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United States Department of the Interior, National Park Service		<b>THE HANDICAPPED ACCOMMODATED</b>	
<b>THE PARK PRACTICE PROGRAM</b>			
National Conference on State Parks • National Recreation & Parks Association			
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Designing facilities for the handicapped requires special planning and attention to details which normally don't occur to us. A recent issue of *TRENDS* magazine on "making parks and recreation areas accessible to the handicapped" suggests that when planning a new facility, handicapped people should be included in the process.

Handicapped people do *not* want segregated facilities. Like everyone else, they want to enjoy outdoor activities and learn from park and recreation programs. Estimates of the numbers of handicapped individuals in this country range up to 67 million, making their needs an important consideration.

A good measure of our sensitivity to others is how we respond to the needs of the handicapped.

A fact sheet on a picnic area at Willamette National Forest in Eugene, Oregon, summarizes the thrust on this special issue of *DESIGN*:

"The goal is not to set aside an area exclusively for these users, but to make it possible for them to enjoy forest recreation opportunities on an equal basis. Being aware of the needs of the handicapped is the largest obstacle to including them as users of fresh recreation areas. Once these needs are known and appreciated, the physical design solution is relatively easy to accomplish. Many existing recreation facilities can be modified to accommodate the handicapped by modifying such structures as traffic controls, trails, stoves and tables."

## It's The Little Things That Count

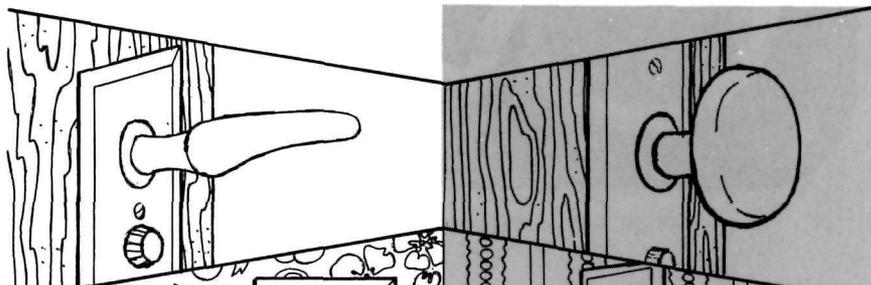
Many of us have problems with manual dexterity. Children, old people and many physically handicapped people find door knobs, and latches, light switches, radio and television dials and water faucets difficult to manipulate.

As you plan your facility, try looking for fixtures like those pictured on the good side of the ledger below. They are readily available and make life so much easier for many of us.

Try it this way . . .

Instead of this . . .

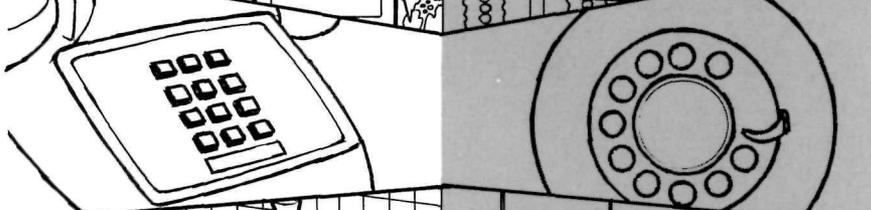
door knob



light switch



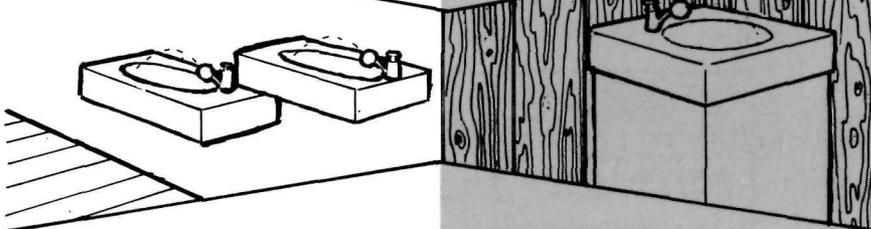
telephone



water faucet



water fountain



## The Wheelchair

The wheelchair bound find the greatest barriers to accessibility. In order to better understand the constraints a wheelchair bound person faces, remember that in their chairs, they are roughly two-thirds as tall as you and twice as wide.

Standard model wheelchairs are:\*

42 inches long

25 inches wide

A standard seat is 19½ inches from the floor

A standard armrest is 29 inches from the floor

A standard set of pusher handles is 36 inches from the floor

When collapsed, a wheelchair is about 11 inches wide.

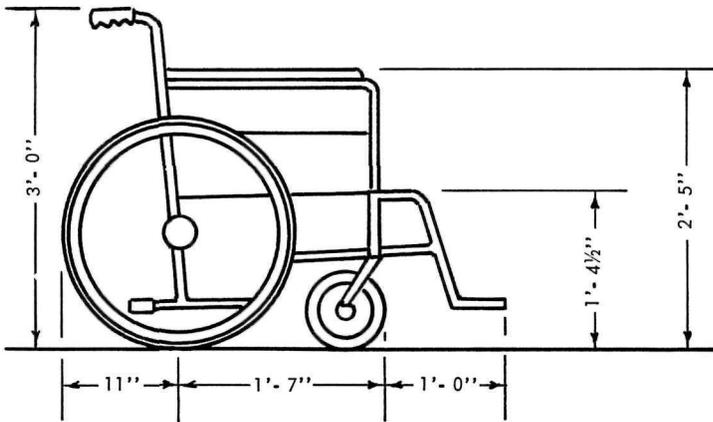
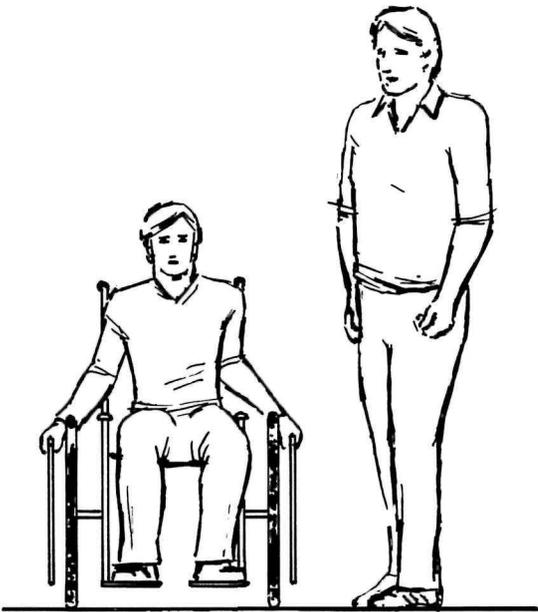
The turning radius of a standard wheelchair, wheel to wheel, is 18 inches.

The fixed turning radius, front structure to rear structure is 31.5 inches.

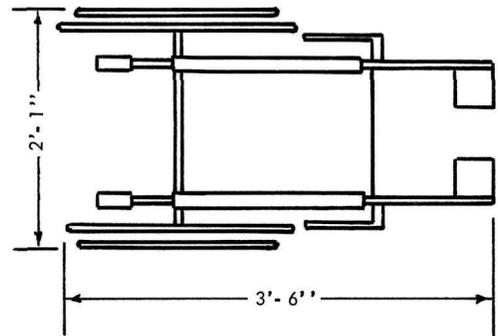
Turning space needed is about 60 x 60 inches.

An adult individual's unilateral reach is about 60 inches from his or her position in the chair. The average horizontal working reach is 30.8 inches and ranges from 28.5 inches to 32.2 inches. Bilateral horizontal reach, with both arms extended to each side, shoulder high, ranges from 54 to 71 inches, averaging 64.5 inches. Wheelchair bound people reaching up on a diagonal make a reach that is about 48 inches from the floor.

\* Specifications delineated by the American National Standards Institute.



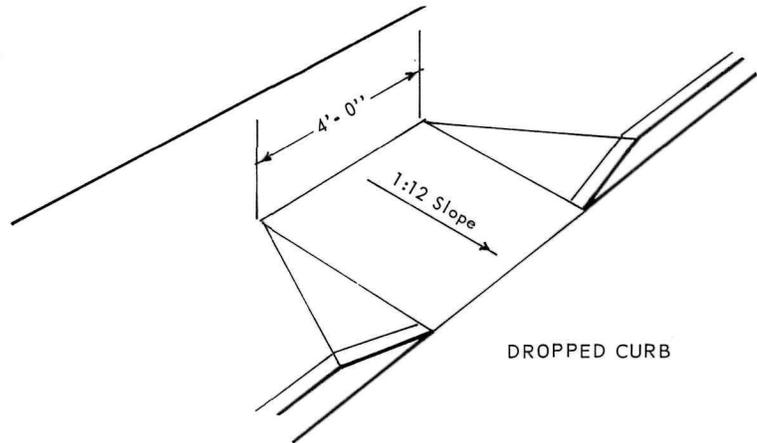
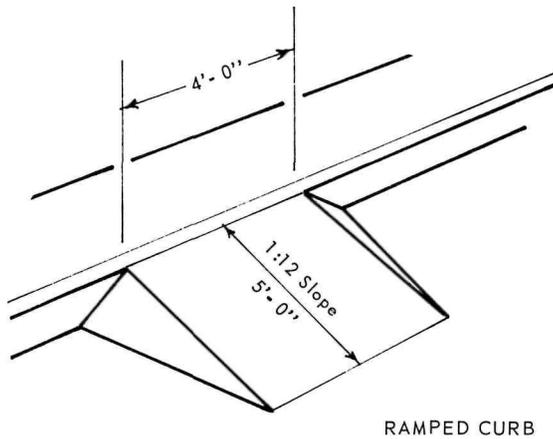
SIDE VIEW



TOP VIEW

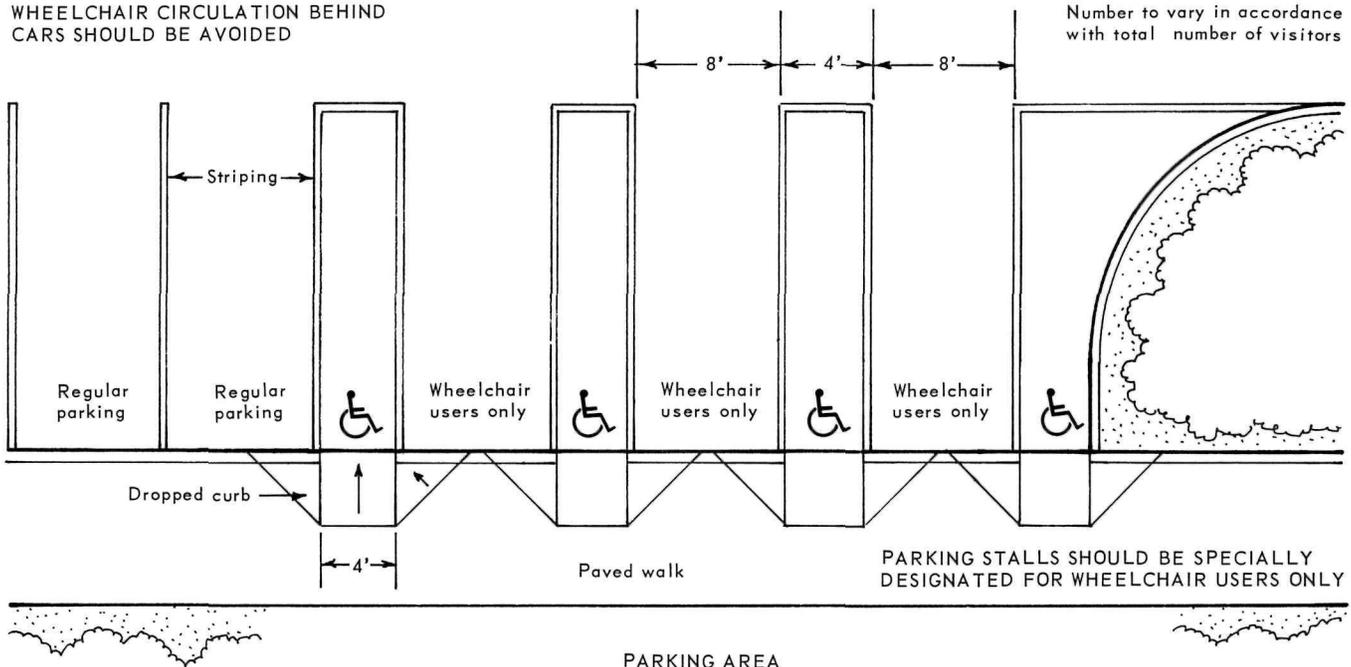
# Parking Lots

Many handicapped people drive. For those whose legs are unable to manage controls, special hand controls can be adjusted for almost any automobile. Many handicapped people use special stickers on their cars to indicate that they are handicapped so that they can park in areas closer to their destination. Similar stickers are used by many sensitive public institutions with parking lots to reserve spaces near entrances for the handicapped. Parking spaces should be about 12 feet wide to allow an individual to open his or her door and swing out of the car into a wheelchair. The parking lot should be paved with a smooth but not slick surface. Curbing should allow for wheelchairs to pass through and grades should be five percent or less. The drawing below, with measurements provides a model parking lot.



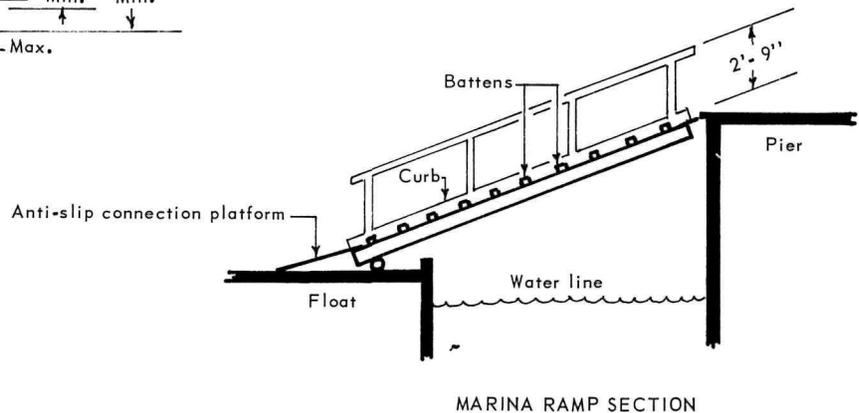
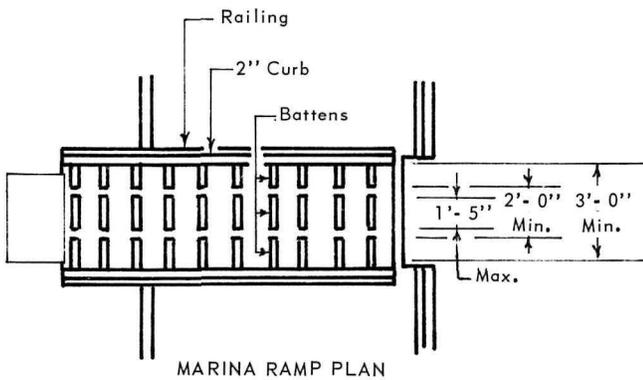
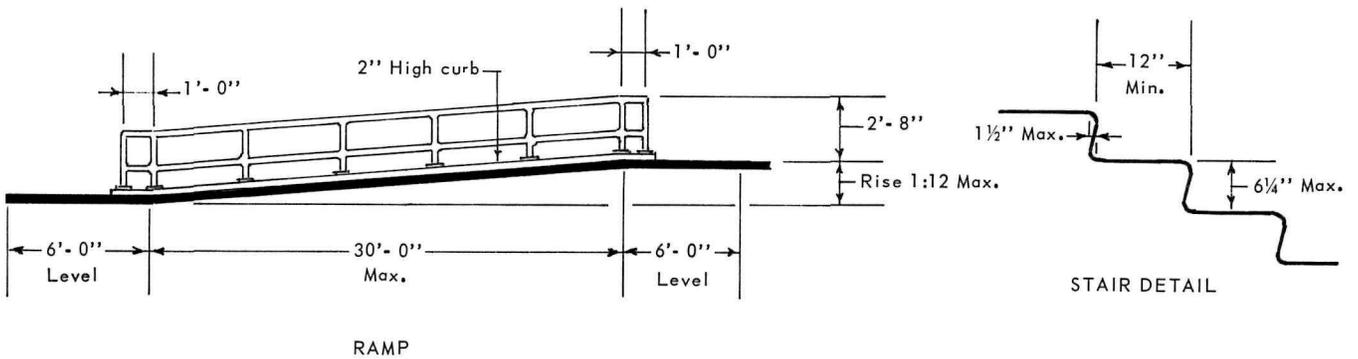
WHEELCHAIR CIRCULATION BEHIND CARS SHOULD BE AVOIDED

Number to vary in accordance with total number of visitors



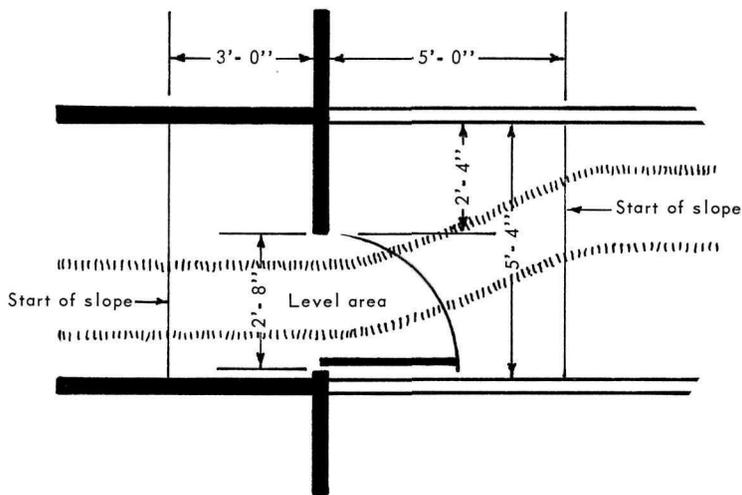
# Ramps

Wheelchair bound people are not the only ones who benefit from ramps. The elderly, pregnant women, people on crutches, or anyone with motor coordination problems is likely to have less difficulty on a ramp than climbing steps. Ramps should have a grade of 5 percent or less, and should be made of non-slip material. There should be level platforms at the top and bottom of the ramps and handrails should extend beyond the grade of the ramp and lead an individual in the correct direction. Handrails should be about 32 inches high.

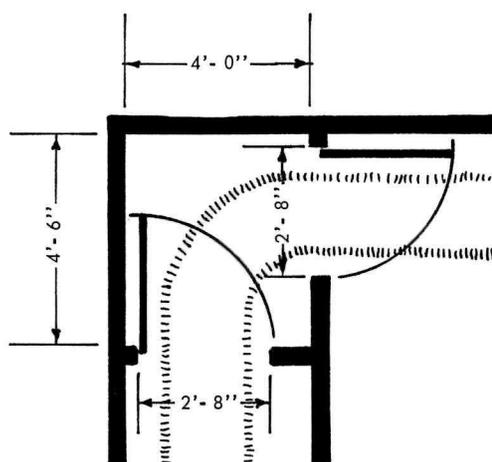


## Doors

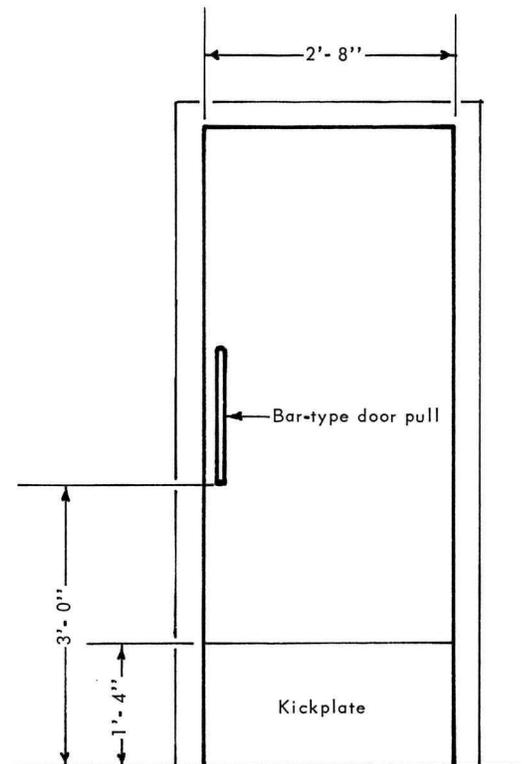
All doors should have flush thresholds to make for smooth access. Doors themselves should be at *least* 32 inches wide. Time delay door closers are preferable, or better yet, electric doors, similar to those found in supermarkets are ideal. Revolving doors are enemies of the wheelchair bound, the elderly, little children whose fingers get caught, blind people and anyone who may not move as fast as the door. If a simple swinging door is used, be sure to place metal kick plate at the bottom to protect the door against marks from wheelchairs. Try and make the door move easily and be constructed with a light material. If a bar is used across the door as a handle, make sure that it is sufficiently low for both those in wheelchairs and small children.



ENTRY



VESTIBULE

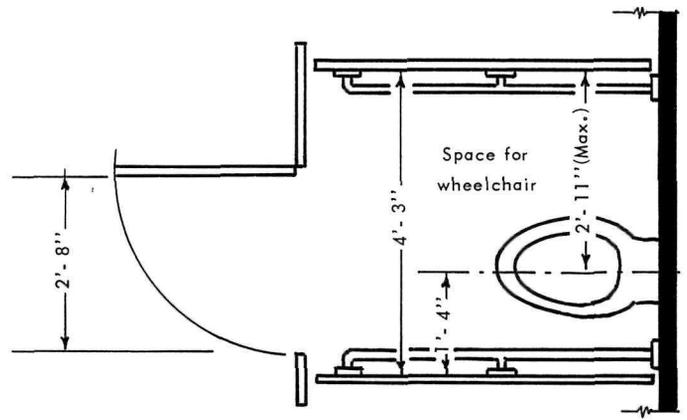


DOOR

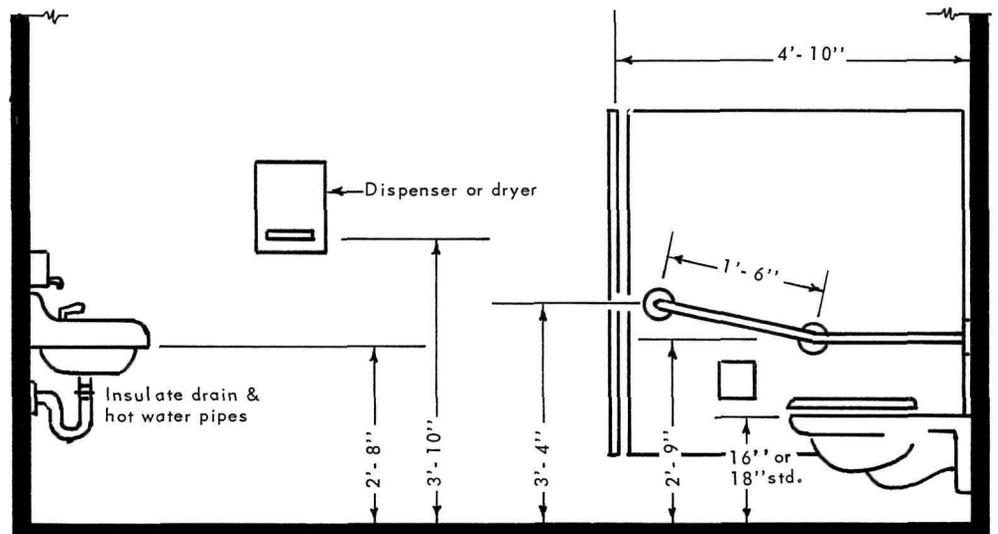
# Restrooms

Toilets should have at least one stall wide enough to accommodate a wheelchair inside with the door closed. The space should allow for lateral transfer from the chair to the toilet, with a grab bar in position to assist. Mirrors, towel dispensers, shelves and the sink should be low enough to allow a handicapped person to use all the facilities. Make sure that faucets, towel dispensers, door locks and flushing devices are easy to operate for people whose manual dexterity may not be good.

Urinals should be mounted on the floor, or if wall-mounted, they should be no higher than 19" above the floor and equipped with a horizontal grab bar. Again, the flushing device should be in easy reach.



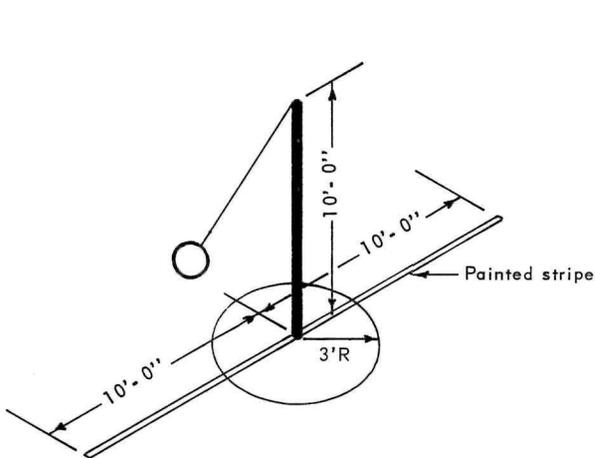
PLAN



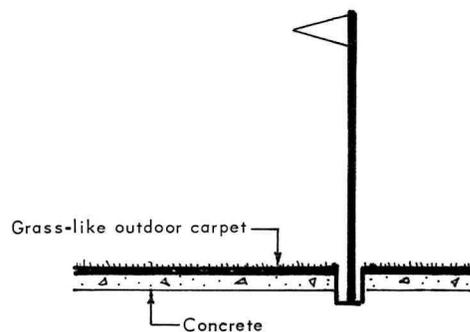
SECTION

# Recreation Ideas

There are dozens of games in which wheelchair bound sportsmen can take part. Volleyball, basketball, badminton, golf, table tennis, horseshoe pitching, baseball pitching, target shooting, archery, bowling, horseback riding, skiing—are all sports suited to the handicapped which are also popular with everyone. The following sketches, taken from a publication put out by the State of New York Council of Parks and Outdoor Recreation, offer some good design ideas for facilities for the handicapped and others.

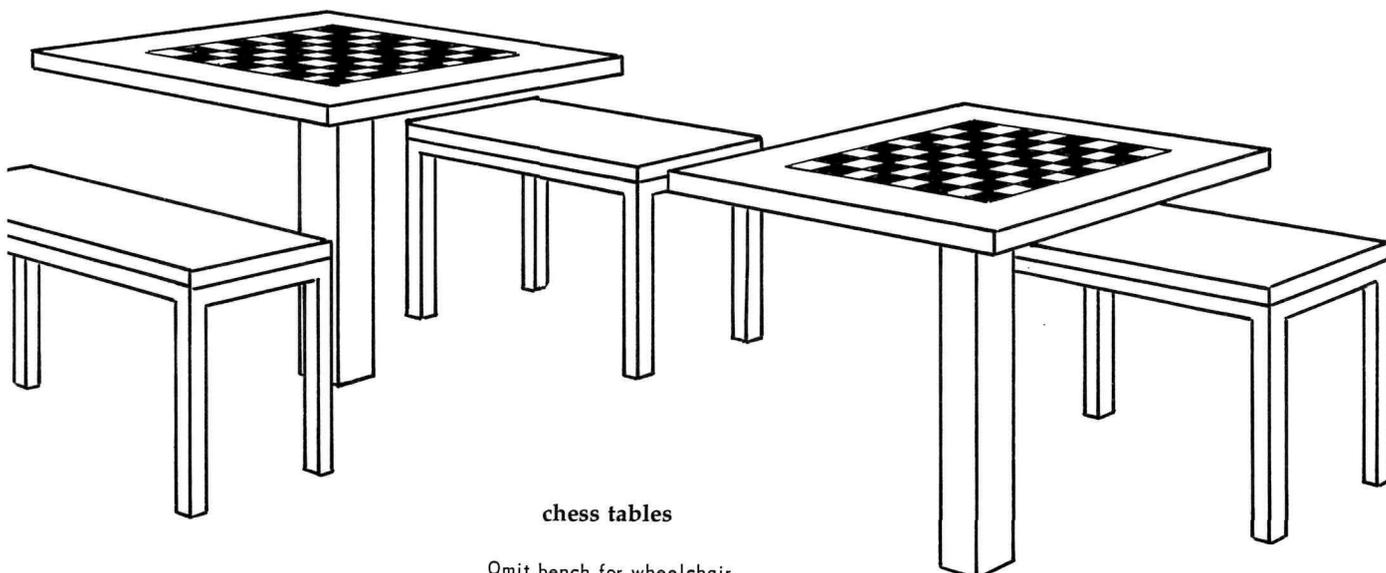


tether ball



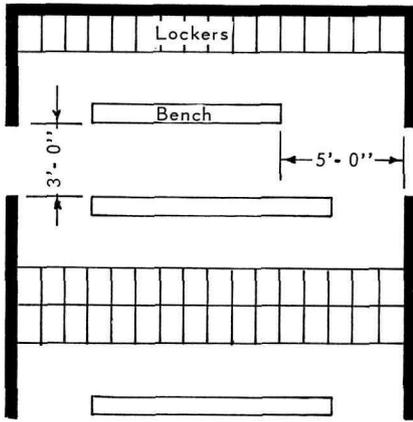
Firm pavement under synthetic grass for wheelchair user

putting green



chess tables

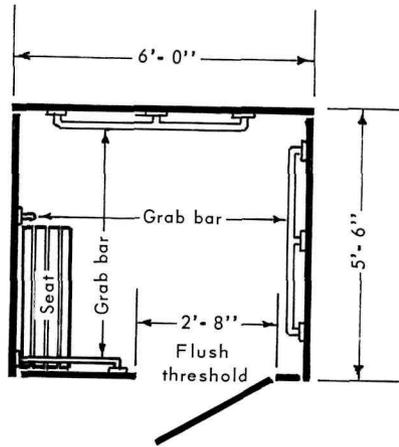
Omit bench for wheelchair



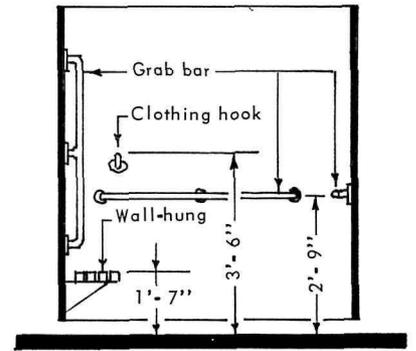
LOCKER AREA

Special lockers should be designated for wheelchair users only, and benches omitted in front of them.

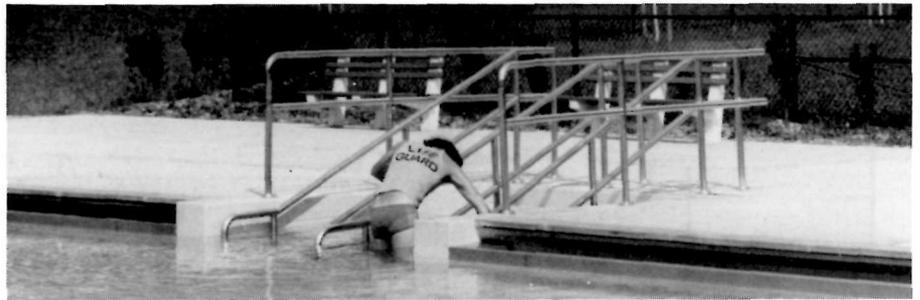
Bench is shortened for wheelchair space



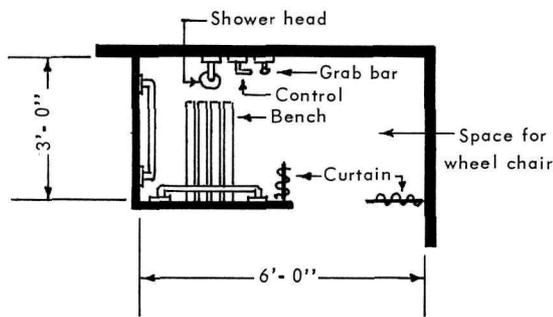
DRESSING ROOM PLAN



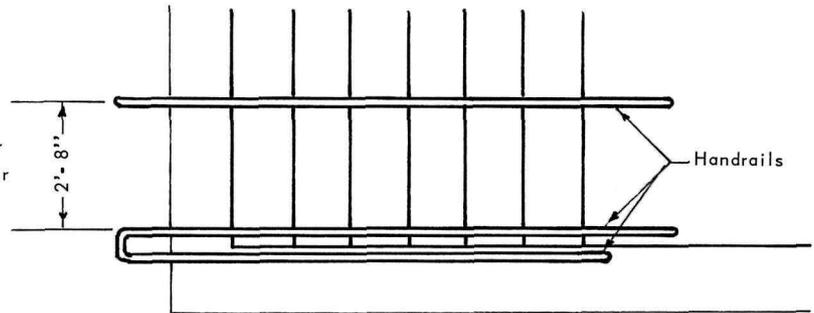
DRESSING ROOM SECTION



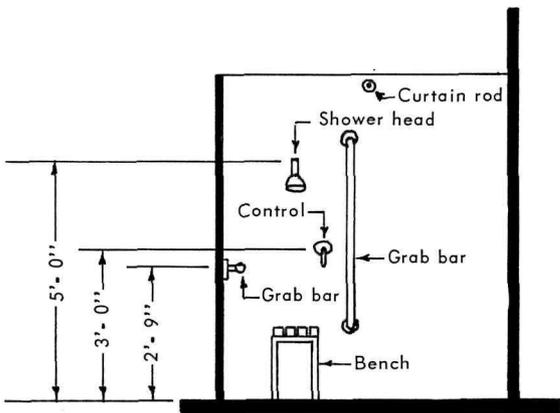
swimming pools



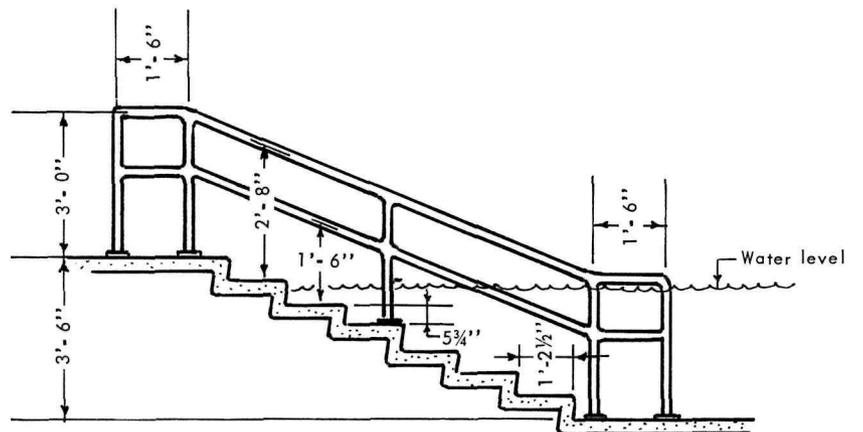
SHOWER STALL PLAN



POOL STEPS PLAN



SHOWER STALL SECTION



POOL STEPS SECTION

