine displays shall be accessible.

-A height of 48 in. preferred.

-Minimum clear aisle width between stacks shall be 36 in with 42 in preferred.

-Shelf height in stack areas is unrestricted.

HOTELS

- Use table to determine number of accessible rooms and rooms with roll in showers.
- Accessible sleeping rooms shall have a 36 in clear width maneuvering space located along both sides of the bed.
- An accessible route complying shall connect all accessible spaces and elements, within the unit.
- Doors and doorways shall be designed to allow accessible passage into and within all sleeping rooms, suits or other covered units.
- Fixed or built-in storage facilities shall contain accessible storage space.
- When provided as accessory to a sleeping room, kitchens, kitchenettes, wet bars, or similar amenities shall be accessible.
- At least 50% of shelf space in cabinets or refrigerator/freezers shall be within the reach ranges.
- Visual modification devices shall also be provided to alert room occupants of incoming telephone calls and a door knock or bell. Notification devices shall not be connected to auxiliary visual alarm signal appliances.
- An accessible electrical outlet within 4 ft of a telephone connection shall be provided to facilitate the use of a text telephone.

EXEMPTIONS

- Full compliance will be considered structurally impractical only in those rare circumstances when the unique characteristics of terrain prevent the incorporation of accessibility features.
- Any portion of the building or facility, which can be made accessible, shall comply to the extent that is not structurally impracticable.
- Accessibility is not required to or in: Raised areas used primarily for purposes of security; Non-occupiable spaces accessed only by ladders, catwalks, etc. Elevator pits, elevator penthouses, Piping or equivalent catwalks and Transformer vaults.

TAX BENEFITS

Tax credit

- Small businesses only, (1,000,000 revenue or less or 30 or fewer full-time workers)
- 50% of the eligible access expenditures in a year
- No credit for the first \$250 of expenditures.
- The maximum tax credits is \$5,000

Tax Deduction

- Maximum of \$15,000 per year.
- A business including active ownership of an apartment building) of any size may use this deduction for the removal of architectural or transportation barriers.

Small Business can use these incentives in combination if the expenditures incurred qualify. For example, a small business that spends 20,000 for access adaptation may take a tax credit of \$5,000 (based on \$10,250 of expenditure), and a deduction of \$15,000

The deduction is equal to the difference between the total expenditures and the amount of the credit claimed.

Maintenance of Accessible Features

A systemic process must be in place for each facility to insure compliance.

ADDAG GUIDELINES ONLY PROVIDE MINIMAL ACCESSIBILITY.

-END-