more difficult for all users to negotiate (Figure 5-7). They present particular hazards for those using wheeled devices such as road bicycles, strollers, and wheelchairs not designed for outdoor terrain. In contrast, unpaved surfaces might be preferred by equestrians and runners to prevent excessive jarring of the joints and skeleton. Others, such as mountain bikers and off-road wheelchair users, often prefer unpaved surfaces for the thrill and challenge of negotiating rough terrain.

Figure 5-7: Soft surfaces are difficult for people with mobility impairments to negotiate and therefore should be avoided.

Local conditions also determine the choice of trail surfaces. Recreational trail surfaces are most commonly composed of naturally occurring soil; however, surfaces ranging from concrete to wood chips may be used depending on the designated user types, the anticipated volume of traffic, the climate, and the conditions of the surrounding environment. High-use trails passing through developed areas and fragile environments are commonly surfaced with pavement, crushed rock, or soils mixed with stabilizing agents to minimize the impact of human traffic on the path.

Locations where the surface changes unexpectedly can frustrate or even endanger trail users unable to negotiate the new surface. This is especially critical in areas where surface conditions change dramatically, i.e., from a paved trail to a sandy beach. Providing information about surface changes through signage or other trail guide products can help visitors avoid such problems.

5.4.9 Trail Information

People select trails based on a variety of criteria, including personal interest, destination, environment, and desired difficulty. Accurate and detailed trail information can provide users with sufficient data to choose routes appropriate to their skill level and desired experience. Trail information can be provided in many formats, including signs, maps, computer programs, posters at park information stations, audio descriptions, and published travel guides. Trail information has traditionally been limited to the trail length, elevation change, usage rules, destination, and descriptive information about points of interest. Signage that provides objective and detailed information about potential obstacles, surface type, grade, cross-slope, and other trail features further benefits users by allowing them to accurately assess whether or not a trail meets their personal level of safety, comfort, and access. Trail users with visual impairments benefit from signs with large lettering, Braille panels, raised lettering, or audio boxes that play prerecorded trail information at the push of a button.

According to ADAAG, “Letters and numbers on signs shall have a width-to-height ratio between 3:5 and 1:1 and a stroke-width-to-height ratio between 1:5 and 1:10.” ADAAG also indicates that the letters and numbers of signs designating permanent locations, such as the woman or man indicators on a bathroom door, be raised 0.8 mm (0.03 in) from the surrounding surface and be in upper case, sans serif, or simple serif type. Type should always be accompanied by Grade 2 Braille. The background color of a sign should contrast with the color of the lettering (ADAAG, U.S. Access Board, 1991). Signs should not be placed