



Department of
Veterans Affairs

Office of Facilities Management

Section VI

OUTDOOR REHABILITATION GUIDEPLATES

A decorative graphic on the left side of the page, consisting of a staircase-like arrangement of squares in various shades of gray, ranging from light to dark. The squares are arranged in a grid that tapers to the right, with the top row having one square, the second row two, the third row three, the fourth row four, and the fifth row five squares.

SPINAL CORD INJURY CENTER

Users 1

Users:

Patients are the primary user at the nursing unit. Patients are classified as:

1. Intensive Rehab - recently injured and hospitalized from time of injury to one year with intensive rehabilitation.
2. Sustaining - have older injuries and hospitalized for medical reasons or additional rehabilitation.
3. Long-Term - unable to leave hospital in spite of rehabilitation efforts, usually an elderly population.

Functions:

I. REHABILITATION

A. Education - Physical and psychological adjustment to wheelchair confinement.

1. Wheeling on a variety of surfaces.
2. Maneuvering over curbs, up steps, on moving surfaces, on ramps and in other potential circumstances.

B. Therapy

1. Exercise stations to develop physical capabilities needed in wheelchair use.
2. Sports facilities to develop physical activity as well aiding psychological adjustment.
3. Outdoor environment to aid in the initial adjustment to new physical circumstances and as a relief from indoor confinement. (Important to patients initially confined to gurneys.)

II. RECREATION

A. Active – Primarily for patient use; participation by staff and visitors possible.

1. Court Games
2. Other physical facilities adding variety to hospitalization routine.

Functions (cont.):

B. Passive – Patients, staff and visitors.

1. Visitor Areas – Due to the nature of hospitalization and potential length of stay, a separate, private area for visiting would contribute to the overall rehabilitation process.
 - a. A private, pleasant area providing picnic tables with a variety of seating combinations, barbecue facilities and nearby sources of drinking water.
 - b. A child's play area to occupy visiting children's restless moments and excess energies.
 - c. Games facilities
2. Random seating areas – located at various activity centers for observing activity, visiting or outdoor relaxation.
3. Extrinsic site amenities, such as landscaping, fountains and pools, contributing to the pleasure of the space.

Sports Facilities 4

Basketball:

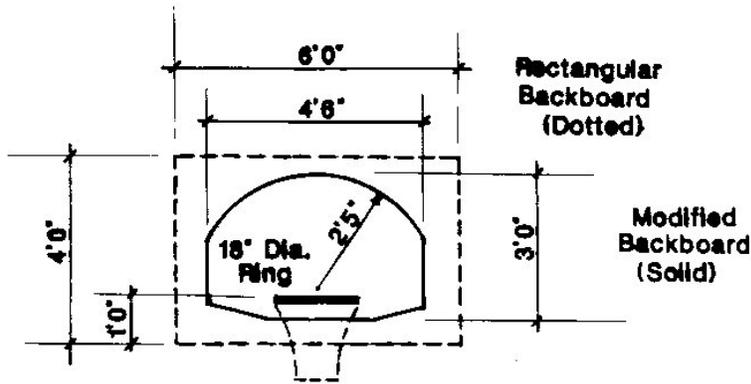


Figure VI-3

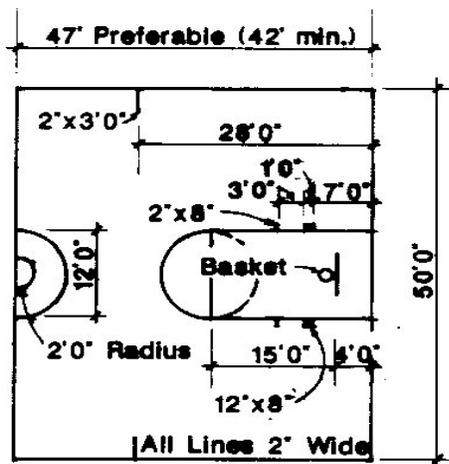


Figure VI-4

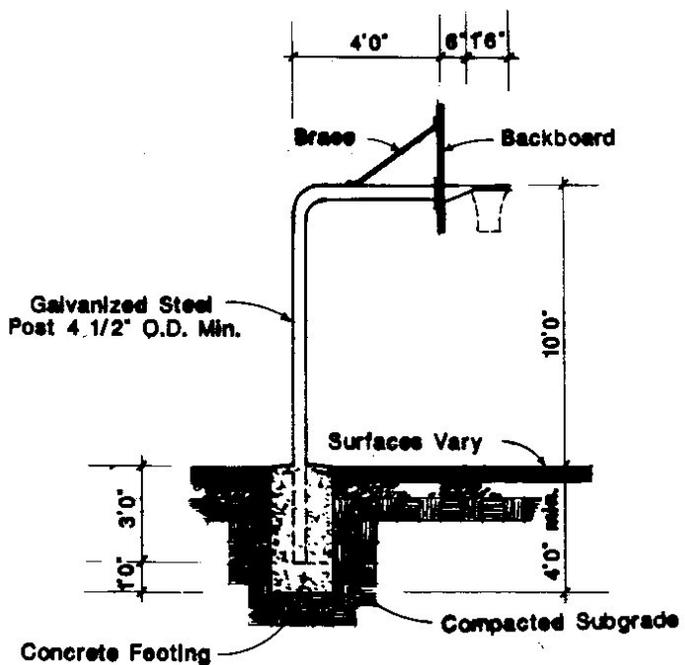


Figure VI-5

Family Encounter Areas 6

Outdoor Barbeque/Grill:

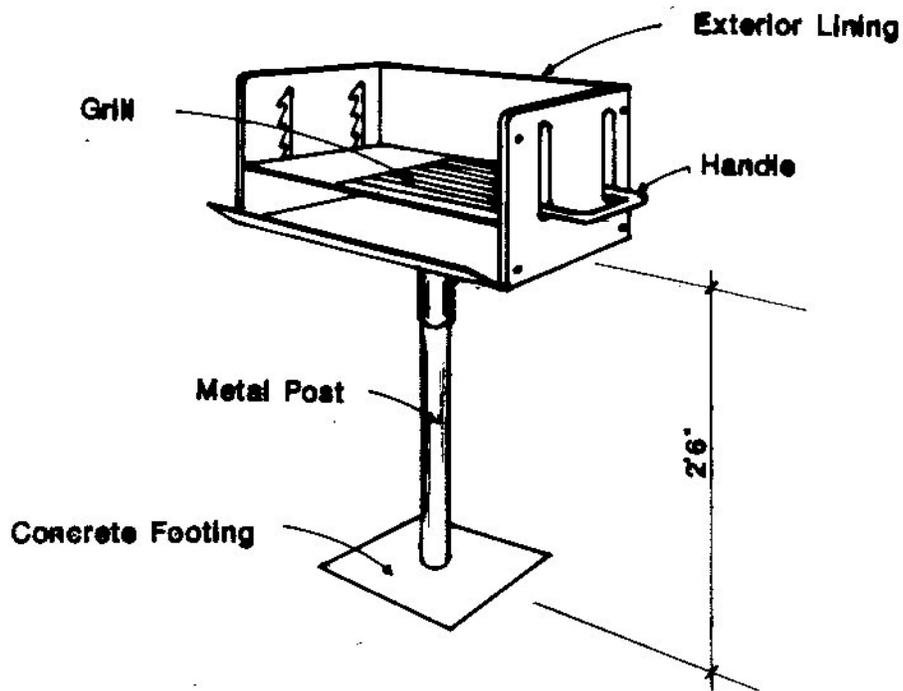


Figure VI-8

Family Encounter Areas 7

Seating Area:

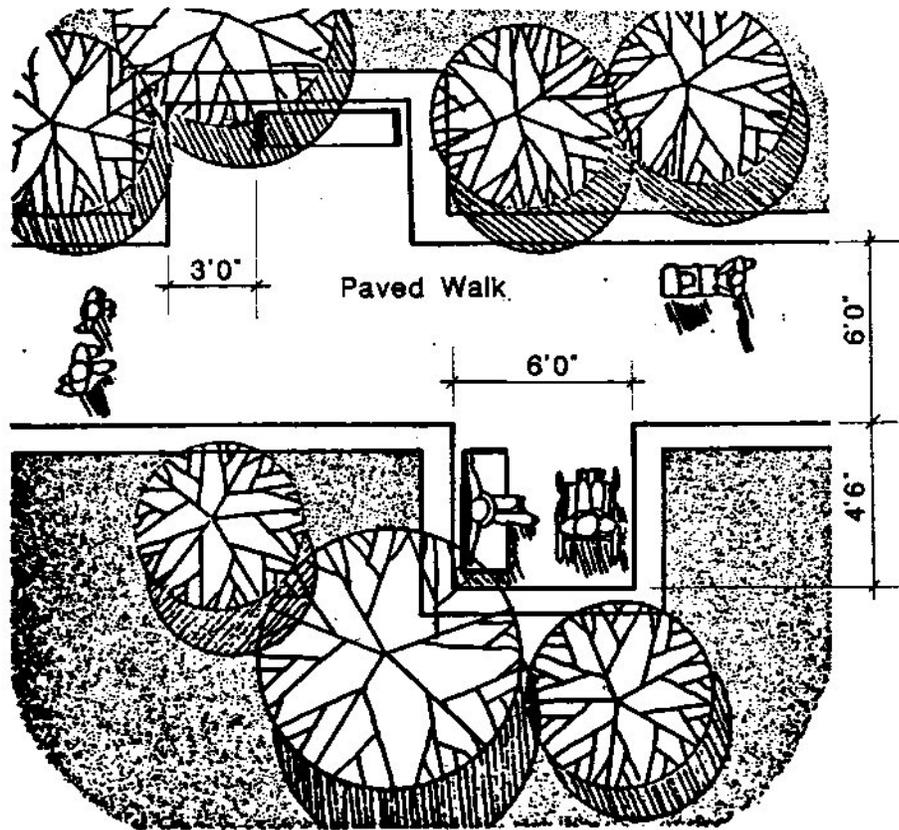


Figure VI-9

Family Encounter Areas 8

SEATING/BENCHES FOR PATIENTS:

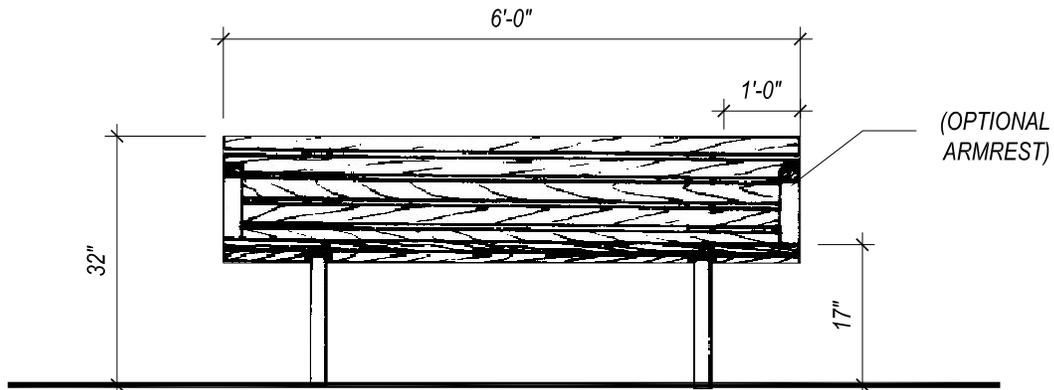


Figure VI-10

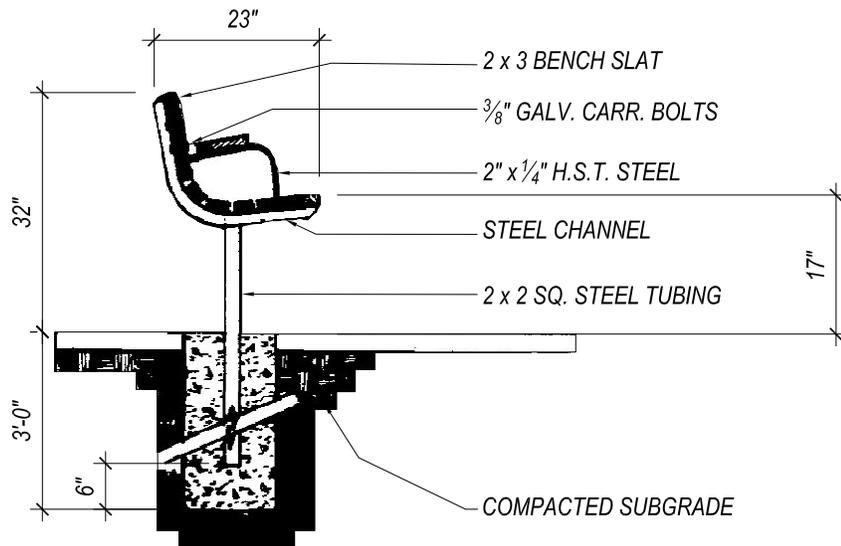


Figure VI-11

Note:

In most cases the semi-ambulant, rather than the wheelchair user, will use seats and benches. Most chair users have difficulty transferring from chair to a bench. A bench with a back rest and arm supports will give added body support to individuals affected by muscle weakness or spasms. Able bodied individuals also seem to prefer a bench with back support. Because of the difficulty the leg amputee or brace wearer has in rising from a seat to a standing position, extremely low benches should be avoided. Arm supports will help such an individual in rising as well as in being seated, although an obstacle when transferring from a wheelchair.

Passive Recreation 9

Function:

The use of the following facilities enhance manual and small muscles dexterity:

1. Seating Planters
2. Game Tables
3. Golf Putt (no guideplate)
4. Greenhouse (no guideplate)
5. Ham/CB Radio Shack (no guideplate)

Seating Planters:

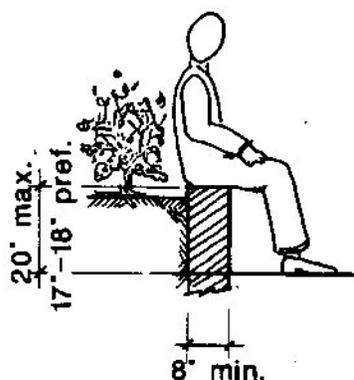


Figure VI-12

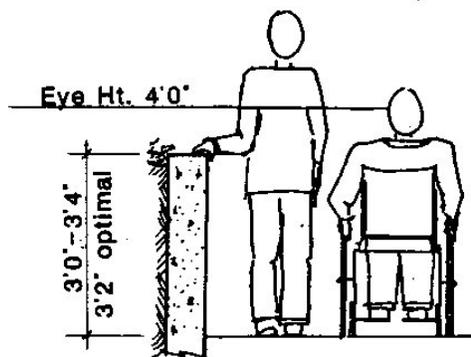


Figure VI-13

Note:

Retaining walls and raised planter boxes can also double as seating areas or support devices, provided they are designed at the right height and width. Free standing walls and fences, usually 5 or 6 feet high, can also be grasped for support if needed. Walls which are constructed of concrete or masonry can serve as directional guides for the blind by sound reverberation.

Passive Recreation 10

Game Table:

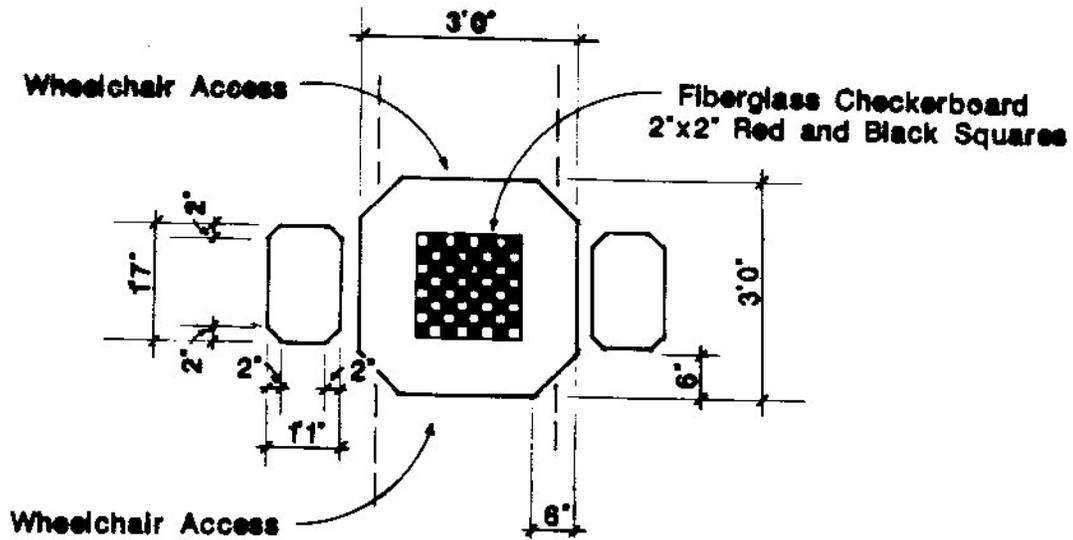


Figure VI-14

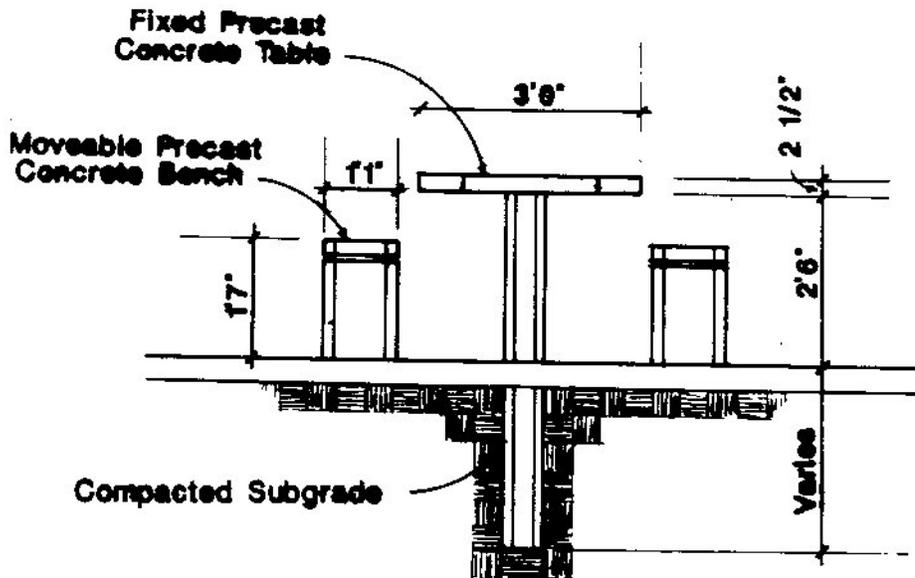


Figure VI-15

Thermo Regulation 11

Function:

SCI patients, especially quadriplegics, who have difficulty maintaining body temperature control, require the following elements to cool their bodies:

1. Drinking Fountain
2. Trellis/Shade Area

Drinking Fountain:

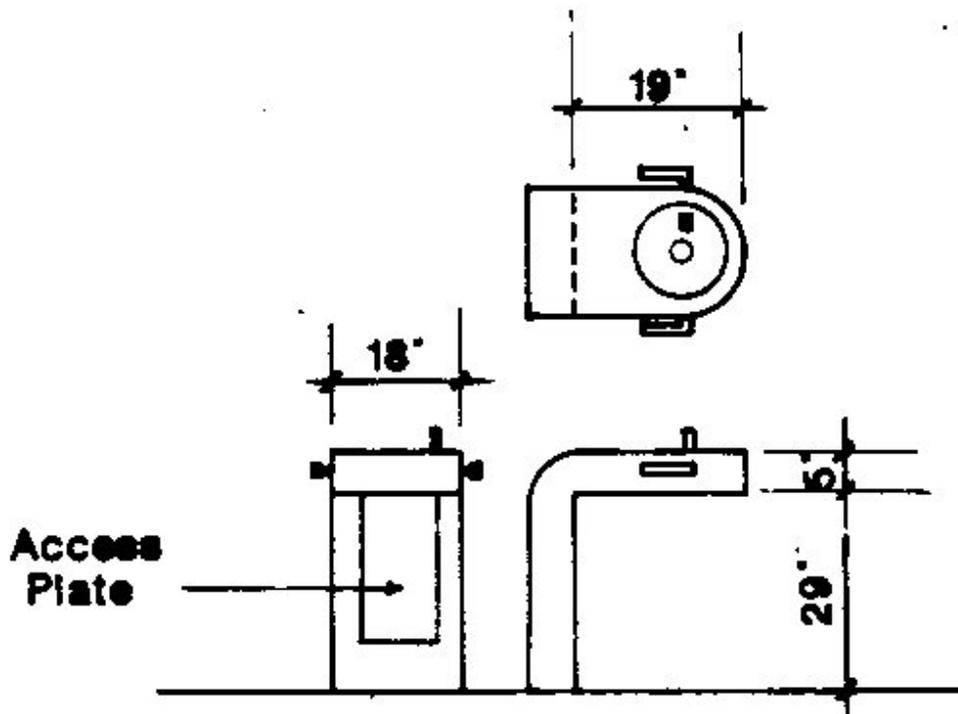


Figure VI-16

Thermo Regulation 12

Trellis/Shade Area:

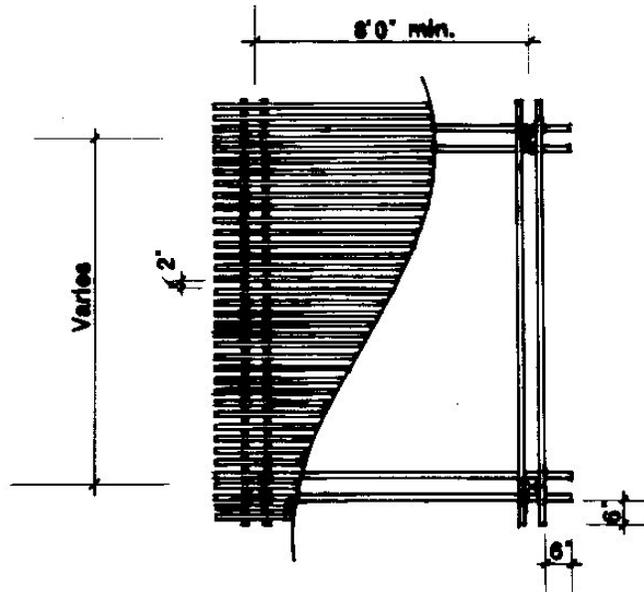


Figure VI-17

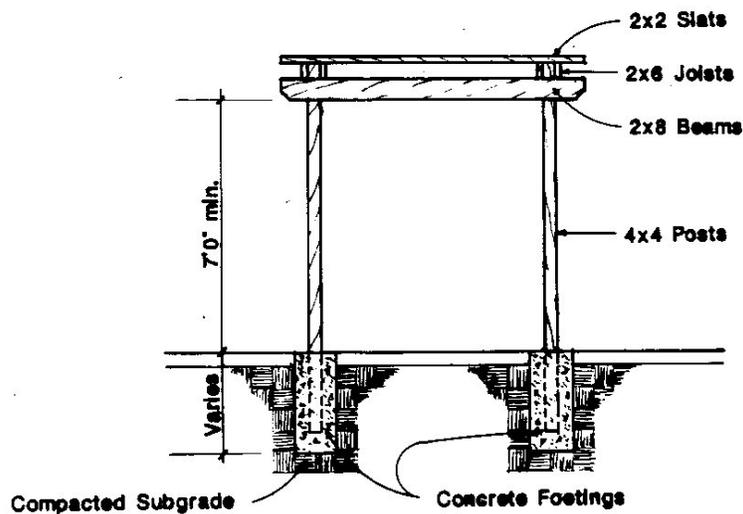


Figure VI-18

*All wood is pressure treated lumber.

Equilibrium 13

Function:

This activity promotes balance and a sense of equilibrium. A patient rolls onto the bridge balancing as long as possible in the center.

Rocking Bridge:

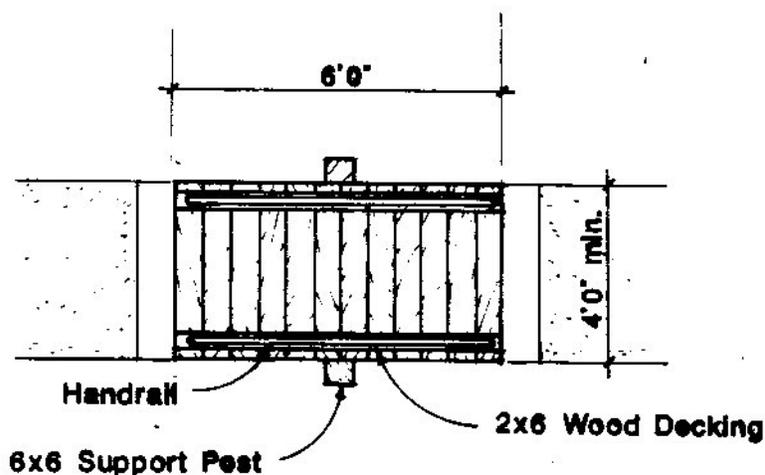


Figure VI-19

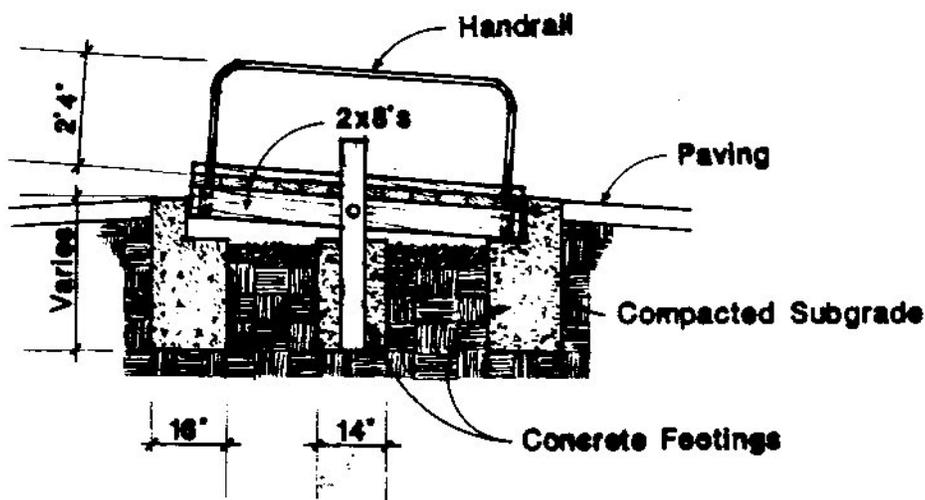


Figure VI-20

*All wood is pressure treated lumber.

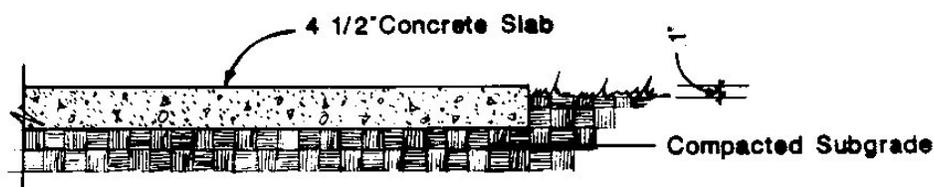
Wheeling Surfaces 14

Function:

The following elements will educate the patient for wheeling on a variety of surfaces and in other difficult areas. The arrangement of the wheeling surfaces can vary depending on the objectives each SCI Clinic and the amount of outdoor space available.

1. The minimum dimensions of 4 feet by 10 feet are required for the following surfaces:
 - a. Concrete/Exposed Aggregate
 - b. Asphalt/Sloped Asphalt (Standing Water Option)
 - c. Brick Pavers
 - d. Concrete Pavers
 - e. Flagstone
 - f. Wood Planks
 - g. Sand
 - h. Gravel
 - i. Barkmulch
 - j. Natural Turf
 - k. Artificial Turf/Synthetic Turf
2. Curb/Curb Ramp/Sidewalk
3. Steps
4. Ramp (1:12 Slope)
5. Exercise Stations

Concrete/Exposed Aggregate



Concrete/Exposed Aggregate



Broom Finish

Use stiff bristle for coarse texture. Use soft bristle on steel troweled surface for fine texture.



Exposed Aggregate

Seed aggregate uniformly onto surface. Embed by tamping. After setup, brush lightly and clean with spray. If using aggregate mix, towel and expose by washing fines or use a retarder.

Figure VI-21

Wheeling Surfaces 15

Asphalt/Slope Asphalt (Standing Water Option)

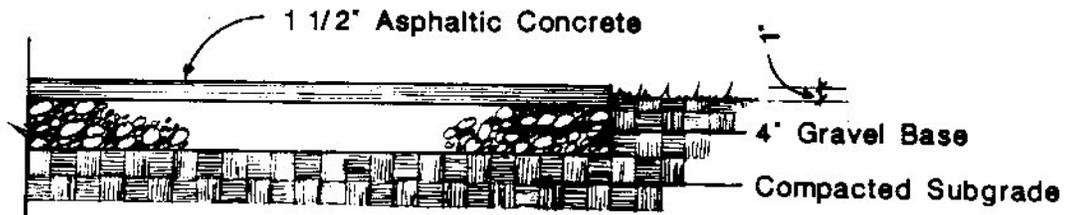


Figure VI-22

Brick Pavers

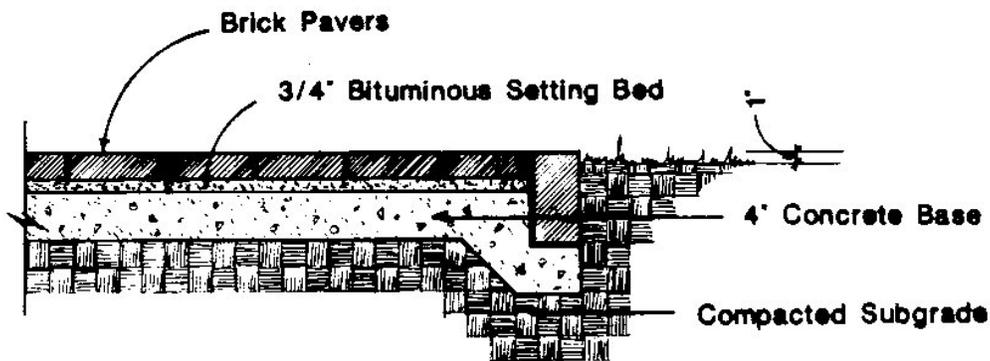


Figure VI-23

Concrete Pavers

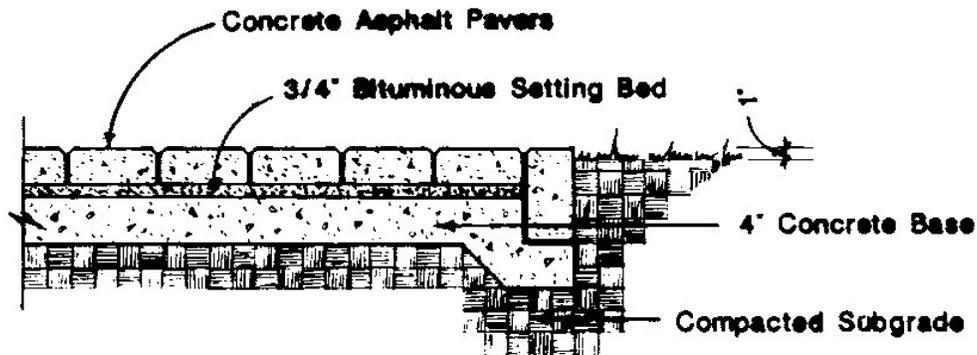


Figure VI-24

Wheeling Surfaces 16

Flagstone

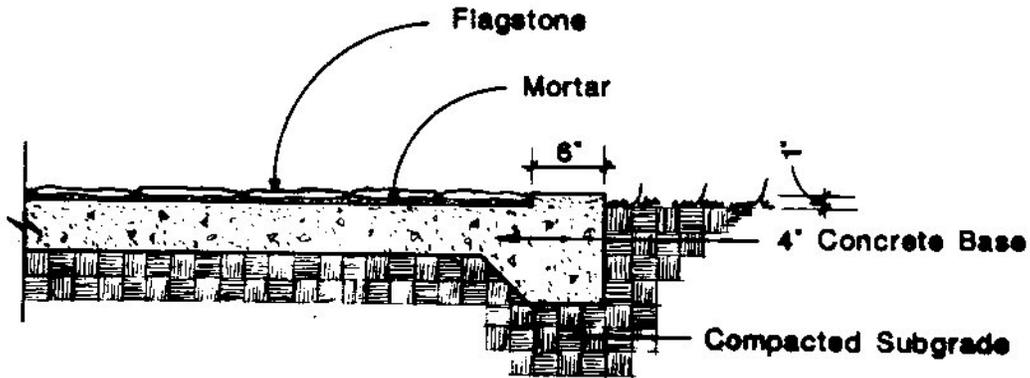


Figure VI-25

Wood Planks

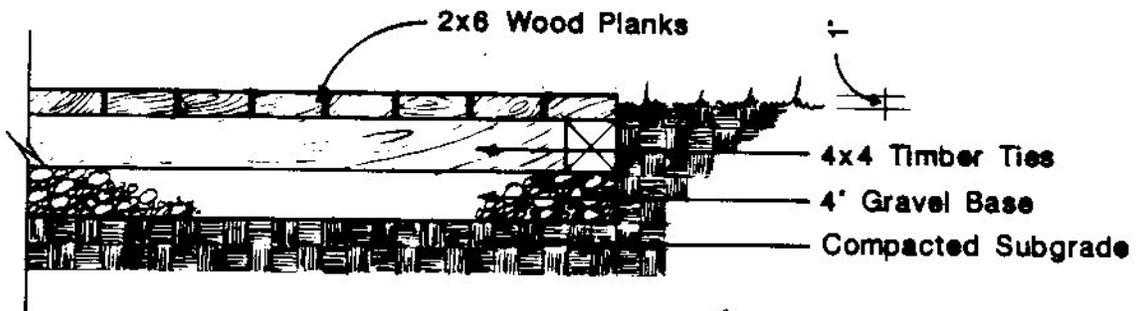


Figure VI-26

Wheeling Surfaces 17

Sand

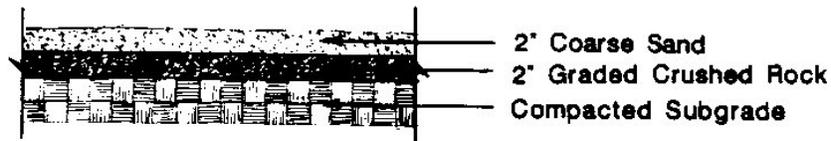


Figure VI-27

Gravel

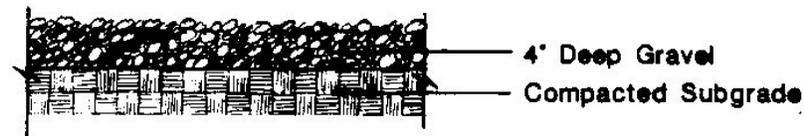


Figure VI-28

Barkmulch

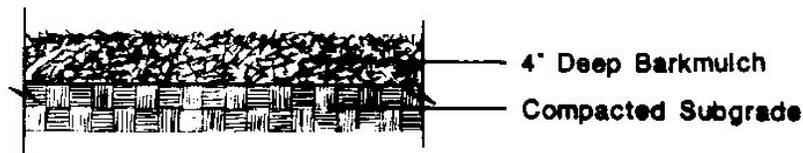


Figure VI-29

Natural Turf

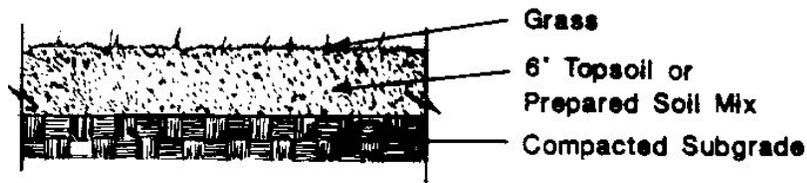


Figure VI-30

Artificial/Synthetic Turf

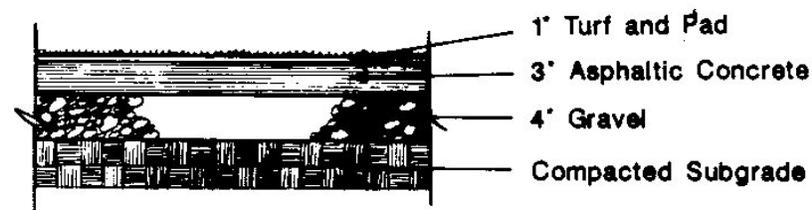


Figure VI-31

Wheeling Surfaces 18

Curb/Curb Ramp/Walk:

Plan

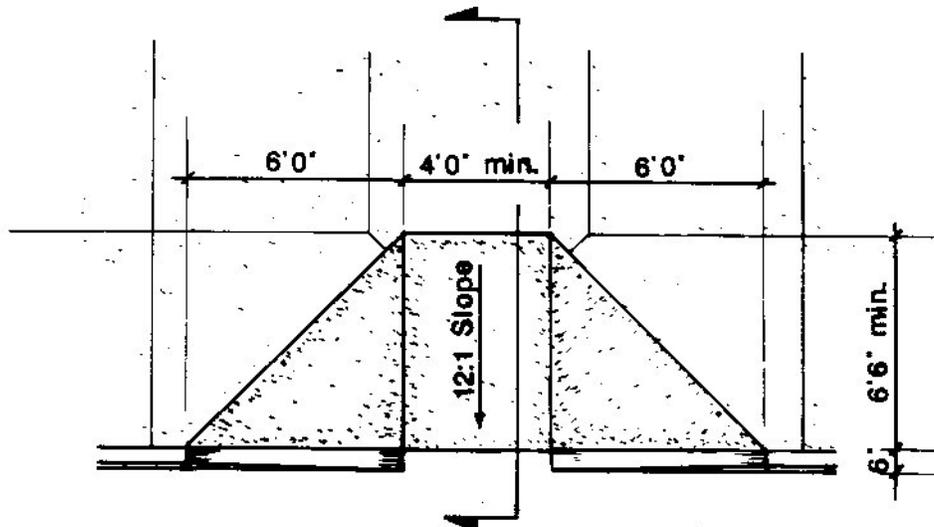


Figure VI-32

Section

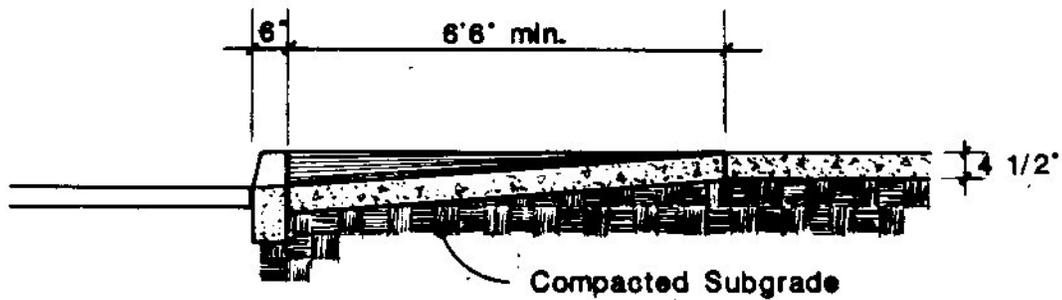


Figure VI-33

Wheeling Surfaces 19

Concrete Steps:

Plan

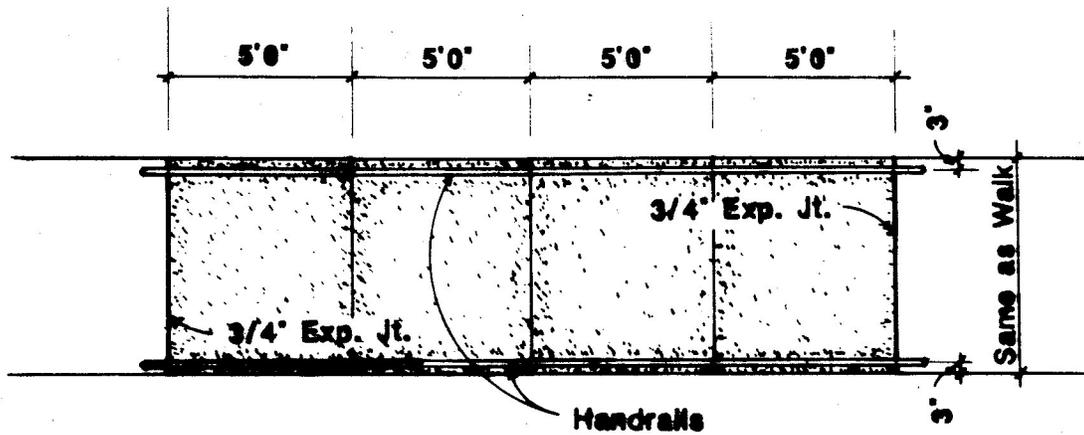


Figure VI-34

Section

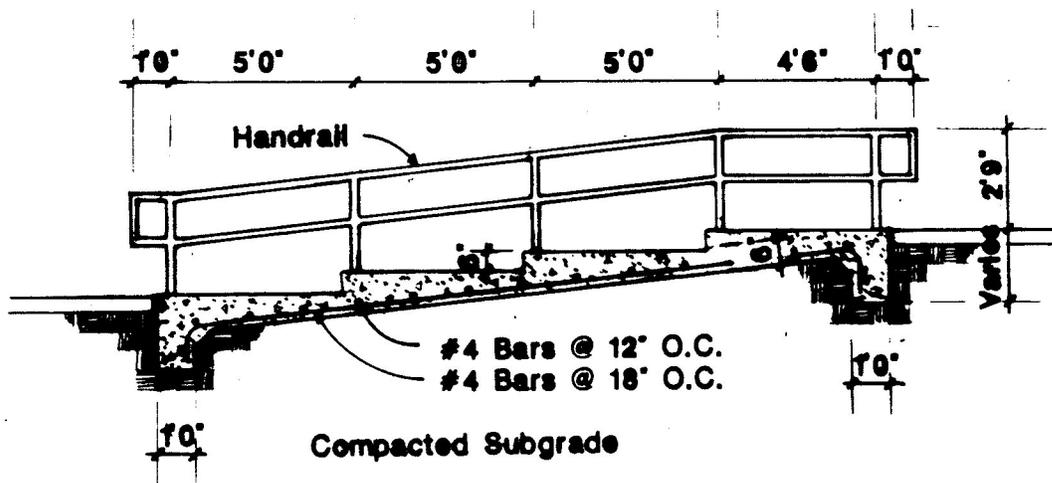


Figure VI-35

Wheeling Surfaces 20

Ramp (12:1 Slope):

Elevation

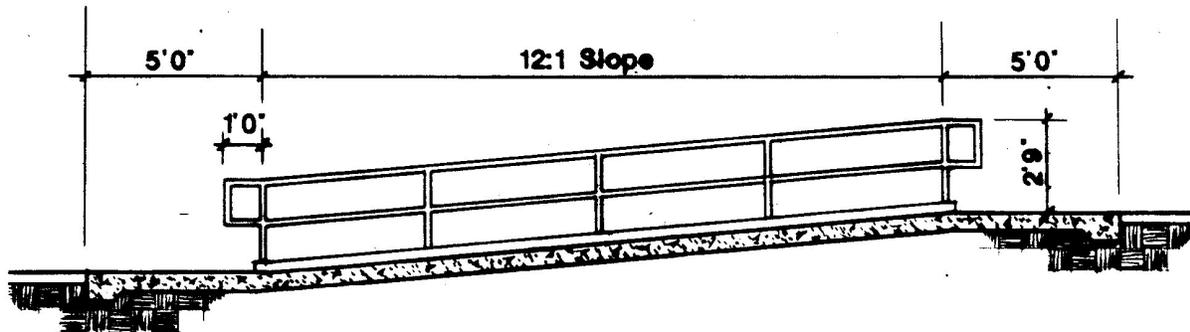


Figure VI-36

Cross-Section

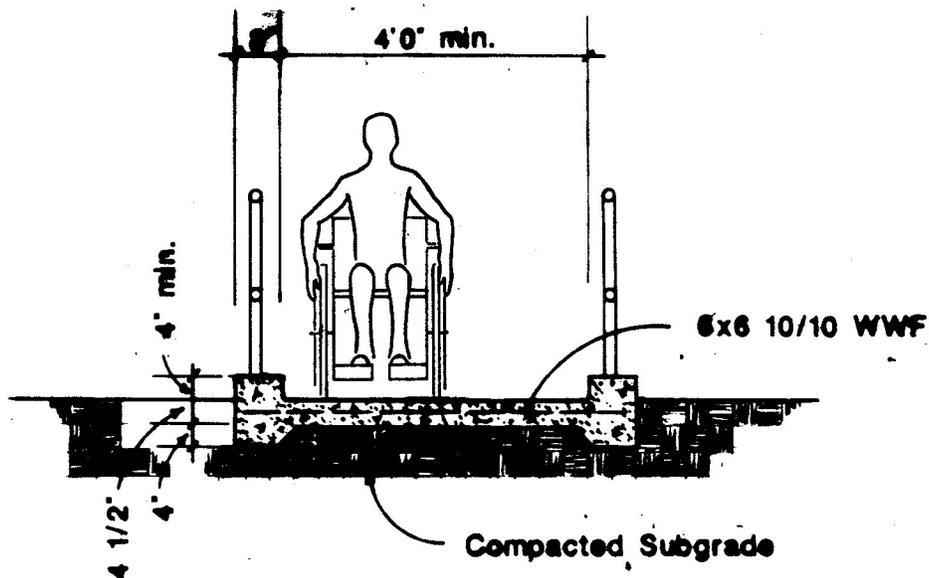


Figure VI-37

Exercise Stations 21

Function:

The Exercise Stations for the Disabled is a multi-use facility. Each station has signs and apparatus for both the disabled and the able-bodied. This allows both the handicapped and able-bodied persons to enjoy the same exercise program together.

 <p>SHOULDER STRETCH</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>	 <p>SIT & REACH</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>	 <p>BEND & REACH</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>	 <p>KNEE-LIFT</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>	 <p>ARM ROTATION</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>	 <p>FORWARD WEAWE</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>
<p>Shoulder Stretch Stretches the shoulder and upper back muscles. It will also stretch the muscles in the lower back.</p>	<p>Sit and Reach Stretches the hamstring muscles (behind the thigh) and the muscles in the lower back.</p>	<p>Bend and Reach A good stretch for the upper and lower back muscles.</p>	<p>Knee-Lift Loosens and stretches the hamstring muscles and provides a light stretch around the knees.</p>	<p>Arm Rotations Loosens the shoulder joints and acts as a warm-up for the shoulder muscles.</p>	<p>Forward Weave This activity will improve your overall maneuverability.</p>
 <p>REVERSE WEAWE</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>	 <p>CIRCLE BODY</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>	 <p>BACK ARCH</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>	 <p>CHIN-UP</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>	 <p>SIDE STRETCH</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>	 <p>HORIZONTAL CHIN-UP</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>
<p>Reverse Weave This will improve your ability to maneuver your wheelchair backwards.</p>	<p>Circle Body Strengthens the muscles in the shoulders, back and forearm. Also stretches the back muscles.</p>	<p>Back Arch A strengthening exercise for the muscles of the lower back.</p>	<p>Chin-Up A strengthening exercise for the shoulders, upper back, biceps, forearm and lats (muscles to sides of back).</p>	<p>Side Stretch This will stretch the muscles along your side from your upper arm to your waist.</p>	<p>Horizontal Chin-Up A strengthening exercise for the shoulders, upper back, biceps, forearm and lats (muscles to sides of back).</p>
 <p>SIT-UP</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>	 <p>PUSH-UP</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>	 <p>BODY STRETCH</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>	 <p>SHOULDER DIPS</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>	 <p>BACK STRETCH</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>	 <p>ABDOMEN BREATHING</p> <p>Stand on the right side of the wheelchair. Grasp the right side of the wheelchair seat. Pull the right side of the wheelchair seat towards the left side of the wheelchair seat. Hold for 15 seconds. Repeat on the left side.</p>
<p>Sit-Up A good strengthening exercise for the muscles in the upper torso, from the stomach to your chest.</p>	<p>Push-Up This will strengthen the back, shoulder and tricep muscles.</p>	<p>Body Stretch A good stretching exercise for the muscles in the shoulders and upper back.</p>	<p>Shoulder Dips An excellent exercise to strengthen the upper back, shoulders and tricep muscles.</p>	<p>Back Stretch This will stretch and loosen the muscles in your back.</p>	<p>Abdomen Breathing This serves as a cool-down activity. It will condition and relax the diaphragm muscles.</p>

Figure VI-38