

# **STANDARD SPECIFICATIONS FOR FACILITIES FOR THE HANDICAPPED**

Effective Sept. 5, 1968

Authorized and Enforceable under  
Ill. Rev. Statutes  
Chapter 111  
Sections 1 etc.

Published and Distributed by  
Department of General Services  
Office of Supervising Architect  
705 State Office Building  
Springfield, Illinois 62706

## FOREWORD

This Standard has been prepared in accordance with, and as an addendum to, House Bill 2416 as passed by the 75th General Assembly of the State of Illinois. This Standard is based on U.S.A. Standard A-117.1-1961. Only those modifications and deletions have been made to adhere to the letter and intent of the Illinois Law.

Approximately one out of seven people in our Nation has a permanent physical disability. Because of the population and the nature of both agricultural and industrial enterprises in the State of Illinois, we might logically have a higher percentage of individuals with physical disabilities of all causes and manifestations and a very significant number of individuals confined to wheelchairs all or part of the time. This segment of our population represents human resources of inestimable value and is of great economic significance to the entire State of Illinois.

The most common design and construction of buildings and facilities, as practiced over the years, creates barriers for the physically handicapped that lessen the social and economic gains now evident in the rehabilitation of these individuals. These 'architectural barriers' make it very difficult to project the physically handicapped into normal situations of education, recreation, and employment.

It is in the best interest of the entire State of Illinois, all of its political subdivisions, and all of its citizenry that these Standards have been developed, and that they be widely distributed, energetically promulgated and firmly adhered to.

This Standard has been carefully written so as not to pose undue hardships on anyone. Its specifications are the result of extended and careful consideration of available knowledge and experience on this subject and are intended to be minimum requirements. Although this Standard, as charged by law, is written specifically for individuals confined to wheelchairs all or part of the time, authoritative and responsible personnel within the state are aware of the many other manifestations of physical disability and feel that these are accounted for, for the most part, in this Standard. However, your attention is called to the appendix of this Standard.

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STANDARD SPECIFICATIONS FOR FACILITIES FOR THE HANDICAPPED

STATE OF ILLINOIS

DEPARTMENT OF GENERAL SERVICES

I. SCOPE AND PURPOSE

A. Scope

1. This Standard applies to all buildings and facilities used by the public.
2. This Standard is concerned with non-ambulatory disabilities, or those using wheelchairs all or part of the time. 1.
3. This Standard does not apply to residences.
4. This Standard is mandatory on all new construction of buildings and facilities used by the public as herein defined and identified.
5. This Standard shall be applied, to the extent deemed feasible, in cases of remodeling.

Example: It is desirable that any remodeling involving the entrance should result in an accessible entrance. Any remodeling involving the approach should result in an accessible and usable approach. Any remodeling of a given area, such as a bathroom, should result in an accessible and usable bathroom.

Example: It is desirable that any large scale remodeling which appreciably changes the use or function of the facility should result in the entire facility becoming accessible and usable.

1. See definitions under II

NOTE: The addition of a major wing or unit to an existing facility should be considered new construction, of and by itself, and would therefore be mandated under this Standard, although it might be considered remodeling in that it is an addition to an existing facility.

**B. Purpose**

1. This Standard is intended to make all buildings and facilities used by the public, accessible to, and functional for, the physically handicapped, to, through, and within their doors, without loss of function, space, or facility where the general public is concerned. It reflects great concern for safety of life and limb.
2. In unique instances the use of other methods or materials might be employed but only when it is clearly evident that equivalent facilitation and protection are thereby secured.

**II. DEFINITIONS****A. Public Building, means:**

1. A building, structure or improved area owned or leased by this state or its political subdivisions.
2. A building, structure or improved area used primarily by the general public as a place of gathering or amusement, including but not limited to theaters, restaurants, hotels, and stadiums.
3. 1 (above) refers to public financing, in part or whole;  
2 (above) refers to private financing, or public financing.
4. All public accommodations are public buildings.

**B. Public Accommodation, means:**

1. A building, structure or improved area which is used primarily by the general public as a place of gathering or amusement, including theaters, restaurants, hotels, and stadiums.

Note: This definitely includes outdoor areas, particularly those for recreation.

2. All public accommodations are public buildings.

**C. Handicapped Person, means:**

A person confined through disease or injury to a wheelchair all of the time or part of the time.

D. Facility for Handicapped Persons

Includes any ramp, handrail, elevator, door, specially treated surface and similar design, convenience or device which facilitates the health, safety or comfort of a handicapped person.

E. Remodel, means:

With respect to an existing public building, to construct an addition, make substantial repairs or substantially alter the appearance, design or layout of said building.

F. Standard

When this term appears in small letters and is not preceded by U. S. A. or Illinois, it is descriptive and does not refer to a Standard approved by U. S. A. Standards Institute or a Standard by specification of those herein written. For example, a "standard" wheelchair is one characterized as standard by the manufacturers.

G. Fixed Turning Radius, Wheel to Wheel

The tracking of the caster wheels and large wheels of a wheelchair when pivoting on a spot.

H. Fixed Turning Radius, Front Structure to Rear Structure

The turning radius of a wheelchair, left front foot platform to right rear wheel, or right front foot platform to left rear wheel, when pivoting on a spot.

I. Involved (Involvement)

A portion or portions of the human anatomy or physiology, or both that have a loss or impairment of normal function, as a result of genesis, trauma, disease, inflammation, or degeneration.

J. Ramps, Ramps with Gradients

Because the term "ramp" has a multitude of meanings and uses, its use in this text is clearly defined as ramps with gradients (or ramps with slopes) that deviate from what would otherwise be considered the normal level. An exterior ramp, as distinguished from a "Walk" would be considered an appendage to a building leading to a level above or below existing ground level. As such, a ramp shall meet certain requirements similar to those imposed upon stairs.

**K. Walk, Walks**

Because the terms "walk" and "walks" have a multitude of meanings and uses, their use in this text is clearly defined as a predetermined, prepared surface, exterior pathway leading to or from a building or facility, or from one exterior area to another, placed on the existing ground level and not deviating from the level of the existing ground immediately adjacent.

**L. Parking Lots, means:**

Any area set aside to facilitate the parking of two or more vehicles and established for the use of the public, with or without charge:

1. On grade or multiple level,
2. Open (outdoor) or enclosed structure,
3. As a separate entity such as a privately operated lot for use by the public or a publicly owned and operated lot for use by the public, and
4. As a part of or adjunct to a building, facility or public accommodation.

**M. Appropriate Number, means:**

1. As used in this text, the appropriate number means the number of a specific item that would be necessary, in accord with the purpose and function of the building or facility, to accommodate individuals with specific disabilities in proportion to the anticipated numbers of handicapped persons who will use a particular building or facility.
2. As an example, although these specifications shall apply to all buildings used by the public (all public accommodations as defined by House Bill 2416), the numerical need for a specific item would differ, for example, between a major transportation terminal, where many handicapped persons would be continually coming and going, an office building or factory, where varying numbers of handicapped persons (in many instances, vary large numbers) might be employed or have reason for frequent visits, a school or church, where the number of individuals may be fixed and activities more definitive, and the many other buildings and facilities dedicated to specific functions and purposes.

Note: Disabilities are specific and where the individual has been properly evaluated and properly oriented and where architectural barriers have been eliminated, a specific disability does not constitute a handicap. It should be emphasized that more and more of those physically disabled are becoming participants, rather than spectators, in the fullest meaning of the word.

3. In no instance shall appropriate number mean less than one.

### III. GENERAL PRINCIPLES AND CONSIDERATIONS

#### A. Wheelchair Specifications

1. The collapsible model wheelchair of tubular metal construction with plastic upholstery for back and seat is most commonly used. The standard models of all manufacturers falls within the following limits, which were used as the basis of consideration:
  - a. Length - 42 inches
  - b. Width - when open - 25 inches
  - c. Height of seat from floor - 19 1/2 inches
  - d. Height of arm rest from floor - 29 inches
  - e. Height of pusher handles (rear) from floor - 36 inches
  - f. Width, when collapsed - 11 inches

#### B. The Functioning of a Wheelchair

1. The fixed turning radius of a standard wheelchair, wheel to wheel, is 18 inches.
2. The fixed turning radius, front structure to rear structure, is 31.5 inches.
3. The average turning space required (180 and 360 degrees) is 60 x 60 inches.

Note: Actually, a turning space that is longer than it is wide, specifically, 63 x 56 inches, is more workable and desirable. In an area with two open ends, such as might be the case in a corridor, a minimum of 54 inches between two walls would permit a 360 degree turn.

4. A minimum width of 60 inches (enclosed) is required for two individuals in wheelchairs to pass each other.

C. The Adult Individual Functioning in a Wheelchair<sup>2,3</sup>

1. The average unilateral-vertical reach is 60 inches and ranges from 54 inches to 78 inches.
2. The average horizontal working (table) reach is 30.8 inches and ranges from 28.5 inches to 33.2 inches.
3. The bilateral-horizontal reach, both arcs extended to each side, shoulder high, ranges from 54 inches to 71 inches and averages 64.5 inches.
4. An individual reaching diagonally, as would be required in using a wall-mounted dial telephone or towel dispenser, would make the average reach (on the wall) 48 inches from the floor.

IV. SITE DEVELOPMENT

- A. Site development is the most effective means to resolve the problems created by topography, definitive architectural designs or concepts, water tables, existing streets, and atypical problems, singularly or collectively, so that ingress, egress, and egress to buildings by handicapped persons can be facilitated while preserving the desired design and effect of the architecture.

2. Extremely small, large, strong, or weak and involved individuals could fall outside the ranges in C, 1 through 4, and the reach could differ from the figure given in C, 4. However, these were determined using a large number of individuals, who were functionally trained, with a wide range in individual size and involvement, including many of the most severe.
3. Most individuals ambulating on braces or crutches, or both, or on canes are able to manipulate within the specifications prescribed for wheelchairs, although doors may present quite a problem at times. However, attention is called to the fact that a crutch tip extending laterally from an individual is not obvious to others in heavily trafficked areas, certainly not as obvious or protective as a wheelchair and is, therefore, a source of vulnerability.

B. Grading

The grading of ground, even contrary to existing topography, so that it attains a level with a normal entrance will make a facility accessible to handicapped persons.

C. Walks

1. Walks should be at least 48 inches wide and should have a gradient not greater than five percent.

NOTE: It is essential that the gradient of walks and driveways be less than that prescribed for ramps, since walks would be void of handrails and curbs and would be considerably longer and more vulnerable to the elements. Walks of near maximum grade and considerable length should have level areas at intervals for purposes of rest and safety. Walks or driveways should have a non-slip surface.

2. Such walks shall be of continuing common surface, not interrupted by steps or abrupt changes in level.

NOTE: IV-C, 1 and 2, separately or collectively, are greatly aided by terracing, retaining walls, and winding walks allowing for more gradual incline, thereby making almost any building accessible to handicapped persons while contributing to its aesthetic qualities.

3. Wherever walks cross over walks, driveways, or parking lots they should blend to a common level.

NOTE: This specification does not require the elimination of curbs, which, particularly if they occur at regular intersections, are a distinct safety feature for all handicapped persons, particularly the blind. The preferred method of meeting these specifications is to have the walk graded downward to the level of the street. However, at principal intersections, it is vitally important that the curb run parallel to the street, up to the point where the walk is inclined, at which point the curb would turn in and gradually meet the level of the walk at its highest point. (A less preferred method would be to bring the surface of the driveway or street to the level of the walk. The disadvantage of this method is that a blind person would not know when he has left the protection of a walk and entered the hazards of a street or driveway.)

4. A walk shall have a level platform at an entrance or exit which is at least 5 feet by 5 feet, if a door swings out onto the platform or toward the walk. This platform shall extend at least 1 foot beyond each side of the doorway.
5. A walk shall have a level platform at least 3 feet deep and 5 feet wide, if the door does not swing onto the platform or toward the walk. This platform shall extend at least 1 foot beyond each side of the doorway.

D. Parking Lots and Structures (See II-K, 1 through 4)

1. An appropriate number of spaces that are accessible and approximate to the facility or public accommodation should be set aside and identified for use by handicapped persons.
2. A parking space opened on one side, allowing room for individuals in wheelchairs to get in and out of an automobile onto a level surface, suitable for wheeling and walking, is adequate.
3. Parking spaces for handicapped persons when placed between two conventional diagonal or head-on parking spaces should be 12 feet wide, or, be so established to allow a net and clear 12 foot for parking, egress, ingress, and aggress.
4. Care in planning should be exercised so that individuals in wheelchairs are not compelled to wheel behind parked cars for any excessive distances.
5. Consideration should be given the distribution of spaces for use by handicapped persons in accordance with the frequency and persistency of parking needs.
6. Walks shall be in conformity with IV-B, 1 through 5.

NOTE: An exception to the foregoing may be allowable when the owner and/or operator of a parking lot or structure guarantees that employees of the parking facility will be on duty at all times to park and retrieve all vehicles. In this situation the standards of accessibility and usability are applicable and enforceable through that point (or points) wherein the owner or operator of the vehicle delivers the vehicle into the hands of an employee of the parking facility and wherein the operator of the vehicle once again, upon leaving, regains possession of the vehicle.

V. BUILDINGS, FACILITIES, PUBLIC ACCOMMODATIONSA. Entrances

1. At least one primary entrance to each building shall be accessible to, and usable by, individuals in wheelchairs.

Note: Because entrances also serve as exits, some being particularly important in case of an emergency, and because the proximity of such exits to all parts of buildings and facilities, in accordance with their design and function, is essential, it is preferable that all or most entrances (exits) should be accessible to, and usable by, individuals in wheelchairs.

2. At least one entrance usable by individuals in wheelchairs shall be on a level that will make the elevators accessible.

B. Ramps with Gradients

Where ramps with gradients are necessary or desired, they shall conform to the following specifications:

1. A ramp shall not have a slope greater than 1 foot rise in 12 feet, or 8.33 percent, or 4 degrees 50 minutes.
2. A ramp shall have handrails on at least one side, and preferably two sides, that are 32 inches in height, measured from the surface of the ramp, that are smooth, that extend 1 foot beyond the top and bottom of the ramp, and that otherwise conform with U.S.A. Standard Safety Codes for floor and wall openings, railings and toe boards, A-12-1932.

Note: Where, for specific reasons, a code specifies handrails to be of heights other than 32 inches, it is recommended that two sets of handrails be installed to serve all people.

Note: Where major traffic is predominately children, particularly handicapped children, extra care should be exercised in the placement of handrails, in accordance with the nature of the facility and the age group or groups being serviced.

NOTE: Care should be taken that the extension of the handrail is not in itself a hazard. The extension may be made on the side of a continuing wall, or, may be designed to be both safe and aesthetic.

3. A ramp shall have a surface which is non-slippery.
4. A ramp shall have a level platform at an entrance or exit which is at least 5 feet by 5 feet, if a door swings out on the platform or toward the ramp. This platform shall extend at least 1 foot beyond each side of the doorway.
5. A ramp shall have a level platform at least 3 feet deep and 5 feet wide, if the door does not swing out onto the platform toward the ramp. This platform shall extend at least 1 foot beyond each side of the doorway.
6. Each ramp shall have at least 6 feet of straight clearance at the bottom.
7. Ramps shall have level platforms at no more than 30 foot intervals for purposes of rest and safety and shall have level platforms wherever they turn.

C. Doors and Doorways

1. Doors shall have a clear opening of no less than 32 inches when open and shall be operable by a single effort.

NOTE: Two-leaf doors are not usable by handicapped persons as defined in II-C, unless they operate by a single effort, or unless one of the two leaves meets the requirements of V-C, 1.

NOTE: It is recommended that all doors have kick plates extending from the bottom of the door to at least 16 inches from the floor, or be made of a material and finish that would safely withstand the abuse they might receive from wheelchair foot platforms, or wheelchair wheels.

2. The floor on the inside or outside of each doorway shall be level for a distance of 5 feet from the door in the direction the door swings and shall extend 1 foot beyond each side of the door.

3. Sharp inclines and abrupt changes in level shall be avoided at doorsills. As much as possible, thresholds shall be flush with the floor.

NOTE: Care should be taken in the selection, placement, and setting of door closers, so that they do not prevent the use of doors by handicapped persons. Time-delay door closers are recommended.

NOTE: Automatic doors that otherwise conform to V-C, 1 through 3, are very satisfactory.

NOTE: These specifications apply both to exterior and interior doors and doorways.

#### D. Floors

1. The floor of each story shall be of a common level throughout or be connected by a ramp in accord with V-B, 1 through 7, inclusive.

EXAMPLE: There shall not be a difference between the level of the floor of a corridor and the level of the floor of the toilet rooms.

EXAMPLE: There should not be a difference between the level of the floor of a corridor and the level of a meeting room, dining room, or any other room, unless proper ramps are provided.

2. In the interest of mobility and safety, extra effort and consideration should be given to the procurement and installation of non-slippery floor surfaces and/or floor finishes.

#### E. Toilet Rooms

1. It is essential that an appropriate number of toilet rooms, in accordance with the nature and use of a specific building, facility, or public accommodation, be made accessible to, and usable by, handicapped persons. (See II-L, 1 and 2).
2. Toilet rooms shall have space to allow traffic of individuals in wheelchairs, in accordance with III-A, 1, a through f, B, 1 through 3, C, 1 through 4.

3. Toilet rooms shall have at least one toilet stall that:
  - a. Is 3 feet wide,
  - b. Is at least 4 feet, 8 inches, preferably 5 feet deep,
  - c. Has a door (where doors are used) that is 32 inches wide and swings out,
  - d. Has handrails on each side, 33 inches high and parallel to the floor, 1 and 1/2 inches in outside diameter, with 1 and 1/2 inches clearance between rail and wall, and fastened securely at ends and center.

Note: It is emphasized that handrails and fastenings shall be secure enough to accommodate the full weight of an adult individual.

- e. Has a water closet with a seat 20 inches from the floor.

Note: The design and mounting of the water closet is of considerable importance. A wall mounted water closet with a narrow understructure that recedes sharply is most desirable. If a floor mounted water closet must be used, it should not have a front that is wide and perpendicular to the floor at the front of the seat. The bowl should be shallow at the front of the seat and turned backward more than downward to allow the individual in a wheelchair to get close to the water closet with the seat of the wheelchair.

4. Toilet rooms shall have lavatories with narrow aprons, which when mounted with a 29 inch clearance to the bottom of the apron are usable by individuals in wheelchairs and all others.

Note: It is important that drainpipes and hot water pipes under a lavatory be covered or insulated so that a person in a wheelchair without sensation will not burn himself.

5. Toilet rooms for men shall have wall mounted urinals with the opening of the basin 19 inches from the floor, or shall have floor mounted urinals that are on level with the main floor of the toilet room.

## 6. Toilet room accessories:

Toilet rooms should have an appropriate number of towel racks, towel dispensers, and other dispensers and disposal units mounted no higher than 40 inches from the floor and, wherein they are included, mirrors shall be mounted with the bottoms no higher than 40 inches from the floor and shelves shall be 40 inches from the floor.

F. Water Fountains

1. An appropriate number of water fountains or other water-dispensing means shall be accessible to, and usable by, handicapped persons. (See II-1, 1 and 2).
2. Water fountains or water coolers shall have up front spouts and controls.
3. Water fountains or coolers shall be hand-operated or hand- and foot-operated.

Note: Conventional floor-mounted water coolers can be servicable to individuals in wheelchairs if a small fountain is mounted on the side of the cooler 30 inches above the floor.

Note: Wall-mounted, hand-operated coolers of the latest design, manufactured by many companies, can serve the able bodied and the physically disabled equally well when the cooler is mounted with basins 36 inches from the floor.

Note: Fully recessed water fountains are not recommended.

Note: Water fountains should not be set in an alcove unless the alcove is wider than a wheelchair. (See III-A,1,b.)

G. Public Telephones

1. An appropriate number of public telephones should be made accessible to and usable by, handicapped persons.

Note: The conventional public telephone booth is not usable by handicapped persons. There are many ways in which public telephones can be made accessible and usable. It is recommended that architects and builders confer with the telephone company in the planning of the building or facility.

2. Such telephones should be placed so that the dial and the headset can be reached by individuals in wheelchairs, in accordance with III-C.
3. An appropriate number of public telephones should be equipped for those with hearing disabilities and so identified with instructions for use.

Note: Such telephones can be used by everyone.

#### H. Elevators

1. All buildings of two or more stories shall have elevators;
  - a. If independent and safe access to all floors by individuals confined to wheelchairs has not been accounted for in an acceptable manner prescribed within this Standard,
  - b. If floor levels, other than the one(s) that is directly accessible to, and usable by, individuals in wheelchairs, contain facilities, services, or functions intended for the general public, essential to the general public, or of broad interest to the general public,
  - c. If levels, other than the one(s) that is directly accessible to, and usable by, individuals in wheelchairs, encompass facilities, services or functions of interest to the general public which are not duplicated on accessible, and usable, floor levels, and
  - d. If the area of an otherwise inaccessible floor is more than one thousand square feet.

Example: A restaurant with a mezzanine, balcony, or second story dining area as an extension to its first floor dining area would not have to make its upper levels accessible by elevator (or other means) because the same facilities, services and functions are duplicated on the accessible level.

Example: A large food service complex with distinctly separate functioning dining rooms would have to have an elevator if such facilities were on different floor levels and not otherwise accessible.

2. Elevators shall be accessible to, and usable by, handicapped persons on the level that they use to enter the building and at all levels normally used by the general public.
3. Elevators shall allow for traffic by wheelchairs in accordance with III-A, B, C, and V-C.

I. Controls

Switches and controls for light, heat, ventilation, windows, draperies, fire alarms, and all similar controls of frequent or essential use shall be placed within the reach of individuals in wheelchairs. (See III-C.)

J. Additional General Considerations

1. Lighting on ramps and walks shall be adequate for the safety of all individuals in accordance with all existing safety codes and practices.
2. Exit signs shall be placed so as to be readily seen by handicapped persons and shall be in accord with all existing safety codes and practices.

K. Public Assembly Areas

1. Public assembly areas are any areas wherein large numbers of individuals collect to participate or to observe programs of participation. The most common of these are auditoria, stadia, gymnasias, or comparable facilities under different names, (Example: field house) and ballrooms, banquet rooms, and theaters.
2. All specifications within this Standard are applicable to public assembly buildings, facilities, or areas.
3. In addition, the following specifications shall be met.
  - a. Unencumbered floor space shall be allotted to accommodate individuals confined to their wheelchairs.

Such space is to be appropriate for viewing the type of events conducted in the specific public assembly area.

Such space shall allow for a portable chair to accommodate husband, wife, child, escort, or companion of the individual in a wheelchair when such might be necessary or appropriate.

b. In such facilities as auditoria and gymnasia, and more particularly when these are associated with schools, areas considered for participation as well as for spectatorship should be equally accessible in accord with the specifications of this Standard. (Examples: The stage of an auditorium or the playing floor of a gymnasium).

- This would include such supportive facilities as dressing rooms, shower rooms, locker rooms, etc. (See Appendix C, Plates IV through XII).

Note: There are many ways in which the foregoing can be achieved without loss of space or function to the general public, and in the best interests of the owners, operators and users of such facilities.

Note: Several examples of this can be found at the University of Illinois and inquiries might be directed to the Rehabilitation-Education Center of the University of Illinois, in Champaign, Illinois.

Of Particular Note: It should be emphasized that more and more individuals confined to wheelchairs are becoming participants, rather than spectators, in the fullest meaning of the word. They are participating in all walks of life, professional, semi-professional, the trades, and in skilled and semi-skilled occupations. They are engaged in music and drama and they participate in wheelchair football, basketball, baseball, track and field, bowling, fencing, square-dancing, archery, etc.

## APPENDIX A

Although the letter of the law is quite specific in its identification of "handicapped person" and the scope and intent of the purpose of the law, authoritative and responsible persons within the State of Illinois readily recognize that many disabilities are compounded in nature and that many individuals confined to wheelchairs will have secondary disabilities involving sight and hearing. Therefore, in support of the law and of the Standard which has grown out of the law and in an effort for thoroughness, rather than conflict with the law, the following items are made an appendix to this Standard.

Appendix A-I Identification

- A-I-a. Appropriate identification of specific facilities within a building used by the public is particularly essential to those with blindness or sight handicaps.
- A-I-b. Raised letters or numbers should be used to identify rooms or offices.
- A-I-c. Such identification should be placed on the wall, to the right or left of the door, at a height between 4 feet 6 inches and 5 feet 6 inches, measured from the floor, and preferably at 5 feet.

NOTE: The proper placement of room identifications in accord with the aforementioned is equally essential and important to handicapped persons as defined in the law, i. e., confined to wheelchairs.

- A-I-d. Doors that are not intended for normal use, and might prove dangerous if a blind person were to exit or enter by them, should be made quickly identifiable to the touch by knurling the door handle or knob.

EXAMPLE: Such doors might lead to loading platforms, boiler rooms, stages, fire escapes, etc., and such doors are quite commonly not marked in the same manner as other rooms and offices.

## Appendix A

Appendix A-II Warning Signals

- A-II-a. Audible warning signals shall be accompanied by simultaneous visual signals for the benefit of those with hearing disabilities.
- A-II-b. Visual signals shall be accompanied by simultaneous audible signals for the benefit of the blind.

Appendix A-III Hazards

- A-III-a. Every effort shall be exercised to obviate hazards to handicapped persons.
- A-III-b. Access panels or manholes in floors, walks, and walls can be extremely hazardous, particularly when in use, and should be avoided.
- A-III-c. When manholes or access panels are open and in use, or when an open excavation exists on a site, particularly when it is approximate to normal pedestrian traffic, barricades shall be placed on all open sides, at least 8 feet from the hazard, and warning devices shall be installed in accordance with Appendix A-II-a and A-II-b.
- A-III-d. Low hanging door closers that remain within the opening of a doorway when the door is open, or that protrude hazardously into regular corridors or traffic ways when the door is closed, should be avoided.
- A-III-e. Low hanging signs, ceiling lights, and similar objects or signs and fixtures that protrude into regular corridors or traffic ways shall be avoided. A minimum height of 7 feet measured from the floor, is recommended.

## APPENDIX B

THE TEXT OF HOUSE BILL 2416 AS PASSED BY THE 75TH GENERAL ASSEMBLY

## Section 1.

This Act shall be known as "An Act to provide facilities for the handicapped in buildings open to the public".

## Section 2. In this Act

"Public building" means: (a) a building, structure or improved area owned or leased by this State or its political subdivisions; (b) a building, structure or improved area used primarily by the general public as a place of gathering or amusement, including but not limited to: theaters, restaurants, hotels, and stadia. All public accommodations are public buildings.

"Public accommodation" means a building, structure or improved area which is used primarily by the general public as a place of gathering or amusement, including theaters, restaurants, hotels and stadiums. All public accommodations are public buildings.

"Handicapped person" means a person confined through disease or disability to a wheelchair.

"Facility for handicapped persons" includes any ramp, handrail, elevator, door, specially treated surface and similar design, convenience or device which facilitates the health, safety or comfort of a handicapped person.

"Remodel" means with respect to an existing public building to construct an addition, make substantial repairs or substantially alter the appearance, design or layout.

## Section 3.

Public buildings which lack facilities for handicapped persons (a) create a substantial risk of death or injury with respect to handicapped persons and others both in normal conditions and in the event of fire, panic or other emergency and (b) impair the full enjoyment of public buildings by handicapped persons. Therefore, facilities for handicapped persons in public buildings are an object of serious public concern.

## Section 4.

Within 6 months after approval of this Act, the Director of the Department of General Services shall publish tentative standards of minimum requirements for facilities for handicapped persons in public buildings. The

## Appendix B

Standards shall not require facilities for the handicapped in portions of public buildings which are not open to or used by the general public. Any interested person may submit to the Director written objections to the tentative standards. If requested in writing by any interested person, the Director shall hold a public hearing within 3 months of publication of the tentative standards. Any interested person may appear at the hearing and present objections. Within 6 months after the publication of the tentative standards, the Director shall issue final standards. The final standards may be revised from time to time by the Director. Revised standards shall be published as tentative revisions. The times and procedures for objection, hearing and issuance of final revised standards shall be in accordance with the procedures established in this Section.

## Section 5.

One year after approval of this Act, the appropriate contracting authority must determine that the plans and specifications of every public building which the State or any political subdivision, governmental entity or public authority

- (a) constructs meets these standards, or
- (b) remodels meets these standards to the extent deemed feasible.

## Section 6.

One year after approval of this Act, no building permit or other official authorization for construction of a public accommodation by any person is valid unless it recites that the plans and specifications meet these standards.

## Section 7.

Tentative and final standards shall be filed with the Secretary of State in accordance with "An Act concerning administrative rules", approved June 14, 1951, as now and hereafter amended.

## Section 8.

If any provision of this Act or application thereof to any person or circumstance is held invalid, such invalidity does not affect other provisions or applications of this Act which can be given effect without the invalid provision or application and to this end the provisions of this Act are declared to be severable.

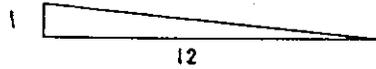
APPENDIX C

pages 21 through 36

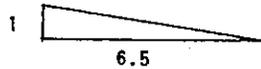
Illustrative Engineering Line Drawings

of

Specific Facilities



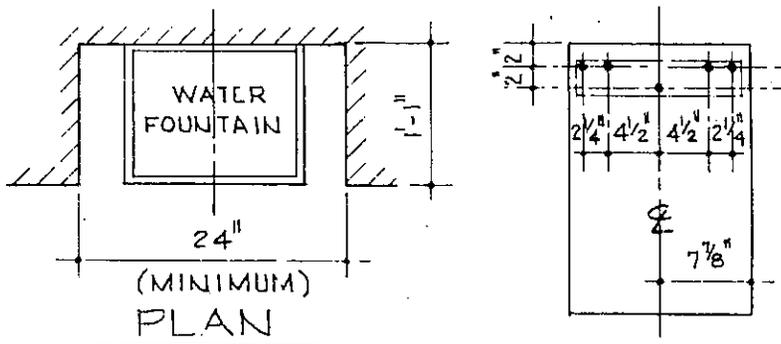
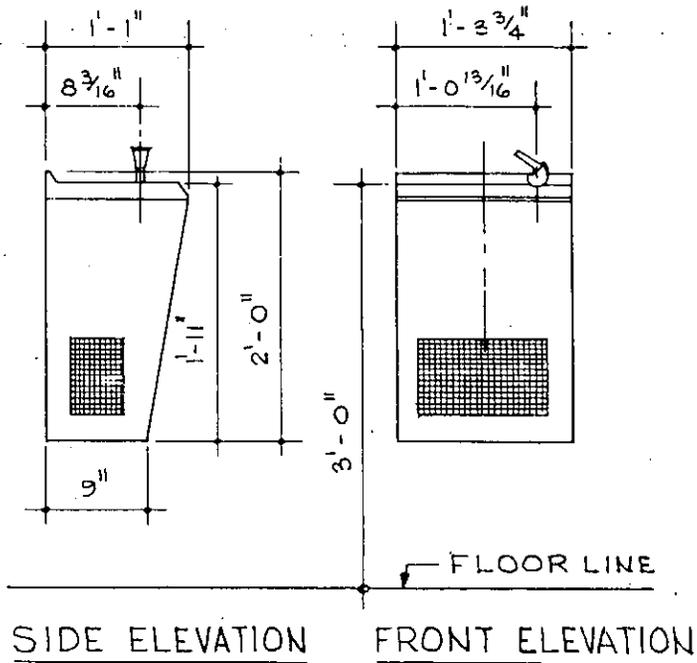
RECOMMENDED STANDARD FOR INCLINE OF RAMP INTO NEW BUILDINGS



RECOMMENDED MAXIMUM INCLINE FOR A RAMP WITHIN OR ADDED TO AN EXISTING STRUCTURE WITH LIMITED SPACE.

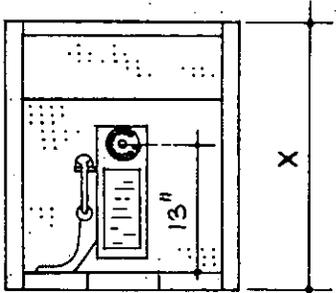
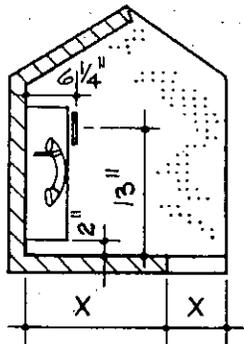
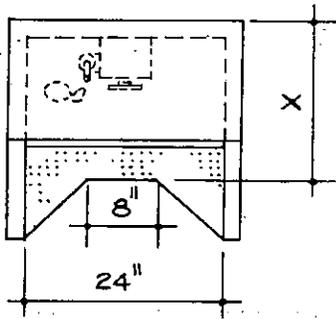
CONVERSION TABLE FOR CONVERTING PITCHES IN INCHES OF RISE PER FOOT TO READINGS IN DEGREES OR PERCENT

INCHES	DEGREES	PERCENT	INCHES	DEGREES	PERCENT
0.1"	30	.83%	2.1"	10	17.50%
0.2"	1	1.67%	2.2"	10 30	18.33%
0.3"	1 30	2.50%	2.3"	11	19.17%
0.4"	1 50	3.33%	2.4"	11 30	20.00%
0.5"	2 20	4.17%	2.5"	12	20.83%
0.6"	2 50	5.00%	2.6"	12 30	21.67%
0.7"	3 20	5.83%	2.7"	13	22.50%
0.8"	3 50	6.67%	2.8"	13 30	23.33%
0.9"	4 20	7.50%	2.9"	14	24.17%
1.0"	4 50	8.33%	3.0"	14 30	25.00%
1.1"	5 20	9.17%	3.1"	15	25.83%
1.2"	5 40	10.00%	3.2"	15 30	26.67%
1.3"	6 10	10.83%	3.3"	16	27.50%
1.4"	6 40	11.66%	3.4"	16 30	28.33%
1.5"	7 10	12.50%	3.5"	17	29.17%
1.6"	7 40	13.33%	3.6"	17 30	30.00%
1.7"	8 10	14.17%	3.7"	18	30.83%
1.8"	8 40	15.00%	3.8"	18 30	31.67%
1.9"	9 10	15.83%	3.9"	19	32.50%
2.0"	9 40	16.67%	4.0"	19 30	33.33%



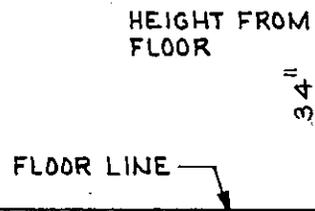
**NOTE:** IF IT IS DESIRED OR REQUIRED THAT THE WATER COOLER BE RECESSED ITS MINIMUM CLEARANCES SHOULD BE AS HEREIN SHOWN.

WATER FOUNTAIN



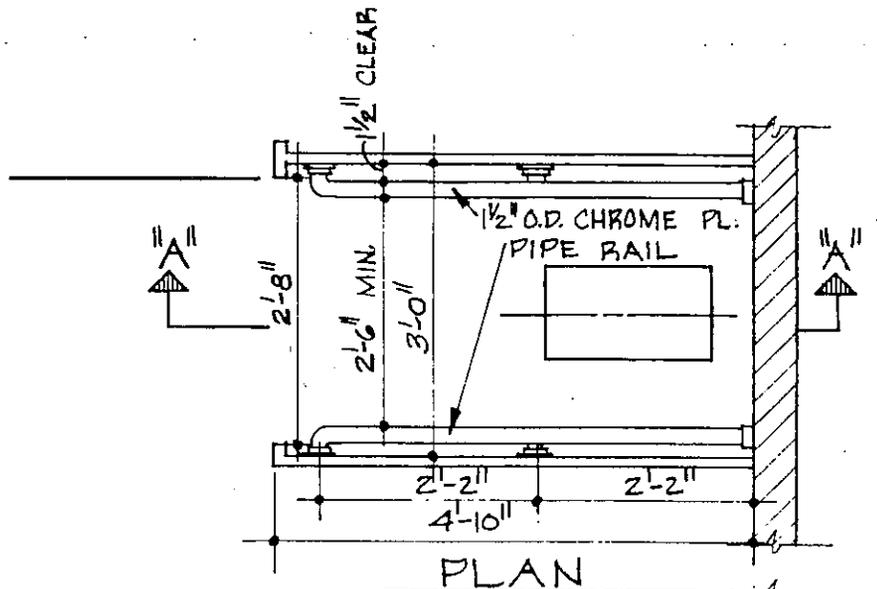
WALL MOUNTED PREFERRED.  
IF FLOOR MOUNTED, PLACE  
IN ACCORDANCE WITH  
A.S.A. - A117.1 - 1961

NOTE: "X" DIMENSIONS ARE  
NON-CRITICAL AND  
ALLOW FOR INDIVIDUAL  
DESIGN COMPATABLE  
WITH LOCATION.

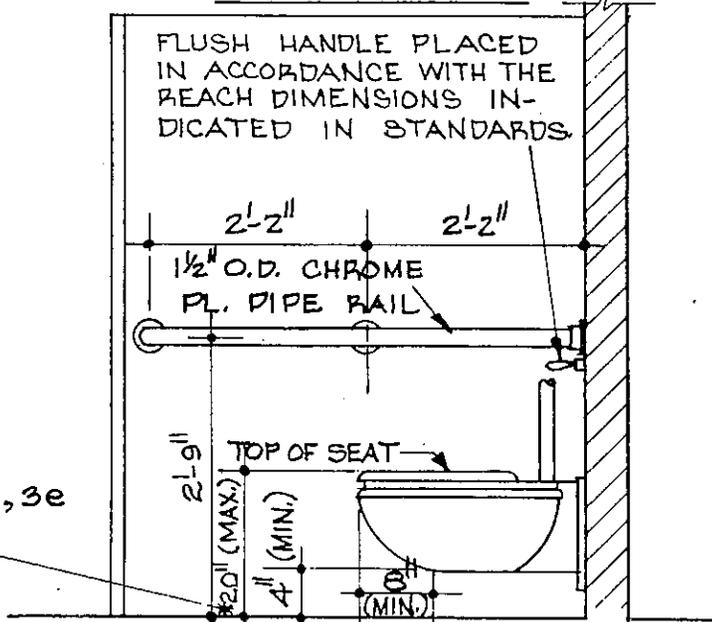


TO BE EQUALLY USABLE BY ABLE,  
DISABLED AND SMALLER CHILDREN

PLAN OF PLACEMENT OF  
MODERN TELEPHONES  
(SEVERAL DESIGNS AVAILABLE)



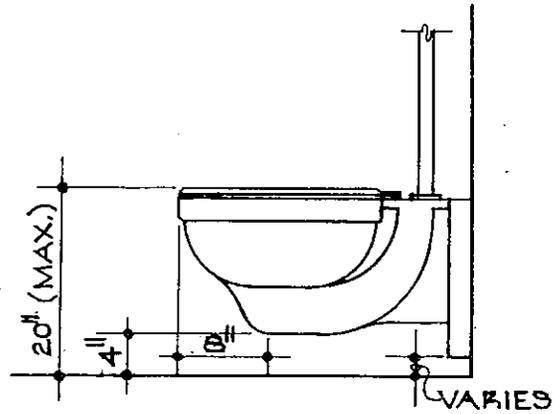
PLAN



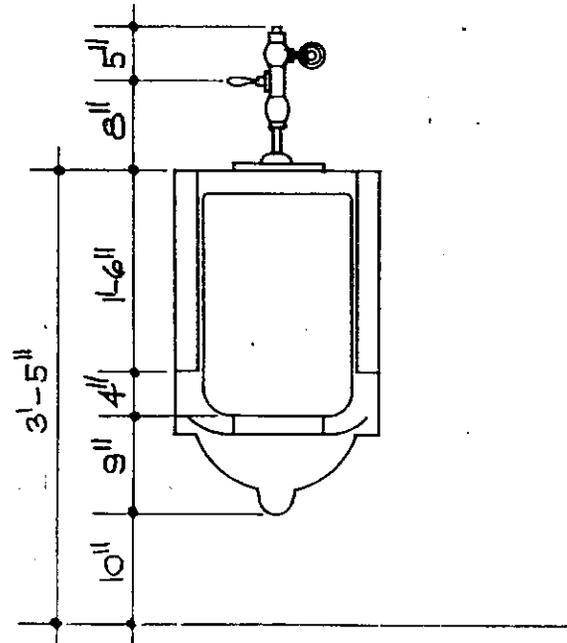
SECTION "A-A"

STANDARD PARAPLEGIC  
TOILET STALL

PLATE 4.

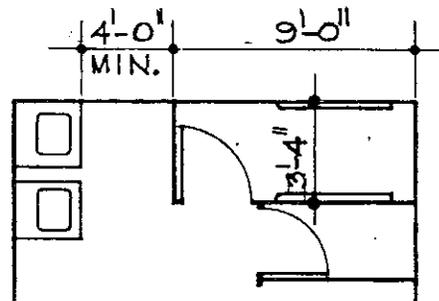
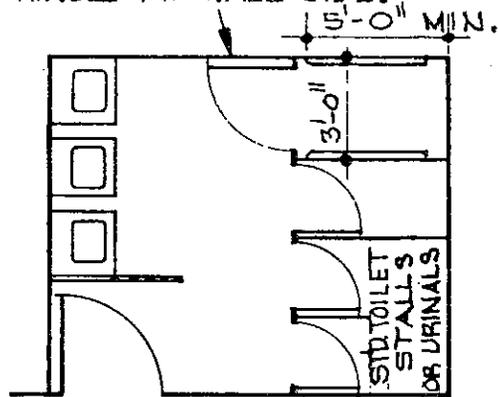


WALL MOUNTED TOILET



WALL MOUNTED URINAL

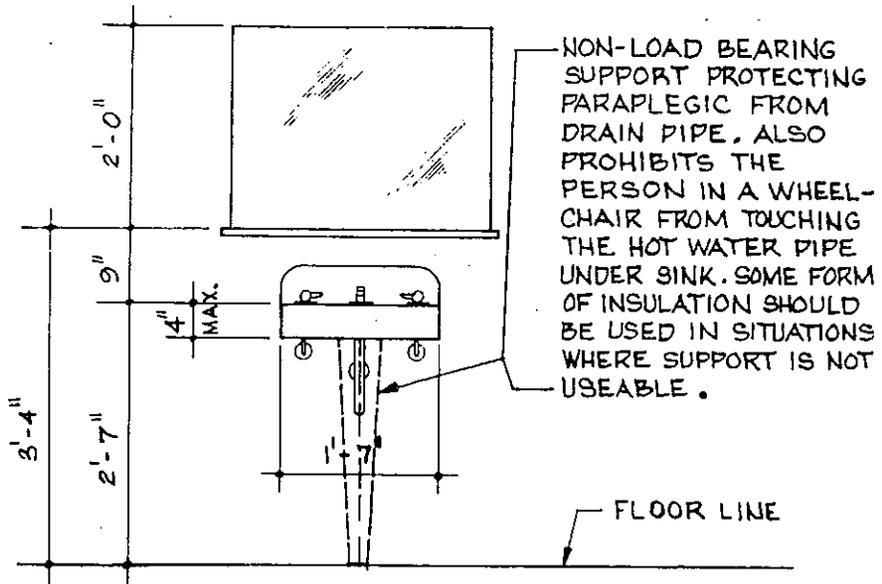
FOR DISABLED - FARTHEST  
FROM ENTRANCE WITH DOOR  
HINGED AT WALL SIDE.



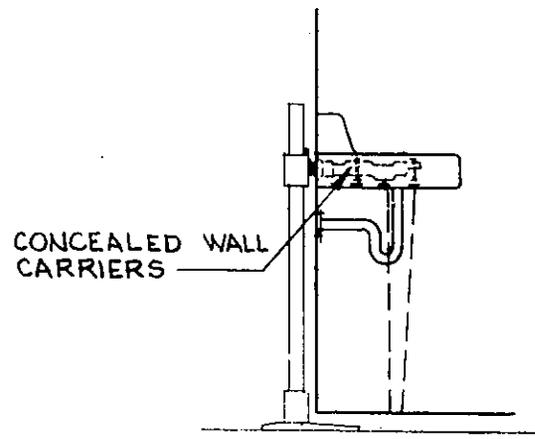
ALTERNATE SCHEME

NOT TO SCALE

SUGGESTED PLACEMENT OF WIDE STALL  
WITH OUTSWINGING DOOR IN TOILET ROOM  
AND A DESIRABLE ALTERNATE SCHEME

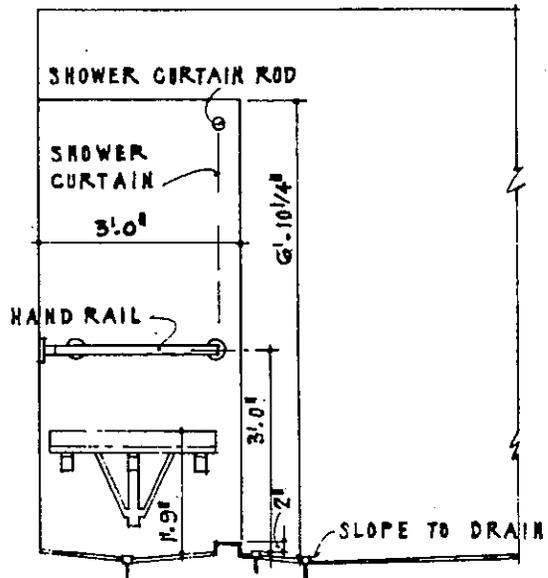
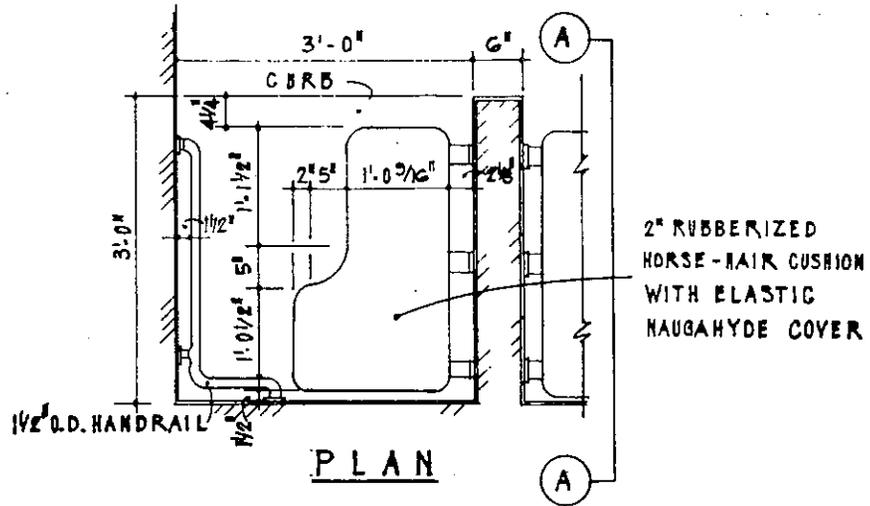


FRONT ELEVATION

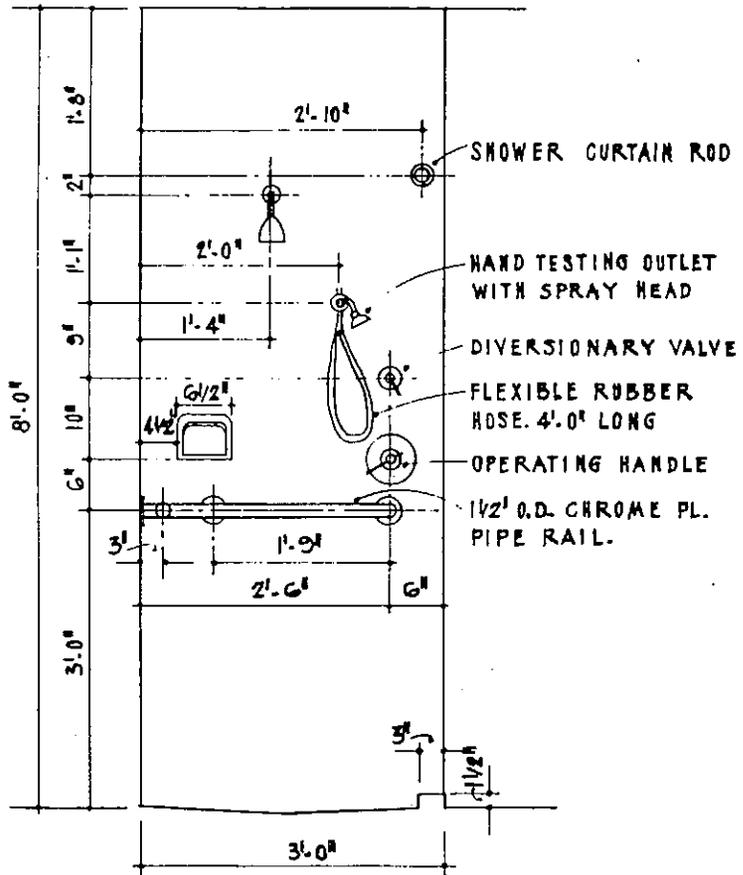


SIDE ELEVATION

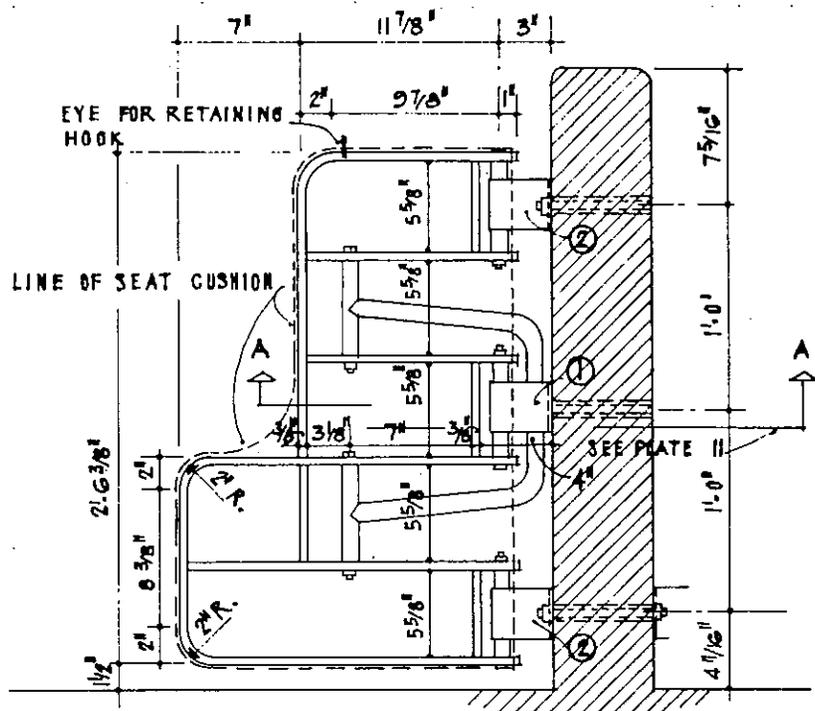
LAVATORY



FOLDING SHOWER SEATS FOR PARAPLEGIC SHOWERS



PLUMBING WALL



P L A N

KEY

- ① SEAT BRACKETS. SEE DETAIL PLATE II.
- ② SEAT BRACKETS. 2 PER SEAT  
STAINLESS STEEL.

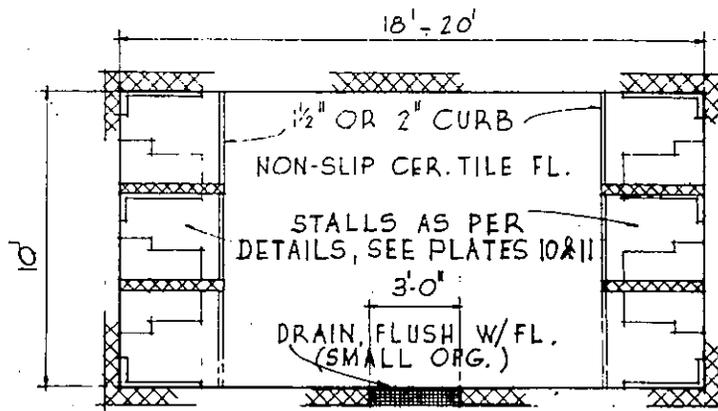
NOTE:

ALL METALS SHALL BE ALUMINUM ALLOY  
OR STAINLESS STEEL.

FOLDING SHOWER SEATS FOR  
PARAPLEGIC SHOWERS

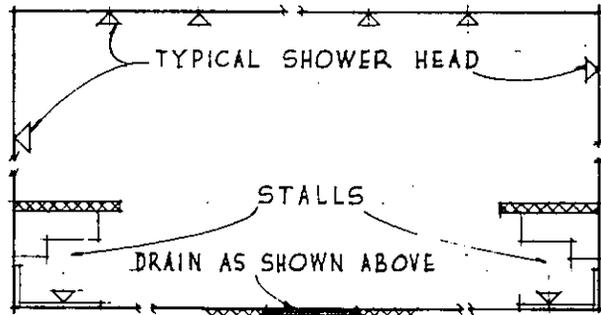
PLATE 10





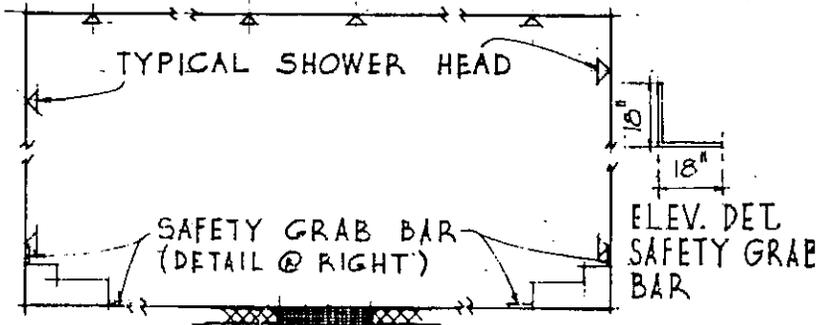
ENTRY TO SHOWER AREA  
**STALL-GANG SHOWER**

(MOST DESIRABLE FOR LARGE NUMBER OF DISABLED OR AGED)

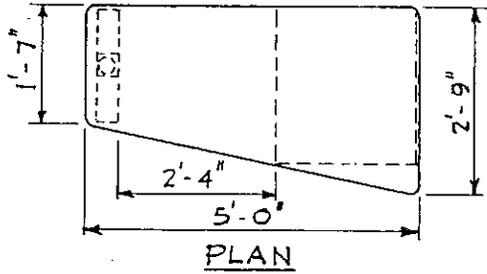


**STALL SHOWER AS PART OF GANG SHO.**

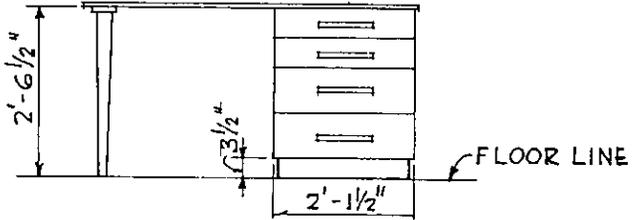
(DESIRABLE FOR MULTI-USE; LIMITED NO. OF AGED & DISABLED)



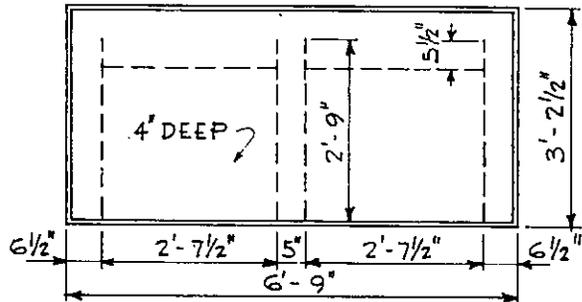
**SEAT IN GANG SHOWER (LEAST DESIRABLE)**



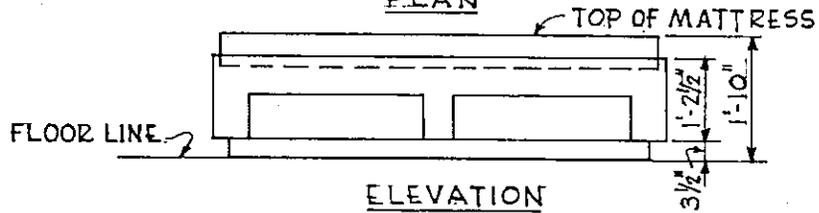
PLAN



ELEVATION  
STUDY DESK



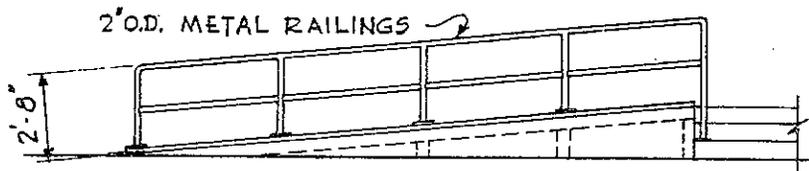
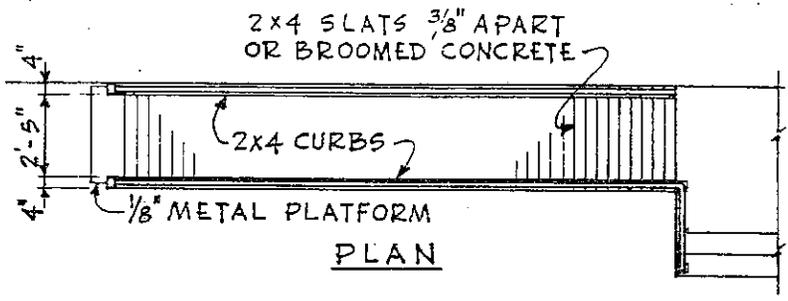
PLAN



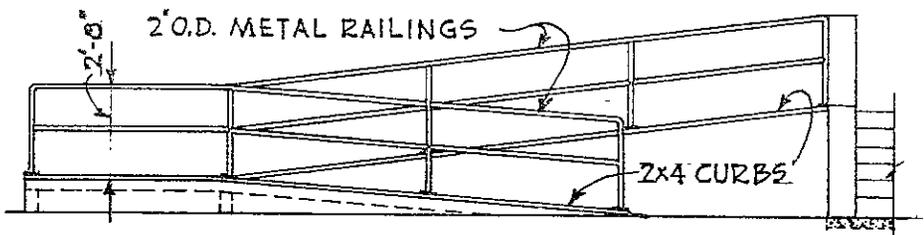
ELEVATION  
BED

FURNITURE  
PLATE 13

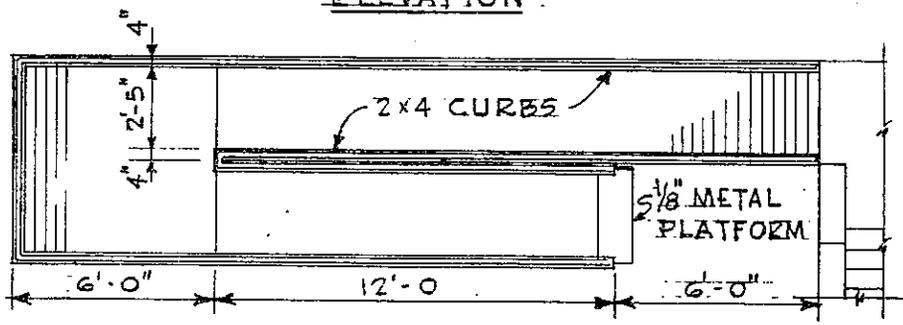
NOTE: IF RAMP IS ADDED TO EXISTING FACILITY AND HAS A  
 STEEPER RISE THAN 1 IN 12 THE FOLLOWING ILLUSTRATIONS APP



ELEVATION  
SINGLE RUN WOOD OR CONCRETE RAMP



ELEVATION



PLAN  
DOUBLE RUN WOOD OR CONCRETE RAMP  
RAMPS  
 PLATE 14

APPENDIX D

COMMITTEES AND PERSONNEL

Advisory Committee

The Honorable Harold A. Katz, Chairman  
The Honorable John A. Graham, Vice Chairman  
Henry Betts, M. D.  
Charles Caniff  
Theodore Gregory, Secretary  
Nathan Lester  
Emily F. Manz  
Edward Matthei  
Timothy J. Nugent  
Edward Parsons  
Joseph R. Passonneau  
Alfred Slicer  
Raymond C. Wieboldt, Jr.

Technical Sub-Committee

Timothy J. Nugent, Chairman  
Theodore Gregory  
Nathan E. Lester  
Edward Matthei  
Joseph R. Passonneau  
Raymond C. Wieboldt, Jr.