

## **ADA Resource Reference Materials**

Information in this document is current with the 2010 ADA Standards for Accessible Design  
<http://www.ada.gov/regs2010/2010ADASTandards/2010ADASTandards.htm#pgfld-1011393>

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For on- line training on Accessible Play Areas; click on the link below.

<http://www.access-board.gov/play/course/1-0.htm>

Source: U.S. Access Board, 1331 F Street, Suite 1000 NW, Washington, DC 20004

Toll Free Number: 1(800) 872-2253

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

## Accessible Parking Spaces and Routes (Americans with Disabilities Act (ADA) Fact Sheet)

*DCNR requires that ADA parking and access aisle(s) be paved or concrete. DCNR also requires that the area be signed, lined (on the space and access aisle) and marked (ADA symbol) consistent with the 2010 ADA standards.*

Parking spaces shall be provided in accordance with Table 208.2. Where more than one parking facility is provided on a site, the number of accessible spaces on that site shall be calculated according to the number of spaces required for each parking facility.

**Table 208.2 Parking Spaces**

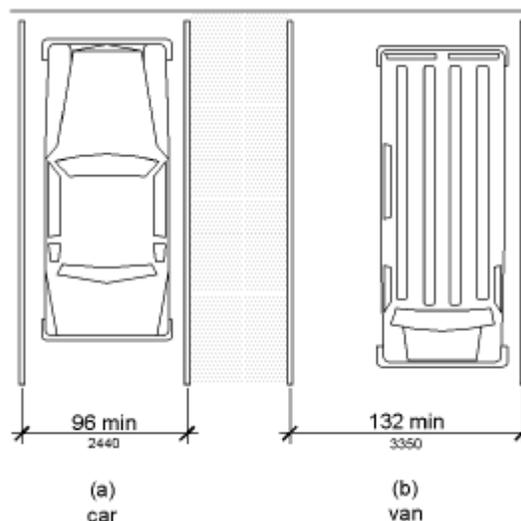
Total Number of Parking Spaces Provided in Parking Facility	Minimum Number of Required accessible Parking Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2 percent of total
1001 and over	20, plus 1 for each 100, or fraction thereof, over 1000

Parking spaces that serve a particular building or facility shall be located on the shortest accessible route from parking to an accessible entrance. Where parking serves more than one accessible entrance, parking spaces shall be dispersed and located on the shortest accessible route to the accessible entrance. Accessible parking space shall be marked with a sign at a minimum height of 60 inches.

**Van Parking Spaces-** For every six or fraction of six parking spaces at least one shall be a van parking space.

**Vehicle Spaces-** Car parking spaces shall be 96 inches (2440 mm) wide minimum; and van parking spaces shall be 132 inches (3350 mm) wide minimum, shall be marked to define the width, and shall have an adjacent access aisle. Exception- Van parking spaces are permitted to be 96 inches (2440 mm) wide minimum where the access aisle is 96 inches (2440 mm) wide minimum.

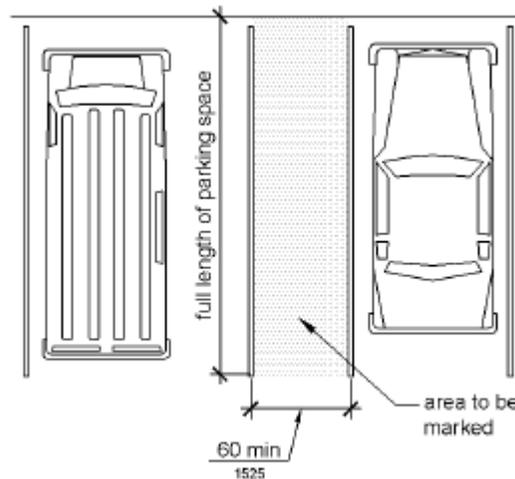
**Figure 502.2 Vehicle Parking Spaces**



**Access Aisle-** Access aisles shall adjoin an accessible route. Two parking spaces shall be permitted to share a common access aisle. Accessible routes must connect parking spaces to accessible entrances. In parking facilities where the accessible route must cross vehicular traffic lanes, marked crossings enhance pedestrian safety, particularly for people using wheelchairs and other mobility aids. Where possible, it is preferable that the accessible route not pass behind parked vehicles.

- **Width-** Access aisles serving car and van parking spaces shall be 60 inches (1525 mm) wide minimum.
- **Length-** Access aisles shall extend the full length of the parking spaces they serve.
- **Marking-** Access aisles shall be marked so as to discourage parking in them.
- **Location-** Access aisles shall not overlap the vehicular way. Access aisles shall be permitted to be placed on either side of the parking space except for angled van parking spaces which shall have access aisles located on the passenger side of the parking spaces.
- **Floor or Ground Surfaces-** Access aisles shall be at the same level as the parking spaces they serve. Changes in level are not permitted. Slopes not steeper than 1:48 shall be permitted for drainage purposes.

**Figure 502.3 Parking Space Access Aisle**



**Vertical Clearance-** Parking spaces for vans and access aisles and vehicular routes serving them shall provide a vertical clearance of 98 inches (2490 mm) minimum.

**Identification-** Parking space identification signs shall include the International Symbol of Accessibility. Signs identifying van parking spaces shall contain the designation "van accessible." Signs shall be 60 inches (1525 mm) minimum above the finish floor or ground surface measured to the bottom of the sign.

**Relationship to Accessible Routes-** Parking spaces and access aisles shall be designed so that cars and vans, when parked, cannot obstruct the required clear width of adjacent accessible routes.

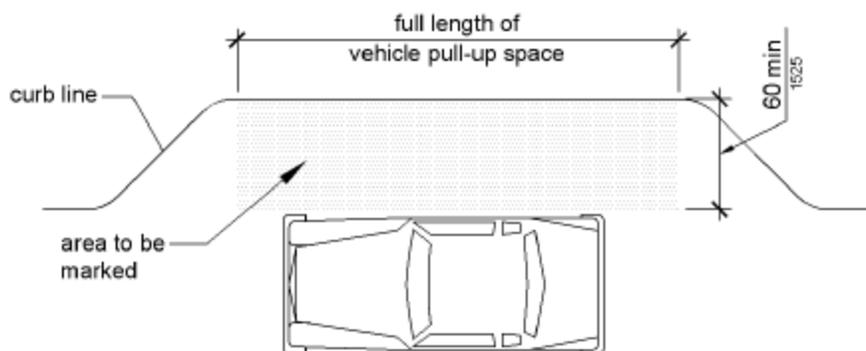
**Passenger Loading Zones:**

**Vehicle Pull-Up Space-** Passenger loading zones shall provide a vehicular pull-up space 96 inches (2440 mm) wide minimum and 20 feet (6100 mm) long minimum.

**Access Aisle-** Passenger loading zones shall provide access aisles complying with 503 adjacent to the vehicle pull-up space. Access aisles shall adjoin an accessible route and shall not overlap the vehicular way.

- **Width-** Access aisles serving vehicle pull-up spaces shall be 60 inches (1525 mm) wide minimum.
- **Length-** Access aisles shall extend the full length of the vehicle pull-up spaces they serve.
- **Marking-** Access aisles shall be marked so as to discourage parking in them.
- **Floor and Ground Surfaces-** Access aisles shall be at the same level as the vehicle pull-up space they serve. Changes in level are not permitted. Slopes not steeper than 1:48 shall be permitted.

**Figure 503.3 Passenger Loading Zone Access Aisle**



**Vertical Clearance-** Vehicle pull-up spaces, access aisles serving them, and a vehicular route from an entrance to the passenger loading zone, and from the passenger loading zone to a vehicular exit shall provide a vertical clearance of 114 inches (2895 mm) minimum.

**Accessible Routes:**

*ADA and DCNR requires that the accessible route be Firm, Stable and Slip Resistant consistent with the requirements of the 2010 ADA standards. DCNR prefers that the route be paved or concrete and requires that the route be 5' in width at a minimum. However, stone aggregate (or other approved suitable materials) are also acceptable IF:*

- *A "Qualified" Contractor is secured OR*
- *In-House Staff "demonstrate" they have the "capacity" and experience with this type of work*
  - *Construction Observation is Required by the Design Consultant*
  - *Capacity "Test"*
    - *Grantee has someone who can read and follow plans and specs.*
    - *Grantee is willing to follow plans and specs provided by their consultant.*
    - *We have pre-approved the plans and specs.*
    - *Grantee is willing to buy the materials specified by their consultant.*
    - *Grantee is willing to rent the necessary equipment to do the installation if they do not own it.*
    - *We may, as one option, ask for pictures of previously completed work, as evidence of ability.*
    - *Grantee is willing, if it is necessary, to split the costs with us for consultant construction observation, from Round 18 forward. If their in-house capacity is questionable for projects from earlier rounds of funding, we may require this.*
    - *Grantee agrees that if we determine that their in-house installation does not follow their consultant's plans and specs or we find the installation to be unacceptable, they will have the work done by a qualified construction firm.*
    - *Design consultant signing off – They define specific observation process.*

**Site Arrival Points-** At least one accessible route shall be provided within the site from accessible parking spaces and accessible passenger loading zones; public streets and sidewalks; and public transportation stops to the accessible building or facility entrance they serve.

- **Advisory-** Each site arrival point must be connected by an accessible route to the accessible building entrance or entrances served. Where two or more similar site arrival points, such as bus stops, serve the same accessible entrance or entrances, both bus stops must be on accessible routes. In addition, the accessible routes must serve all of the accessible entrances on the site.

**Within a Site-** At least one accessible route shall connect accessible buildings, accessible facilities, accessible elements, and accessible spaces that are on the same site. An accessible route shall not be required between accessible buildings, accessible facilities, accessible elements, and accessible spaces if the only means of access between them is a vehicular way not providing pedestrian access.

- **Advisory-** An accessible route is required to connect to the boundary of each area of sport activity. Examples of areas of sport activity include: soccer fields, basketball courts, baseball fields, running tracks, skating rinks, and the area surrounding a piece of gymnastic equipment. While the size of an area of sport activity may vary from sport to sport, each includes only the space needed to play. Where multiple sports fields or courts are provided,

an accessible route is required to each field or area of sport activity.

For more information please visit: <http://www.ada.gov/regs2010/2010ADAStandards/2010ADAstandards.htm#pgfId-1006250>

DRAFT

## Accessibility Standards for Play Areas (Americans with Disabilities Act (ADA) Fact Sheet)

The Americans with Disabilities Act (ADA) is a comprehensive civil rights law that prohibits discrimination on the basis of disability. The ADA requires that newly constructed and altered state and local government facilities, places of public accommodation, and commercial facilities be readily accessible to, and usable by, individuals with disabilities. Recreational facilities, including play areas, are among the facilities required to comply with the ADA. This fact sheet is intended to give an overview of the accessibility standards for play areas. Emphasis is placed on ensuring that children with disabilities are generally able to access the diversity of components provided in a play area. Incorporating accessibility into the design of a play area should begin early in the planning process with consideration to layout, circulation paths, and the selection of play components.

### WHERE DO THE PLAY AREA STANDARDS APPLY?

**New Construction-** The play area standards in this guide apply to all newly designed or constructed play areas for children ages 2 and older. Owners or operators of newly constructed play areas are responsible for complying with these standards. The play area standards do not apply to: family childcare facilities where the proprietor resides, amusement attractions, or religious entities.

**Alterations-** The play area standards apply to alterations made to existing play areas that affect, or could affect, the usability of the play area. Examples include removing a climbing play component and replacing it with a spring rocker, or changing the ground surfacing. Alterations provide an opportunity to improve access to existing play areas. Where play components are altered and the ground surface is not, the ground surface does not have to comply with the ASTM F 1951-99 standard for accessible surfaces unless the cost of providing an accessible surface is less than 20% of the cost of the alterations to the play components.

If the entire ground surface of an existing play area is replaced, the new ground surface must provide an accessible route to connect the required number and types of play components. Normal maintenance activities such as replacing worn ropes, relocated in an existing play area to create safe use zones, or topping off ground surfaces are not considered alterations.

**Equivalent Facilitation-** is the concept of utilizing innovative solutions and new technology, design, or materials in order to satisfy the standards. These alternative solutions provide equal access and take advantage of new developments, but may differ technically from specific standards. Designs, products, or technologies can be used as alternatives to those prescribed, provided they result in substantially equivalent or greater accessibility or usability.

**Phasing in Play Areas-** "Phased Designs" are play areas developed to be installed in different stages, allowing the play area to grow in a planned manner while accommodating budgets, fund raising, or community approval processes. When play areas are constructed in phases, they must continue to meet the play area standards throughout construction. As each phase is completed, the entire play area must be reevaluated for compliance.

**Play Areas Separated by Age-** To reduce the risk of injury, safety guidelines recommend separate play areas for different age groups; compliance with the guidelines must be considered for each individual play area. A play area designed for 2 to 5 year-olds is considered separate from one for 5 to 12 year-olds.

**Geographically Separated Play Areas-** Large geographical spaces may contain several play areas within one park setting. The accessibility standards apply to each play area.

### WHAT IS A PLAY COMPONENT?

**Play Components-** elements designed to generate specific opportunities for play, socialization, and learning. They may be manufactured or natural, stand alone or part of a composite play structure. Swings, spring riders, water tables, playhouses, slides, and climbers are among the many different play components. When applying the play area standards, it is important to identify the different play experiences play components can provide. At least one of each type of play component provided at ground level must be on the accessible route. Different "types" of play components are based on the general experience provided by the play component; including experiences such as rocking, swinging, climbing, spinning, and sliding.

**Elevated Play Components-** a play component reached above or below grade from a platform or deck area and is part of a composite play structure. The climber (right) is considered an



elevated component since it can be approached or exited from the ground level or above grade from a platform or deck on a composite play structure.

**Ground-Level Play Components-** are items that can be approached and exited at ground level. These include swings, spring riders, panels, and freestanding slides. An accessible route must connect to the ladder or steps, and to the exit of the slide. When more than one ground-level play component is required on an accessible route, the play components must be integrated. Designers should consider the optimal layout of ground-level play components to foster interaction and socialization among all children.

**HOW MANY PLAY COMPONENTS MUST BE ON AN ACCESSIBLE ROUTE?**

**One of Each Type-** At least one of each type of ground-level play component that is present in the play area must be on an accessible route. To meet the requirement, for example, in the case of a play area including a composite play structure, two spring riders, and a swing set, an accessible route must connect to at least one spring rider and one swing.

**Ground Level Requirements Based on Elevated Play Components-** The number and variety of ground-level play components required to be on an accessible route is also determined by the number of elevated components provided in the play area. The intent is to provide a variety of experiences for individuals who choose to remain with their mobility devices. If ramps provide access to at least 50% of the elevated play components then additional ground-level components are not required.

Table 240.2.1.2 establishes a minimum level of ground level play components required to be on an accessible route, based on the number of elevated play components provided.

Table 240.2.1.2		
Number of elevated play components provided	Minimum number of ground-level play components required to be on accessible route	Minimum number of different types of ground-level play components required to be on accessible route
1	Not applicable	Not applicable
2 to 4	1	1
5 to 7	2	2
8 to 10	3	3
11 to 13	4	3
14 to 16	5	3
17 to 19	6	3
20 to 22	7	4
23 to 25	8	4
More than 25	8 plus 1 for each additional 3 over 25, or fraction thereof	5

An example: the composite structure of a play area has four elevated play components (bubble panel, slide, steering wheel, and tic-tac-toe panel). According to the table, a minimum of one ground level play component must be provided, and a minimum of one different type. The spring rider or swing can be used to meet the "one of each type" requirement and can also be used to meet the minimum number determined by Table 240.2.1.2.

**Elevated Play Components-** a play component reached from above or below grade, and is part of a composite play structure. At least 50% of the elevated play components must be on an accessible route. Play areas with 20 or more elevated components must use ramps (36-inch minimum clear width) to connect a minimum of 25% of those components. A transfer system or ramps may connect the other elevated play components required on an accessible route. Play areas with less than 20 elevated play components may use a transfer system instead of ramps to connect at least 50% of the elevated components.

**Step-by-Step Guide-** The following step-by-step guide has been provided to assist in evaluating a play area for meeting the minimum requirements of these standards.

- **STEP 1: Assess your play area design-** identifies the number and different types of ground level and elevated play components provided in a play area design.
- **STEP 2: Determine what is needed-** In some cases, the accessibility standards will require additional play components to be provided to meet the minimum requirements. See Table 240.2.1.2.

- **STEP 3: Compare which is greater-** compares your results in identifying the number and different types of ground level play components with those required by Table 240.2.1.2. The greater number is considered to be the minimum number of ground level play components required to be on an accessible route.
- **STEP 4: Assess how to get there-** examines the number of elevated play components provided, beginning with the number established in Step 1. Once the number of elevated play components provided is identified, Step 4 defines the type of route to be provided to connect to these elevated play components.

## WHAT ARE THE REQUIREMENTS FOR ACCESSIBLE ROUTES?

**Accessible Routes-** are pathways specifically designed to provide access for individuals with disabilities, including those using wheelchairs or mobility devices. The accessible route must connect all entry and exit points of accessible play components. Clear floor space required at play components and maneuvering space can overlap the accessible route. Incorporating additional circulation space around high-use play components creates extra room for movement and accessibility for everyone using the play area.

**Ground-Level Accessible Routes-** connect play components at ground level and require 60 inches (1525 mm) minimum clear width and a maximum slope of 1:16. The route may narrow down to 36 inches (915 mm) for a distance of 60 inches (1525 mm). This permits flexibility to work around site design features like existing equipment or trees. Smaller play areas (less than 1,000 square feet or 304.8 square meters) may have ground-level accessible routes that are 44 inches (1120 mm) clear width. A wheelchair turning space must be provided where the route exceeds 30 feet (9.14 mm) in length.

At ground level, objects may not protrude into the 60-inch wide space of an accessible route up to or below the height of 80 inches (2030 mm), measured above the accessible route surface. The 80-inch clearance applies only to the 60-inch accessible route, and is not required for the entire play area. The 80-inch vertical clearance applies to ground-level routes only, and not elevated routes. This allows features like protective roofs and sun shelters to be present.

**Maximum Slope at Ground Level-** The maximum allowable slope for a ground-level accessible route is 1:16. Berms are sometimes used to provide access to elevated play areas. A berm may be a natural sloped surface that is present in a hilly play area site, or a ground-level route built with slopes. Designers are encouraged to consider edge protection and handrails on berms where there may be a drop-off.

**Accessible Ground Surfaces-** Ground surfaces along accessible routes, clear floor or ground spaces, and maneuvering spaces, must comply with the American Society for Testing and Materials (ASTM) F 1951-99 Standard Specification for Determination of Accessibility to Surface Systems Under and Around Playground Equipment. This standard assesses the accessibility of a surface by measuring the work an individual must exert to propel a wheelchair across the surface. To meet the standard, the force required must be less than that which is required to propel the wheelchair up a ramp with a slope of 1:14. Accessible surfaces can include impact-attenuating tiles made of recycled rubber and engineered wood fiber that meet the ASTM requirements for accessibility and safety.

**Accessible Surfaces Located In The Use Zone-** If located within the *use zone* (a ground level area beneath and immediately adjacent to a play structure or piece of equipment that is designated for unrestricted circulation around the equipment), accessible ground surfaces must also be impact attenuating and meet ASTM F 1292-04 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment. Ground surfaces must be inspected and maintained regularly and frequently to ensure continued compliance with the ASTM F 1951-99 standard. The frequency of maintenance and inspection of resilient surfacing depends on the amount of use and the type installed.

**Elevated Accessible Routes-** must connect the entry and exit points of at least 50% of the elevated play components in the play area. Two common methods used are ramps and transfer systems. Ramps are the preferred method since not all children who use wheelchairs may be able to use transfer systems. A typical elevated accessible route might include the following:

- 36-inch (915 mm) clear width
- 32-inch (815 mm) narrowed width permitted for 24-inch (610 mm) length to accommodate features in the composite structure
- 12-inch (305 mm) rise maximum per ramp run
- Top of handrail gripping surfaces shall be 20 inches (510 mm) minimum to 28 inches (710 mm) maximum above the ramp surface



**When Ramps Are Required-** Ramps are required on composite structures with 20 or more elevated play components and must connect to at least 25% of the elevated play components. Ramps serve as a continuation of the accessible route from the ground allowing individuals who use mobility devices to access

elevated components. For each elevated ramp *run* (length of a continuous sloped surface that is ascending or descending) the following requirements apply:

- 12-inch (305 mm) maximum *rise* (the amount of vertical distance the slanted surface ascends or descends)
- 1:12 maximum slope
- 36-inch (915 mm) minimum clear width

Platform lifts/wheelchair lifts may be considered for providing access to elevated play components. Where applicable, platform lifts complying with ADAAG section 4.11 and applicable state and local codes are permitted as a part of an accessible route. Because lifts must be independently operable, their use in unsupervised settings should be carefully considered.

**Landings-** are the level surfaces at the top and bottom of each ramp run. The following requirements apply to landings:

- Must be as wide as the ramp they connect to
- A minimum length of 60 inches (1525 mm)
- If ramps change direction, the minimum landing size must be 60 inches (1525 mm) wide to accommodate a turn

**Maneuvering Space Where Ramps Are Provided-** At least one maneuvering space must be provided on the same level as the play component. The space must have a slope no steeper than 1:48 in all directions. The ADA Accessibility Standards address additional requirements for ramps and landings including edge protection, cross slope, surfaces, and outdoor conditions.

**Handrails-** Handrails are required on both sides of ramps connecting elevated play components. Handrails are required to comply with ADAAG 4.8.5. Handrails must comply with the following:

- Clearance between handrail gripping surfaces and adjacent surfaces shall be 1 ½ inches (38 mm) minimum.
- Handrail gripping surfaces shall be continuous along their length and shall not be obstructed along their tops and sides. The gripping surface shall have an outside diameter of 0.95 inch (24 mm) minimum and 1.55 inches (39 mm) maximum. The bottoms of handrail gripping surfaces shall not be obstructed for more than 20% of their length. Where provided, horizontal projections shall occur 1 ½ inches (38 mm) minimum below the bottom of the handrail gripping surface.

**When Transfer Systems Are Used-** A transfer system provides access to elevated play components within a composite system by connecting different levels with transfer platforms and steps. A transfer system provides individuals the space necessary to physically transfer up or down in a composite play structure. Where provided, a 24-inch (610 mm) minimum width is necessary for individuals moving around a structure. At least 50% of the elevated play components can be connected by a transfer system in play areas with fewer than 20 elevated components. In play areas with 20 or more elevated play components, transfer systems may be used to connect up to 25% of the elevated play components and the rest of the elevated play components required to be on an accessible route must be connected by a ramp.

**Transfer Platforms-** A transfer platform is a platform or landing that an individual who uses a wheelchair or mobility device can use to lift or transfer onto the play structure and leave the wheelchair or mobility device behind at ground level. Clear floor or ground space used for parking wheelchair or mobility devices is required at the transfer platform. The 48- inch long side (1220 mm) of the "wheelchair parking" space must be parallel to the 24-inch (610 mm) side of the transfer platform. The following are transfer platform requirements:

- 11 inches (280 mm) to 18 inches (455 mm) height of top surface
- Minimum 24 inches (610 mm) wide
- Minimum 14 inches (355 mm) deep
- Unobstructed side

**Transfer Steps-** Transfer steps are level surfaces in a composite structure that can be used for transferring from different levels to access play components. Adding a transfer step that leads to the ground surface increases access for children exiting at the ground level. The following are transfer step requirements:

- Minimum 24 inches (610 mm) wide
- Minimum 14 inches (355 mm) deep
- Maximum 8 inches (205 mm) height

**Transfer Supports-** include handrails, handgrips, or custom designed handholds and offer a means of support when transferring into the entry or seat of a play component. Transfer supports must be provided on transfer platforms and transfer steps at each level where transferring is the intended method of access.



**Connected Elevated Components-** When transfer systems are used, an elevated play component may connect to other elevated play components, providing an innovative, accessible route. Elevated play components that are connected to other play components count toward fulfilling the requirement for the number of elevated components on an accessible route where transfer systems are used.

## WHAT OTHER ACCESSIBILITY REQUIREMENTS APPLY TO PLAY COMPONENTS?

The play area standards address accessible routes connecting play components along with certain spaces that are crucial to making a play area usable for children with disabilities. Additional features will assist in making play components more accessible to more children. Designers are encouraged to consider components with back support, increased space for maneuvering adjacent to the play component, and other features that promote independent use.

**Clear Floor or Ground Space-** provides unobstructed room to accommodate a single wheelchair and its occupant at a play component on an accessible route. The minimum clear floor or ground space on a composite structure may be positioned for a forward or parallel approach. It may overlap accessible routes and maneuvering spaces. Maneuvering space and clear space is not required on elevated structures or at elevated play components reached by a transfer system, since mobility devices are left at ground level. The following are clear floor or ground space requirements:

- 30-inch (760 mm) by 48-inch (1220 mm) minimum area
- May overlap accessible routes and maneuvering spaces
- Slope not steeper than 1:48 in all directions

**Maneuvering Space-** the space required for a wheelchair to make a 180-degree turn. At least one maneuvering space must be provided on the same level as elevated play components. When ramps are used to provide access to ground level and elevated play components, space allowances to accommodate wheelchairs and mobility devices are required.

- A 60-inch (1525 mm) turning circle permits individuals with mobility devices to turn around
- A 60-inch (1525 mm) T-Shaped turn allows an individual to change directions by making a series of multi-point turns
- Slope not steeper than 1:48 in all directions

As an example, maneuvering space is required for swings and may be located behind or in front, as long as it is immediately adjacent to the swing. Objects are not permitted to protrude into ground level maneuvering spaces at or below 80 inches (2030 mm) above the ground or floor surface.

**Entry Points and Seats-** are features of play components where individuals would transfer, sit, or gain access. When play components are located on an accessible route, the height required to transfer directly to the entry point or seat of a play component has a minimum of 11 inches (280 mm) and a maximum of 24 inches (610 mm). A mid-level height of 18 inches (455 mm) is recommended. Consider design features like open sides, back supports, and hand supports to help facilitate easy transfer and access.

**Play Tables-** are surfaces, boards, slabs, or counters that are created for play. This includes tables designed for sand and water play, gathering areas, and other activities. Where play tables are located on an accessible route, the wheelchair knee clearance minimums are:

- 24 inches (610 mm) high minimum
- 30 inches (760 mm) wide minimum
- 17 inches (430 mm) deep minimum

Play tables designed primarily for children under 5 years old may provide a parallel approach instead of knee clearance if the rim is a maximum of 31 inches (785 mm) high. The tops of rims, curbs, or other obstructions that would prevent access to a table surface should be 31 inches (785 mm) maximum in height. Consider the route, clear floor space and maneuvering spaces for tables intended to be accessible to individuals who use wheelchairs.



**Reach Ranges-** Reach ranges are designated regions of space that a person seated in a wheelchair can reasonably extend their arm or hand to touch, manipulate, move, or interact with an object or play component. Reach ranges should be considered when providing play components with interactive features for children who use wheelchairs. Reach ranges are not appropriate for play components reached by transfer systems. Appropriate reach range heights will vary depending on how the play component is accessed. Recommended forward or side reach ranges are:

- 20 to 36 inches for 3 to 4 year-olds

- 18 to 40 inches for 5 to 8 year-olds
- 16 to 44 inches for 9 to 12 year-olds

## SOFT CONTAINED PLAY STRUCTURES

"Soft contained play equipment" is a play structure made of one or more components, on which an individual enters a fully enclosed play environment that uses pliable materials such as plastic, soft padding, and fabric. These structures must provide at least one entry point on an accessible route when three or fewer entry points are provided. If four or more entry points are provided, at least two entry points must be located on an accessible route. Transfer systems or platform lifts can serve as a part of an accessible route connecting entry points on soft-contained play structures.

For more information please visit: <http://www.ada.gov/regs2010/2010ADAStandards/2010ADASTandards.htm#1008> and <http://www.access-board.gov/play/guide/intro.htm>

## Accessible Sports Facilities (Americans with Disabilities Act (ADA) Fact Sheet)

The Americans with Disabilities Act (ADA) is a comprehensive civil rights law that prohibits discrimination on the basis of disability. The ADA requires that newly constructed and altered state and local government facilities, places of public accommodation, and commercial facilities be readily accessible to, and usable by, individuals with disabilities. This fact sheet is intended to give an overview of the accessibility standards for sports facilities. These standards establish minimum accessibility requirements for newly designed or newly constructed and altered sports facilities. Emphasis is placed on ensuring that individuals with disabilities are generally able to access the sports facility and use a variety of elements. Incorporating accessibility into the design of a sports facility should begin early in the planning process with careful consideration of accessible routes.

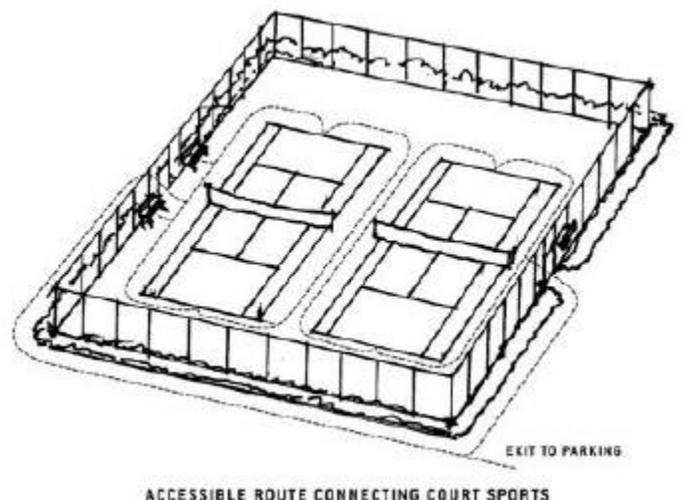


**Accessible Sports Facilities-** The recreation facility standards described in this guide focus on the accessible features of unique sports-related elements in newly designed or newly constructed and altered facilities.

**Accessible Routes-** ADA Accessibility Standards requires that at least one continuous, unobstructed path connect accessible buildings, facilities, elements and spaces within areas of indoor or outdoor sports activities. The accessible route must comply with ADA provisions for the location, width, passing space, head room, surface, running slope (not steeper than 1:20), cross slope (not steeper than 1:48), changes in level, doors, egress, and areas of rescue assistance. The standards apply to "fixed" facilities and elements. They do not cover equipment that is frequently moved.

**Court Sports-** An accessible route must connect each court and must comply with all ADA requirements, such as width (minimum of 36 inches) and changes in level or surface. An accessible route must directly connect both sides of the court without traversing through the court space.

**Areas of Sport Activities-** An "area of sport activity" is a broad term intended to cover a diverse number of indoor and outdoor sports fields and areas. It is "that portion of a room or space where the play or practice of a sport occurs. This includes, but is not limited to: basketball courts, baseball fields, running tracks, soccer fields, and skating rinks. Accessible routes must connect each area of sport activity and must comply with all ADA requirements, except for surfaces and protruding objects since they may affect the fundamental nature of the sport or activity. For example, an accessible route is required to connect to the boundary of a soccer field, but there is no requirement to change the surface of a field to an accessible surface. Where light fixtures or gates are provided as part of a court sport or other area of sport activity, they must comply with ADAAG provisions for controls and operating mechanisms, and for gates and doors.



**Animal Containment Areas-** If the public has access to an animal containment area; accessible routes must connect each area. Examples may include petting zoos, petting farms, public pathways for viewing livestock display tents, or other areas where the public has access to animals. These areas must comply with all ADA requirements, except the requirements for surfaces and the restrictions on changes in level. Accessibility is not required in areas that are for animal handlers and not for public use.

**Dressing, Fitting, or Locker Rooms-** When provided, dressing, fitting, or locker rooms must be accessible and comply with all ADA provisions. If they are in a cluster, 5%, or at least one must be accessible. There must be an accessible route through the door and to all elements required to be accessible in the room. Operating mechanisms provided on accessible lockers must also meet ADA provisions for their operation and height.

- **Lockers-** If lockers are provided, at least 5%, but not less than one of each type (full, half, quarter, etc.) must be accessible. Accessible benches should be located adjacent to the accessible lockers.
- **Benches-** Accessible benches are required in dressing, fitting, and locker rooms. Benches must have a clear floor space to allow persons using wheelchairs or other mobility devices to approach parallel to the short end of a bench seat. In saunas and steam rooms, this floor space may be obstructed by readily removable seats.

Benches must have seats that are a minimum of 20 inches to a maximum of 24 inches in depth and 42 inches minimum in length. The seat height should be a minimum of 17 inches to a maximum of 19 inches above the finished floor. If the bench is not located next to a wall, the bench must have back support that is 42 inches minimum in length and extends from a point 2 inches maximum above the seat to a point 18 inches minimum above the bench. Benches must be strong enough to withstand a vertical or horizontal force of 250 pounds applied at any point on the seat, fastener, mounting device, or supporting structure. The provisions for benches are not intended to apply to park benches or other benches used for sitting or resting. If benches are located in wet areas, the surface must be slip-resistant and designed not to accumulate water.

**Team Player Seating Areas-** Fixed team or player seating areas must contain the number of wheelchair spaces and companion seats required by ADA (based on the number of seats provided), but not less than one space. One option is to provide a clear space adjacent to a fixed bench, with the bench serving as companion seating. Wheelchair spaces in the team player seating areas are exempt from the requirements related to admission price and line of sight choices in assembly areas. It is recommended that ramps be used wherever possible for accessible routes connecting team or player seating areas and areas of sport activity. However, a platform lift may be used as part of an accessible route to team player seating areas.

**Saunas and Steam Rooms-** If saunas or steam rooms are in a cluster, at least 5%, but not less than one of each type must be accessible. The wheelchair turning space in the sauna or steam room must comply with ADA, except that it can be obstructed by readily removable seats. If seating is provided, at least one bench must be accessible. Doors cannot swing into any part of the clear floor or ground space required for benches.

**Exercise Equipment and Machines-** At least one of each type of exercise equipment or machine must have clear floor space of at least 30 by 48 inches and be served by an accessible route. If the clear space is enclosed on three sides (e.g., by walls or the equipment itself), the clear space must be at least 36 by 48 inches. Most strength training equipment and machines would be considered different types. For example, if operators provide both a biceps curl machine and free weights, both must meet the standards in this section.

Clear floor space must be positioned to allow a person to transfer from a wheelchair or to use the equipment while seated in a wheelchair. For example, to make a shoulder press accessible, the clear floor space should be next to the seat. But the clear floor space for a bench press designed for use by a person using a wheelchair would be centered on the operating mechanisms. Clear floor space for more than one piece of equipment may overlap. The exercise equipment and machines themselves do not need to comply with the ADA requirements regarding controls and operating mechanisms.

**Shooting Facilities-** If facilities provide fixed firing positions, at least 5%, but not less than one of each type of fixed firing position must be served by an accessible route. Fixed firing positions must have a 60-inch diameter space with slopes not steeper than 1:48 so a wheelchair user can turn around and have a level place from which to shoot. Types of different firing positions include positions with different admission prices, positions with or without weather covering or lighting, and positions that support different shooting events (e.g., muzzle loading rifle, small bore rifle, high power rifle, bull's eye pistol, action pistol, silhouette, trap, skeet, and archery).

**Bowling Lanes-** At least 5%, but not less than one, of each type of bowling lane must be accessible. Unlike other areas of sport activity, only those team or player seating areas that serve accessible lanes must be connected with an accessible route and comply with seating requirements. Spectator seating in bowling facilities is addressed in ADA and will require wheelchair spaces, companion seating, and designated aisle seats.

For more information please visit: <http://www.access-board.gov/recreation/guides/sports.htm>

## Accessible Swimming Pools and Spas (Americans with Disabilities Act (ADA) Fact Sheet)

The Americans with Disabilities Act (ADA) is a comprehensive civil rights law that prohibits discrimination on the basis of disability. The ADA requires that newly constructed and altered state and local government facilities, places of public accommodation, and commercial facilities be readily accessible to, and usable by, individuals with disabilities. This fact sheet is intended to give an overview of the accessibility standards for swimming pools and wading pools. Emphasis is placed on ensuring that individuals with disabilities are generally able to access swimming pools and use a variety of elements. Incorporating accessibility into the design of a swimming pool should begin early in the planning process with careful consideration to the accessible routes and means of entry into the water.

**Accessible Swimming Pools-** These standards focus on newly designed or newly constructed and altered swimming pools, wading pools, and aquatic recreation facilities.

**Accessible Routes-** ADA Accessibility Standards require that at least one continuous, unobstructed path connect accessible buildings, facilities, elements and spaces on the site. Accessible route requirements in ADA address width, passing space, head room, surface, slope, changes in level, doors, egress, and areas of rescue assistance. An accessible route is required to provide access to the swimming area and all supporting amenities, with the exception of, diving boards, platforms, or water slides.

### Types of Facilities and Required Means of Entry into the Water:

- **Swimming Pools-** Large pools (any pool with over 300 linear feet of pool wall) must have a minimum of two accessible means of entry (a sloped entry, pool lift, transfer wall, transfer system, or pool stairs). Pool walls at diving areas and in areas where swimmers cannot enter because of landscaping or adjacent structures are still counted as part of the pool's total linear feet. It is recommended that where two means of entry are provided, they be different types and be situated on different pool walls. Pools with less than 300 linear feet of pool wall are only required to provide one accessible means of entry, which must be either a pool lift or sloped entry.
- **Aquatic Recreation Facilities-** Wave action pools, leisure rivers, sand bottom pools, and other pools where access to the water is limited to one area and where everyone gets in and out at the same place, must provide at least one accessible means of entry, no matter how many linear feet of pool wall is provided. The accessible means of entry can be either a pool lift, sloped entry, or transfer system.
- **Catch Pools-** are bodies of water where water slide flumes drop users into the water. An accessible means of entry or exit is not required into the catch pool. However, an accessible route must connect to the edge of the catch pool.
- **Wading Pools-** are designed for shallow depth and are used for wading. Each wading pool must provide at least one sloped entry into the deepest part. Other forms of entry may be provided as long as a sloped entry is provided. The sloped entries for wading pools are not required to have handrails.



PERMITTED MEANS OF POOL ACCESS					
POOL TYPE	SLOPED ENTRY	LIFT	TRANSFER WALLS	TRANSFER SYSTEMS	STAIRS
Swimming (less than 300 linear feet of pool wall)	✓	✓			
Swimming (300 or more linear feet of pool wall) —two means of entry required	✓*	✓*	✓	✓	✓
Wave action, leisure river, and other pools where user entry is limited to one area	✓	✓		✓	
Wading pools	✓				
Spas		✓	✓	✓	

\*Primary means must be by sloped entry or lift, secondary means can be any of the permitted types.

#### Types of Accessible Means of Entry into the Water:

- **Pool Lifts-** must be located where the water level is not deeper than 48 inches. If multiple pool lift locations are provided, only one must be where the water is less than 48 inches. If the entire pool is deeper than 48 inches, an exception allows operators to use a pool lift in any location as an accessible means of entry.
- **Lift Seats-** must be a minimum of 16 inches wide. In the raised (load) position, the centerline of the seat must be located over the deck, a minimum of 16 inches from the edge of the pool. The deck surface between the centerline of the seat and the pool edge cannot have a slope greater than 1:48 (2%). Seats with backs will enable a larger number of persons with disabilities to use the lift independently. Headrests, seat belts, and additional leg support will enhance accessibility and accommodate a wider variety of people with disabilities.
- **Clear Deck Space-** must be provided to enable a person to get close enough to the pool lift seat to easily transfer from a wheelchair or mobility device. The clear deck space must be a minimum of 36 inches wide and extend forward a minimum of 48 inches from a line located 12 inches behind the rear edge of the seat. This space must be located on the side of the seat opposite the water and parallel with the seat. The slope of the clear deck space must not be greater than 1:48 (2%).
- **Seat Height-** The lift must be designed so that the seat will make a stop between a minimum of 16 inches and maximum of 19 inches (measured from the deck to the top of the seat surface, when the seat is in the raised position). Lifts can provide additional stops at various heights to accommodate users of all ages and abilities.
- **Footrests and Armrests-** Footrests must be provided on pool lifts, and must move together with the seat. Padding on footrests, large enough to support the whole foot, reduces the chance of injury. Armrests are not required, however if provided, the armrest opposite the water must be removable or be able to fold clear of the seat when the seat is in the raised (load) position.
- **Operation-** Lifts must be designed and placed so that people can use them without assistance, although assistance can be provided if needed. A person must be able to call the lift when it is in either the deck or water position. The controls and operating mechanisms must be unobstructed when a lift is in use. A person must be able to use the lift with one hand, and the operating controls must not require tight grasping, pinching, or twisting of the wrist. Controls may not require more than five pounds of pressure to operate.
- **Submerged Depth-** Lifts must be designed so that the seat will submerge to a minimum of 18 inches below the stationary water level.
- **Lifting Capacity-** Lifts must have the capability of supporting a minimum weight of 300 pounds and be capable of sustaining a static load that is at least 1.5 times the rated load.

**Sloped Entries-** must comply with ADA accessible route provisions (36 inch minimum width, maximum 1:12 or 8.33% slope), except that the surface does not need to be slip resistant. In most cases, it is not appropriate to submerge personal wheelchairs and mobility devices in water. Facilities that use sloped entries are encouraged to provide an aquatic wheelchair designed for access into the water. Persons transfer to the aquatic wheelchair and access the water using it, leaving their personal mobility device on the deck. Operators and facility managers may need to consider storage options for personal mobility devices if deck space is limited.

- **Submerged Depth-** Sloped entries must extend to a depth between 24 inches minimum and 30 inches maximum below the stationary water level. Where the sloped entry has a running slope greater than 1:20 (5%), a landing at both the top and bottom of the ramp is required. At least one landing must be located between 24 and 30 inches below the stationary water level. Landings must be a minimum of 36 inches in width and 60 inches in length. The sloped entry may be a maximum of 30 feet at 1:12 (8.33%) slope before an intermediate landing is required. Adding a solid wall on the side closest to the water can enhance safety.
- **Handrails-** Sloped entries must have handrails on both sides regardless of the slope. Handrail extensions are required at the top landing but not at the bottom. Clear width between handrails must be between 33 and 38 inches. The handrail height must be between 34 and 38 inches to the top of the gripping surface. This provision does not require the handrails to be below the stationary water level, which could be considered an underwater obstruction. No minimum width is required between handrails provided on sloped entries that serve wave action pools, leisure rivers, sand bottom pools, and other pools where people can enter only in one place. Handrails are required to comply with ADAAG provisions (diameter, non-rotating, and height).



**Transfer Walls-** A transfer wall is a wall along an accessible route that allows a person to leave a mobility device and transfer onto the wall and then into a pool. The following are requirements for transfer walls:

- **Grab Bars-** at least one grab bar must be located perpendicular to the pool wall and extend the full width of the wall. The top of the gripping surface must be 4 to 6 inches above the wall. If only one bar is provided, the clearance must be a minimum of 24 inches on each side of the bar. If two bars are provided, the clearance must be a minimum of 24 inches between the bars. The diameter of the grab bars must comply with ADA (diameter (between 1.25-1.5 inches), non-abrasive, and non-rotating).
- **Clear Deck Space-** Clear deck space of 60 by 60 inches minimum, with a slope of not more than 1:48 (2%), must be provided at the base of a transfer wall. If there is one grab bar on a transfer wall, the clear deck space must be centered on the one grab bar. That allows enough space for a transfer on either side of the bar. If two bars are provided, the clear deck space must be centered on the 24-inch clearance between the two bars.
- **Height-** must be 16 inches minimum to 19 inches maximum, measured from the deck.
- **Width and Length-** Width: minimum of 12 inches to a maximum of 16 inches. Length: minimum of 60 inches and must be centered on the clear deck space.
- **Surface-** To prevent injuries, the wall surface must have rounded edges and not be sharp.

**Transfer Systems-** consist of a transfer platform and a series of transfer steps that descend into the water. Users need to transfer from their wheelchair or mobility device to the transfer platform and continue transferring into the water.

- **Transfer Platform-** Each transfer system must have a platform on the deck surface so users can maneuver on and off the system from their mobility device or wheelchair. Platforms must be a minimum of 19 inches deep by 24 inches wide. Transfer platforms must be between 16 and 19 inches high, measured from the deck.
- **Clear Deck Space-** The base of the transfer platform must have clear deck space adjacent to it that is 60 by 60 inches minimum, with a slope not steeper than 1:48 (2%). The space must be centered along the 24-inch minimum unobstructed side of the transfer platform.
- **Transfer Steps-** The maximum height of transfer steps is 8 inches, although shorter heights are recommended. Each transfer step must have a tread depth of 14 inches minimum to 17 inches maximum and a minimum tread width of 24 inches. The steps must extend into the water a minimum of 18 inches below the stationary water level.
- **Surface-** The surface of the transfer platform and steps must not be sharp and must have rounded edges to prevent injuries.
- **Grab Bars-** A grab bar must be provided on at least one side of each step and on the transfer platform, or as a continuous grab bar serving each step and the platform. The bar must not obstruct transfer onto the platform. If a grab bar is provided on each step, the top of the gripping surface must be 4 inches minimum to 6 inches



maximum above each step. If a continuous bar is provided, the top of the gripping surface must be 4 inches minimum to 6 inches maximum above each step nosing. Grab bars on transfer systems must comply with ADA (diameter between 1.25 and 1.5 inches, not abrasive, and non-rotating).

**Accessible Pool Stairs-** provide assistance with balance and support from a standing position when moving from the pool deck into and out of the water. ADA provisions for stairs include the requirement that all steps have uniform riser heights and tread widths not less than 11 inches, measured from riser to riser. Open risers are not permitted. Other stairs or steps provided in the pool are not required to meet these standards.

- **Handrails-** Pool stairs must have handrails with a minimum width between the rails of 20 inches and a maximum of 24 inches. Handrail extensions are required on the top landing of the stairs but are not required at the bottom landing. Handrails on pool stairs must comply with ADA provisions. The top of the handrail gripping surface must be a minimum of 34 inches and a maximum of 38 inches above the stair nosing. If handrails are mounted on walls, the clear space between the handrail and wall must be 1.5 inches.

**Water Play Components-** if provided must comply with the ADA play area standards and accessible route provisions. Floor and ground surfaces shall be stable, firm and slip resistant. The running slope of walking surfaces shall not be steeper than 1:20 and the cross slope shall not be steeper than 1:48. Ramp runs shall have a running slope not steeper than 1:12. Cross slope of ramp runs shall not be steeper than 1:48. Transfer systems may be used instead of ramps to connect elevated water play components. If the surface of the accessible route, clear floor or ground spaces, and turning spaces that connect play components are submerged, the accessible route does not have to comply with the requirements for cross slope, running slope, and surface conditions.

Personal wheelchairs and mobility devices may not be appropriate for submerging in water. Providing an aquatic wheelchair made of non-corrosive materials and designed for access into the water will protect the water from contamination and avoid damage to personal wheelchairs.

**Other Accessible Elements-** If swimming pools are part of a multi-use facility, designers and operators must also comply with ADA and all applicable requirements for recreation facilities. These include, but are not limited to:

- Dressing, fitting, and locker rooms
  - Where lockers are provided, at least 5%, but no fewer than one of each type, shall be accessible
    - 1 to 100 = 5%, but no fewer than 1
    - 201 and over = 10, plus 2% of total number of units over 200
- Exercise equipment and machines
- Areas of sports activities (court sports, sports fields, etc.)
- Play areas

For more information please visit: <http://www.ada.gov/regs2010/2010ADASTandards/2010ADASTandards.htm#Swimming> and <http://www.access-board.gov/recreation/guides/pools.htm>

## Accessible Boating Facilities (Americans with Disabilities Act (ADA) Fact Sheet)

The Americans with Disabilities Act (ADA) is a comprehensive civil rights law that prohibits discrimination on the basis of disability. The ADA requires that newly constructed and altered state and local government facilities, places of public accommodation, and commercial facilities be readily accessible to, and usable by, individuals with disabilities. This fact sheet is intended to give an overview of the accessibility standards for boating facilities. Emphasis is placed on ensuring that individuals with disabilities are generally able to access the boating facility and use a variety of elements. Incorporating accessibility into the design of a boating facility should begin early in the planning process with careful consideration to accessible routes.



**Accessible Boating Facilities-** Recreational boating facilities can include fixed and floating facilities. Facilities can vary in size from one boat slip (for example, at a small campground facility) to several thousand slips, and can handle boats ranging in size from small canoes to large sailboats and powerboats. Facilities may be located in the same waterfront area or in the same site and include marinas, launching facilities, piers, and docks designed for recreational use.

**Accessible Routes-** ADA Accessibility Standards require that at least one continuous, unobstructed path connect accessible buildings, facilities, boarding piers at boat launch ramps, boat slips, elements, and spaces within a boating

facility. The accessible route must comply with ADA provisions for the location, width, passing space, head room, surface, slope, changes in level, doors, egress, and areas of rescue assistance.

**Gangways-** are variable-sloped pedestrian walkways linking a fixed structure or land with a floating structure. Where gangways are provided as part of accessible routes to connect accessible boat slips on floating piers, the following exceptions to the ADA accessible route provisions have been included:

- **Gangway Slope and Rise Exceptions-** Gangways designed for the least possible slope will provide more independent access for persons with disabilities. Gangways must be designed to provide for a maximum 1:12 (8.33%) slope but are not required to be longer than 80 feet in length. The rise for any ramp run shall be 30 inches (760 mm) maximum.
- **Gangway Alterations-** Gangways on existing boating facilities may be repaired or replaced without increasing the gangway length. However, if the areas altered contain primary functions (such as a boat slip or boat dock), existing gangways must be made accessible, if the cost to do so is not disproportionate. The Department of Justice has determined that it is not disproportionate to spend up to an additional 20% of the overall costs of alterations to the primary function areas to make the path of travel accessible.
- **Transition Plates-** are sloping pedestrian walking surfaces located at the end of a gangway. Gangways are not required to have landings at the end, if transition plates are provided. If the slope of a transition plate is greater than 1:20 (5%), a landing at the non-gangway end of the transition plate must be provided and comply with other ADA ramp requirements.
- **Handrail Extensions-** are not required where gangways and transition plates connect. ADA does not require handrails on sloped surfaces that have a rise of less than 6 inches or a projection less than 72 inches, or a slope of 1:20 (5%) or less.
- **Cross Slope-** The cross slopes of gangways, transition plates and floating piers that are part of an accessible route must be designed and constructed to not exceed a maximum of 1:48 and shall be measured in the static position.
- **Elevators and Platform Lifts-** In addition to regular elevators, limited use/limited application elevators or platform lifts that comply with ADA may be used instead of gangways as part of an accessible route connecting floating piers.

**Boat Slips-** are the portion of a pier, main pier, finger pier, or float where a boat is moored, or used for embarking or disembarking. Boarding piers that are not part of boat launch ramps are also classified as boat slips. Piers not typically thought of as providing boat slips, such as a fuel pier, are also included in calculating the total number of slips at the facility. The number of boat slips required to be accessible must comply with the table shown on the next page.

If boat slips at a facility are not identified, each 40 feet of boat slip edge along the perimeter of a pier will be counted as one boat slip.

**Dispersion-** Accessible boat slips must be dispersed throughout the various types of slips a facility provides. Accessible slips may be grouped on one pier if the requirement for different types of slips is met. Types could include shallow-water or deep water; transient or longer-term lease; covered or uncovered; and whether slips are equipped with features such as telephone, water, electricity, or cable connections.

Accessible boat slips do not need to be marked and are not reserved in the same way as accessible vehicle parking spaces. For example, facilities should hold the accessible slips open for persons with disabilities until all other slips are filled. At that point, the slip may be made available for general use. For seasonal slip holders, accessible slips should be held until the expiration period for slip contracts has expired.

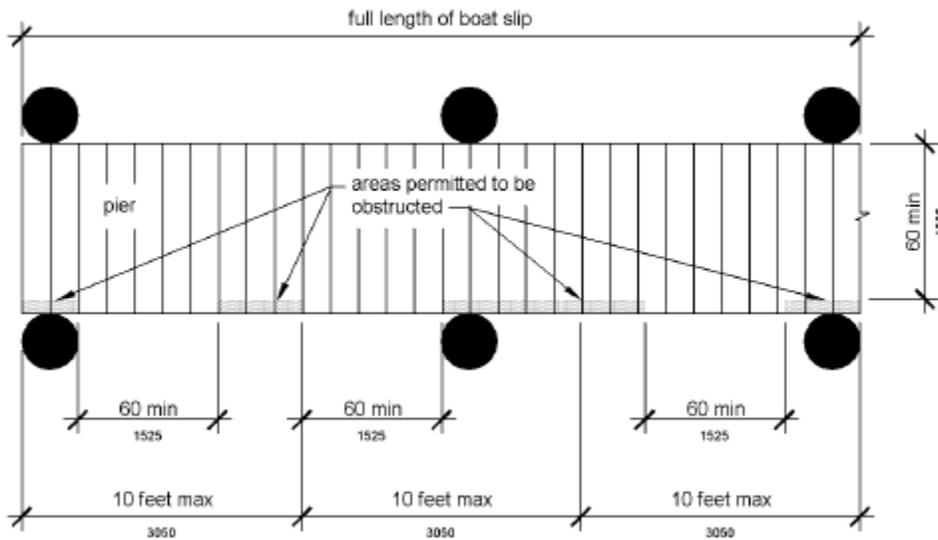
**Accessible Boat Slips-** Accessible boat slips must have clear pier space at least 60 inches wide and as long as the slip. Every 10 feet of linear pier edge serving the accessible slips must have at least one continuous clear opening that is at least 60 inches wide. There are three exceptions:

- The width of the clear pier space may be 36 inches wide for a length of 24 inches, as long as multiple 36-inch segments are separated by segments that are 60 inches minimum clear in width and 60 inches minimum clear in length, and the clear openings are at least 60 inches deep.

NUMBER OF ACCESSIBLE BOAT SLIPS REQUIRED	
Total Slips in Facility	Minimum Accessible Slips
1-25	1
26-50	2
51-100	3
101-150	4
151-300	5
301-400	6
401-500	7
501-600	8
601-700	9
701-800	10
801-900	11
901-1000	12
1001 and over	12 plus 1 for each 100 or fraction thereof

- Edge protection is not required, but if provided, it can be 4 inches high maximum and 2 inches deep maximum at the continuous clear openings.
- In existing piers, clear pier space shall be permitted to be located perpendicular to the boat slip and shall extend the width for the boat slip, where the facility has at least one boat slip complying with the above, and further compliance would result in a reduction in the number of boat slips available or result in a reduction of the widths of existing slips.
  - Existing facilities are only required to have one accessible boat slip with a pier clearance which runs the length of the slip and a minimum of 60 inches wide. All other accessible slips are allowed to have the required pier clearance at the head of the slip. Under this exception, at piers with perpendicular boat slips, the width of most “finger piers” will remain unchanged. However, where mooring systems for floating piers are replaced as part of pier alteration projects, an opportunity may exist for increasing accessibility. Piers may be reconfigured to allow an increase in the number of wider finger piers, and serve as accessible boat slips.

Cleats and other boat securing devices do not have to comply with ADA reach range requirements. However, clear space must be provided at each securing device and each device must be located on an accessible route.



**Figure 1003.3.1 Boat Slip Clearance**

**Boarding Piers at Boat Launch Ramps-** Boarding piers are the part of a pier where a boat is temporarily moored for embarking and disembarking and shall provide clear pier space 60 inches (1525 mm) wide minimum and shall extend the full length of the boarding pier. A boat launch ramp is a sloped surface designed for launching and retrieving boats and other watercraft. It is advised that at least one launch ramp have an accessible route; this route is not required to comply with slope requirements. If boarding piers at launch ramps are provided, at least 5% but not less than one, must be served by an accessible route. The entire length of accessible boarding piers must comply with the same technical provisions that apply to boat slips. The exceptions for gangways, previously described above, may be applied to boarding piers.

***DCNR requires that any boat ramp/launch should have ADA access TO it—an accessible route. Beyond that, DCNR suggests that the applicant/grantee discuss the current ADA standards with their engineer to determine the level to which they are applicable to their site and project. DCNR encourages ADA accessible launches wherever possible but do not REQUIRE them. Where entrance/boat access into a creek/river/ lake is not explicitly ADA accessible, signage is encouraged so users know the conditions they will face at the entry point (much like trail challenge signage).***

ADA ramp requirements do not apply to the portion of the accessible route serving a boarding pier if it is located within a boat launch ramp. For example, a facility provides a chain of floats on a launch ramp to be used as an accessible boarding pier. At high water, the entire chain is floating and a transition plate connects the first float to the surface of the launch ramp. As the water level decreases, segments of the chain rest on the launch ramp surface, matching the slope of the launch ramp. An accessible route must serve the last float because it would function as the boarding pier at the lowest water level. Because the entire chain also functions as a boarding pier, it must comply with all ADA provisions.

Another facility provides a fixed boarding pier that is supported by piles and divides a launch area into two launch ramps. To comply with ADA, the accessible route could run down between the two launch ramps. Or, the fixed boarding pier could be relocated to the side of one of the launch ramps, which would allow the slope of the launch ramps to remain unchanged.

For more information please visit: <http://www.ada.gov/regs2010/2010ADAStandards/2010ADASTandards.htm#Boating> and <http://www.access-board.gov/recreation/guides/boating.htm>

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## Accessible Fishing Piers and Platforms (Americans with Disabilities Act (ADA) Fact Sheet)

The Americans with Disabilities Act (ADA) is a comprehensive civil rights law that prohibits discrimination on the basis of disability. The ADA requires that newly constructed and altered state and local government facilities, places of public accommodation, and commercial facilities be readily accessible to, and usable by, individuals with disabilities. This fact sheet is intended to give an overview of the accessibility standards for fishing piers and platforms. Emphasis is placed on ensuring that individuals with disabilities are generally able to access the fishing pier and use a variety of elements. Incorporating accessibility into the design of a fishing pier should begin early in the planning process with careful consideration to accessible routes and maneuvering space.



**Accessible Fishing Piers and Platforms-** These standards establish minimum accessibility requirements for newly designed or newly constructed and altered fishing piers and platforms. Structures that were not built specifically for fishing do not need to meet these requirements, even if people use them for fishing (for example, a bridge, flood control dam or breakwater jetty).

**Accessible Routes-** ADA Accessibility Standards require that at least one continuous, unobstructed path connect accessible fishing piers and platforms and other accessible spaces and elements within a fishing facility. The accessible route must comply with ADA provisions for the location, width, passing space, head room, surface, slope, changes in level, doors, egress, and areas of rescue assistance.

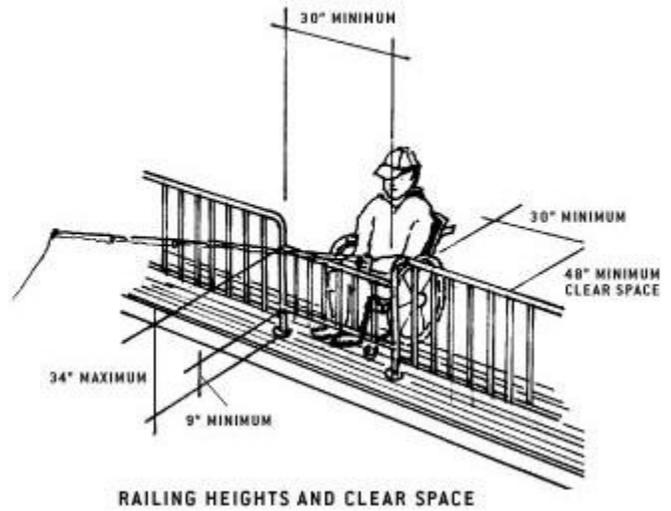
**Gangways-** are variable-sloped pedestrian walkways linking a fixed structure or land with a floating structure. Where gangways are provided as part of accessible routes to connect floating accessible fishing piers or platforms, the following exceptions to ADAAG accessible route provisions have been included:

- **Gangway Slope and Rise Exceptions-** Gangways designed for the least possible slope will provide more independent access for persons with disabilities. Gangways must be designed to provide for a maximum 1:12 (8.33%) slope; however, there is no maximum slope requirement for gangways 30 feet or longer. This does not apply to other sloped walking surfaces that may be part of the accessible route. For example, where a non-gangway sloped walking surface greater than 1:20 (5%) is provided as part of an accessible route, it must comply with ADAAG slope and rise requirements. This would include a ramp connecting a fixed pier or a float with fixed switchback ramps.
- **Gangway Alterations-** Gangways on existing fishing facilities may be repaired or replaced without increasing the gangway length. However, if the areas altered contain primary functions (such as a fishing station), existing gangways must be made accessible, if the cost to do so is not disproportionate. The Department of Justice has determined that it is not disproportionate to spend up to an additional 20% of the overall costs of alterations to the primary function area to make the path of travel accessible.
- **Transition Plates-** are sloping pedestrian walking surfaces located at the end of a gangway. Gangways are not required to have landings at the end, if transition plates are provided. However, if the slope of the transition plate is greater than 1:20 (5%), a landing at the non-gangway end of the transition plate must be provided and comply with other ADA ramp requirements.
- **Handrail Extensions-** are not required where gangways and transition plates connect. ADA does not require handrails on sloped surfaces that have a rise of less than 6 inches or a projection less than 72 inches, or a slope of 1:20 (5%) or less.
- **Cross Slope-** The cross slopes of gangways, transition plates and floating piers that are part of an accessible route must be designed and constructed not to exceed a maximum of 1:50 (2%).
- **Elevators and Platform Lifts-** In addition to regular elevators, limited use/limited application elevators or platform lifts that comply with ADA may be used instead of gangways as part of an accessible route connecting floating piers and platforms used for fishing.

**Railings-** Railings, guards, or handrails provided on a fishing pier or platform must meet ADA provisions

- **Height-** at least 25% of railings, guards, or handrails on a fishing pier or platform must be 34 inches or less in height above the ground or deck so a person using a wheelchair or other mobility device has the opportunity to fish. However, guardrails may be higher than 34 inches if the higher portion meets all the requirements of the International Building Code (see next page). This will allow a design professional to increase the guardrail height if a specific location needs enhanced safety measures or a local building code applies.

- **Dispersion-** Anglers who can stand are able to fish from any part of a pier or platform and change locations. To provide anglers with disabilities similar opportunities, the accessible 34-inch maximum railing must be located in a variety of places on the pier or platform.
- **Edge Protection-** Where railings, guards, or handrails are provided, edge protection must be provided and extend a minimum of 2 inches above the ground or deck surface. This protection will prevent persons using wheelchairs or other mobility devices from slipping off the pier or platform. Edge protection is not required where a railing, guardrail, or handrail is provided, if the deck surface extends a minimum of 12 inches beyond the inside face of the railing. This design allows a person using a wheelchair or other mobility device to pull into a clear space and move beyond the face of the railing to view the water in different directions. Toe clearance must be at least 30 inches wide and a minimum of 9 inches above the ground or deck surface beyond the railing.
- **Clear Floor or Ground Space-** At least one clear floor or ground space (30 inches by 48 inches minimum) must be provided at each location that has a railing height of 34 inches maximum. If there are no railings, at least one clear space must be provided on a pier or platform.
- **Turning Space-** Piers and platforms must have at least one turning area, either a 60-inch turning space or T-shaped space, to allow a person using a mobility device or wheelchair to make a 180-degree turn. The space may overlap the accessible route and clear floor or ground space.



**2000 International Building Code:**

*1003.2.12.1 Height.* Guards shall form a protective barrier not less than 42 inches (1067 mm) high, measured vertically above the leading edge of the tread, adjacent walking surface or adjacent seatboard.

*Exception:* For occupancies in Group R-3, and within individual dwelling units in occupancies in Group R-2, both as applicable in Section 101.2, guards whose top rail also serves as a handrail shall have a height not less than 34 inches (864mm) and not more than 38 inches (965mm) measured vertically from the leading edge of the stair tread nosing.

*1003.2.12.2 Opening limitations.* Open guards shall have balusters or ornamental patterns such that a 4-inch-diameter (102mm) sphere cannot pass through any opening up to a height of 34 inches (864mm). From a height of 34 inches (864mm) to 42 inches (1067mm) above the adjacent walking surfaces, a sphere 8 inches (203mm) in diameter shall not pass.

*Exception:* The triangular opening formed by the riser, tread and bottom rail at the open side of a stairway shall be of a maximum size such that a sphere of 6 inches (152mm) in diameter cannot pass through the opening.

[Exceptions 2 through 4 not reprinted.]

*Source: Sections 1003.2.12.1 and 1003.2.12.2, International Building Code. Reprinted with permission of the International Code Council, Falls Church, Virginia.*

For more information please visit: <http://www.ada.gov/regs2010/2010ADAStandards/2010ADASTandards.htm#Piers> and <http://www.access-board.gov/recreation/guides/fishing.htm>

## Accessible Golf Courses (Americans with Disabilities Act (ADA) Fact Sheet)

The Americans with Disabilities Act (ADA) is a comprehensive civil rights law that prohibits discrimination on the basis of disability. The ADA requires that newly constructed and altered state and local government facilities, places of public accommodation, and commercial facilities be readily accessible to, and usable by, individuals with disabilities. This fact sheet is intended to give an overview of the accessibility standards for golf courses. Emphasis is placed on ensuring that individuals with disabilities are generally able to access the golf course and use a variety of elements. Incorporating accessibility into the design of a golf course should begin early in the planning process with careful consideration to the layout of the course, golf car paths, and other circulation paths.



**Accessible Golf Courses-** The recreation facility standards described in this fact sheet focus on newly designed or newly constructed and altered golf courses and driving ranges. Other provisions contained in ADA Accessibility Standards address elements commonly found at a golf course, such as accessible vehicle parking spaces, exterior accessible routes, and toilet and bathing facilities.

**Accessible Routes-** ADA requires that at least one continuous, unobstructed path connect all accessible elements and spaces of a building or facility on golf courses. The accessible route must comply with ADA provisions for location, width, passing space, head room, surface, slope, changes in level, doors, egress, and areas of rescue assistance, unless modified by specific provisions outlined in this guide.

**Alternative Golf Car Passage-** Providing an accessible route that complies with ADA may be impractical throughout a golf course for several reasons. First, the route of play for a golfer is dependent on where the ball lands and is therefore unpredictable. The standards assume that on many courses, golfers use a golf car to move throughout the course. Second, requiring an accessible route throughout a course could alter the slopes within some courses. Therefore, a golf car passage (a continuous passage on which a motorized golf car can operate) may be substituted for an accessible route within the boundary of a golf course. While a golf car passage must be usable by golf cars, it does not necessarily need to have a prepared surface and may be part of a golf car path. The passage could be located on areas such as fairways, greens, and teeing surfaces; and can be substituted for all or part of the accessible route connecting elements within the boundary of the course and must be a minimum of 48 inches in width.

A golf car passage may also be substituted for an accessible route outside the boundary of the golf course when connecting certain elements. This is limited to the golf car rental area, bag drop areas, practice putting greens, accessible practice teeing grounds, course toilet rooms, and course weather shelters.

**Accessible Route Standards-** Where an accessible route is used the minimum width is 48 inches. If an accessible route is provided instead of a golf car passage, it must connect accessible elements and spaces located within the boundary of a golf course. The 48-inch minimum width for the accessible route is necessary to ensure passage of a golf car on the accessible route. This is important where the accessible route is used to connect the golf car rental area, bag drop areas, practice putting greens, accessible practice teeing grounds, course toilet rooms, and course weather shelters. Where handrails are provided along an accessible route, the standards increase the minimum width of the route to 60 inches to accommodate the passage of a golf car.

**Course Barriers-** Curbing or other man-made barriers often line golf car paths. Where man-made barriers prevent golf cars from entering a fairway, openings at least 60 inches wide at intervals not exceeding 75 yards must be provided to enable a golfer using a golf car to play the game without extended travel distances and time requirements.

**Teeing Grounds-** a rectangular area usually two club-lengths in depth used as the starting place for a hole of golf. The teeing ground's borders are defined by the outside limits of two "tee-markers." The design and construction of new teeing grounds or the alteration of an existing teeing area must allow golf cars to enter and exit within these limits.

- **Forward Teeing Ground-** for each hole must be connected by either an accessible route or a golf car passage. Existing courses do not have to provide access to the forward teeing ground in alterations, if terrain makes compliance infeasible.
- **Multiple Teeing Grounds-** If one or two teeing grounds are provided for a hole, only the forward teeing ground must be accessible either by an accessible route or a golf car passage. If three or more teeing grounds are provided for a hole, two teeing grounds must be accessible. This will allow persons with disabilities to play from different tees appropriate to their skill level, while providing flexibility to course operators and designers.

**Putting Greens-** must be connected by a golf car passage and must be designed and constructed so that a golf car can enter and exit the green.

**Weather Shelters-** must be designed and constructed to allow a golf car to enter and exit, and have a clear floor or ground space of 60 inches by 96 inches minimum.

**Driving Ranges-** Both stand-alone driving ranges and driving ranges adjacent to a golf course that provide teeing stations or practice teeing grounds must comply with the following:

- **Accessible Routes-** An accessible route or a golf car passage must connect accessible teeing stations with accessible parking spaces. The accessible route must be a minimum of 48 inches wide. If handrails are provided, the accessible route must be a minimum of 60 inches wide.
- **Teeing Stations-** If teeing stations or practice teeing grounds are provided, at least 5%, but not less than one, of the practice teeing grounds must be accessible and provide space for a golf car to enter and exit.
- **Temporary Facilities-** ADA also requires temporary facilities such as bleachers for tournaments, assembly seating areas, portable toilet facilities, concessions, and all other available amenities to provide access. Access to temporary facilities on a golf course may be achieved through either an accessible route or golf car passage. Facilities hosting tournaments or competitions must comply with all the other requirements of the ADA, including the general obligation to provide an equal opportunity to individuals with disabilities to enjoy the services provided.

For more information please visit: <http://www.ada.gov/regs2010/2010ADAStandards/2010ADAstandards.htm#Golf> and <http://www.access-board.gov/recreation/guides/golf.htm>

## Accessible Miniature Golf Courses (Americans with Disabilities Act (ADA) Fact Sheet)

The Americans with Disabilities Act (ADA) is a comprehensive civil rights law that prohibits discrimination on the basis of disability. The ADA requires that newly constructed and altered state and local government facilities, places of public accommodation, and commercial facilities be readily accessible to, and usable by, individuals with disabilities. This fact sheet is intended to give an overview of the accessibility standards for miniature golf courses. Emphasis is placed on ensuring that individuals with disabilities are generally able to access the miniature golf course and use a variety of elements. Incorporating accessibility into the design of a miniature golf course should begin early in the planning process with careful consideration to accessible holes and accessible routes.



**Accessible Miniature Golf Courses-** The recreation facility standards described in this guide focus on newly designed or newly constructed and altered miniature golf courses, adventure-style courses, and other putting courses. Other provisions contained in ADA Accessibility Standards address elements commonly found at a miniature golf course facility, such as accessible vehicle parking spaces, exterior accessible routes, and toilet and bathing facilities.

**Accessible Holes-** At least 50% of the holes on a miniature golf course must be accessible—if possible, operators should make all holes accessible. Accessible holes must be consecutive, to offer a more socially integrated experience. If only the minimum number of holes are accessible, it is recommended that designers select holes that will offer golfers who use wheelchairs or other mobility devices a playing experience that is as equivalent as possible to the experience of golfers without disabilities. An exception permits courses to have one break in the sequence of accessible holes, if the last hole in the sequence is the last hole on the course. The route in which a golfer with a disability must travel may not require travel back through any holes, even if the route is adjacent to the hole and not on the hole itself.

Handrails shall not be required on holes.

**Accessible Routes-** ADA requires that at least one continuous, unobstructed path connect all accessible elements and spaces of a building or facility. The accessible route must comply with ADA provisions for the location, width, passing space, head room, surface, slope, changes in level, doors, egress, and areas of rescue assistance. The accessible route must connect the facility's entrance with the first accessible hole and start of play area on each following accessible hole. The course must be configured to allow an easy exit from the last accessible hole to the facility exit or entrance. When not all holes are accessible, a player cannot be required to double back through holes to exit. An accessible route connecting accessible holes may be on the hole-playing surface or adjacent to it.

**Accessible Routes on the Playing Surface-** The surface of the accessible route must be stable, firm and slip resistant. Where carpets are used on the playing surface, they are not required to comply with the requirements in ADA for accessible carpets; however, they are still required to be stable, firm, and slip resistant. The accessible route must be within 36 inches of any area where the ball comes to rest. The accessible route may include a maximum slope of 1:4 (25%) for a maximum 4-inch rise. These steeper slopes or ramps are permitted for limited distances.

There is usually a curb around a hole to keep the ball within the area. When the accessible route is provided on the course, a 1-inch high maximum curb is permitted for an opening of 32 inches minimum where the accessible route extends outside the hole. Designers should consider locating this opening in an area where the ball is not likely to roll.

Landings must be 48 inches long. Where ramps change direction, the landing size must be a minimum of 48 inches by 60 inches. Slopes on landings must be no more than 1:20 (5%).

**Accessible Routes Adjacent to the Playing Surface-** If the accessible route is adjacent to the playing surface it must not exceed 36 inches from any area where golf balls rest. The accessible route should be as close to the level playing areas as possible. The accessible route adjacent to the playing surface must comply with ADA provisions that address slope (maximum of 1:12 or (8.33%), width (minimum of 36 inches), cross slope (maximum of 1:50 or (2%), handrails, and changes in level.

**Start of Play Area-** The clear floor or ground space area at the start of play for each accessible hole must be 48 by 60 inches minimum. It must have a slope no steeper than 1:48. The accessible route and the clear space can overlap.

**Golf Club Reach Range Area-** All areas within holes where golf balls rest shall be within 36 inches (915 mm) maximum of a clear floor or ground space 36 inches (915 mm) wide minimum and 48 inches (1220 mm) long minimum having a running slope not steeper than 1:20. The clear floor or ground space shall be served by an accessible route.

## Universal Access for Trails and Shared Use Paths

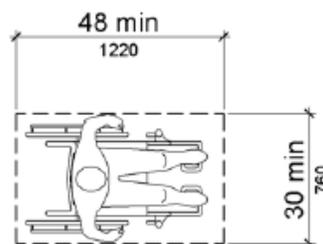
DCNR has developed a with Best Management Practices (“BMPs”) to utilize when planning, designing, constructing, and maintaining **pedestrian trails and shared use paths** for universal accessibility—for providing trails usable by all people, to the greatest extent possible, without separate or segregated access for people with disabilities. These BMPs, which derive from federal regulations, are mandatory for federal entities and those working on their behalf but voluntary for all others.

### [Universal Access for Trails and Shared Use Paths](#)

#### Accessibility Tables and Benches

The ADA Standards for tables and benches are dispersed in the 2010 ADA guidelines. In an effort to encapsulate the requirements in one place in a concise manner DCNR offers the following summary of what it understands to be the ADA requirements for Tables and Benches in a park setting:

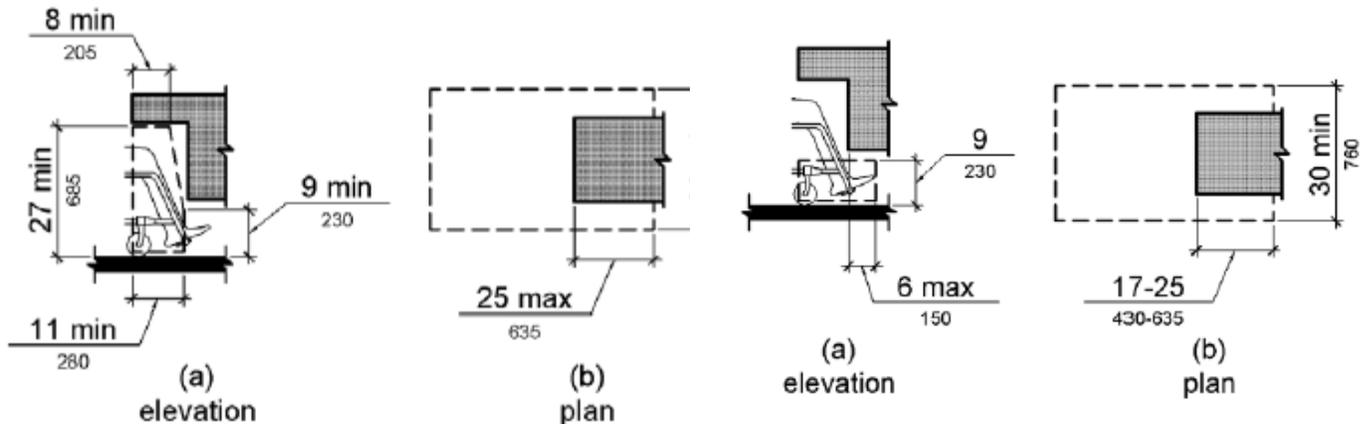
- Facilities/amenities funded with a DCNR grant are required to be accessible via an accessible route.
- Clear floor or ground space is required around tables and benches (bumpout on one side)
- The clear floor or ground space shall be 30 inches (760 mm) minimum by 48 inches (1220 mm) minimum.



- Knee and toe clearance shall be provided consistent with Section 306 of the 2010 ADA Standards.

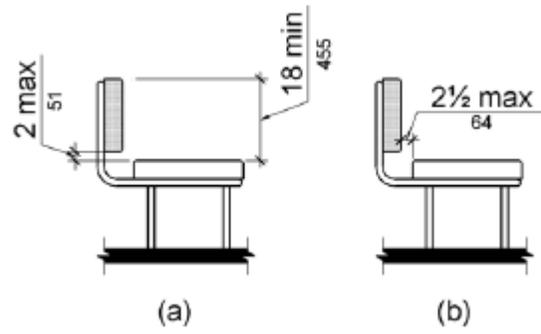
**Tables:**

- The tops of dining surfaces and work surfaces shall be 28 inches (710 mm) minimum and 34 inches (865 mm) maximum above the finish floor or ground.
- Tables need to provide knee and toe clearance. Table top overhangs need to extend between 17-25 inches.



**Benches:**

- Benches must have clear floor or ground space positioned at the end of the bench seat and parallel to the short axis of the bench.
- Benches shall have seats that are 42 inches (1065 mm) long minimum and 20 inches (510 mm) deep minimum and 24 inches (610 mm) deep maximum.
- The bench shall provide for back support or shall be affixed to a wall. Back support shall be 42 inches (1065 mm) long minimum and shall extend from a point 2 inches (51 mm) maximum above the seat surface to a point 18 inches (455 mm) minimum above the seat surface. Back support shall be 2 1/2 inches (64 mm) maximum from the rear edge of the seat measured horizontally.
- The top of the bench seat surface shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum above the finish floor or ground.
- The bench must support the application of 250 pounds (1112 N) of vertical or horizontal force on the seat, fasteners, mounting devices, and supporting structure.
- To assist in transferring to the bench, consideration should be provided to mounting grab bars on a wall adjacent to the bench, but not on the seat back. If provided, grab bars cannot obstruct transfer to the bench.



**Figure 903.4 Bench Back Support**

For more information please visit: <http://www.ada.gov/regs2010/2010ADASTandards/2010ADASTandards.htm#Miniature> and <http://www.access-board.gov/recreation/guides/min-golf.htm>

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