1.4 Recreation, Part 1
Standards for Accessible Playgrounds

26th Annual Mid-Atlantic ADA Update
The United States Access Board is an independent federal agency that promotes equality for people with disabilities through leadership in accessible design and the development of accessibility guidelines and standards.
SESSION AGENDA

• Application of ABA and ADA Standards
• Play Area Terminology
• Existing Play Areas
• Ground Level Play Components and Accessible Routes
• Elevated Play Components and Accessible Routes
• Water and Soft Contained Play Structures
• Questions
Current ADA Standards

Department of Justice’s 2010 Standards
March 15, 2012
What Standards Apply to Existing ADA Facilities?

- Title II — Program accessibility
- Title III — Readily achievable barrier removal

For more information, contact DOJ @ 800 514-0301
Architectural Barriers Act (ABA) Accessibility Standards

- Buildings and facilities constructed or altered or leased on behalf of the federal government
- Where?
  - employee day care centers, federal parks, other federal leased facilities
- Play area accessibility guidelines effective May 8, 2006 - GSA
Play Area Guidelines
The play area standards also do not apply to:

- Play areas designed for children under 2 years old
- Family childcare facilities where the proprietor resides
- Amusement attractions
Play Area Terms

- Elevated Play Component
- Use Zone
- Elevated Accessible Route
- Accessible Route (ground level)
- Ground-Level Play Component
Alterations
Alterations vs. Maintenance

Normal maintenance activities such as replacing worn “S” hooks or topping off ground surfaces are not considered alterations.
Alterations

- Actions that affect, or could affect, the usability of the play area.

- Examples include removing a climbing play component & replacing it with a spring rocker, or changing the ground surfacing.
Alterations

Additional Requirements

- When altering a “primary function area”
  - Area altered must be in compliance with ADA or ABA Accessibility Standards
  - Provide “path of travel” to the altered area
- 20% Disproportionality Rule
When altering the play component...not the surface
Replacing the entire ground surface...
Applying the standards

Inside the Play Area

Outside the Play Area
Play Area
- Contains play components
- Designed and constructed for children
Applying the standards, 2

**Play Area**

- A portion of a site containing play components designed and constructed for children.

**Area of Sport Activity**

- That portion of a room or space where the play or practice of a sport occurs.
Geographically Separated Play Areas
Multiple play areas on same site
Accessibility must be maintained in each phase of development.
What is a Play Component?

A play component is an element designed to generate specific opportunities for play, socialization, and learning.
What is a Play Component?

- Transfer Systems
- Steps
- Decks
- Roofs
Natural feature play components
Ground level play components

Approached and exited at ground level
Elevated play components

• Approached from elevated level
• Attached to composite play structure
• Components (counted once)
Determining Ground or Elevated

Ground-Level Play Component

Elevated Play Component
Ground Level
Scoping Provisions
Ground-level Requirement
One of Each Type
Ground-Level Requirements

More than one — integrated in the play area
Minimum number based on the number of elevated play components provided

- Minimum quantity of ground-level play components

<table>
<thead>
<tr>
<th>Number of Elevated Play Components</th>
<th>Min. Number Ground Level Components Required to be on Accessible Route</th>
<th>Min. Number of Different Types of Ground Level Components Required to be on Accessible Route</th>
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<tbody>
<tr>
<td>1</td>
<td>Not applicable</td>
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<td>2 - 4</td>
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<td>17 - 19</td>
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<tr>
<td>20 - 22</td>
<td>7</td>
<td>4</td>
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<tr>
<td>23 - 25</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>More than 25</td>
<td>8 plus 1 for each additional 3 over 25, or fraction thereof</td>
<td>5</td>
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</tbody>
</table>
Play Types

Identified by the experience the play component generally is designed to provide

Climbing

Spinning

Rocking

Swinging
Technical Provisions
Ground Level Accessible Routes

- Surface
- Clear width
- Clear width reductions
- Changes in level

- Running Slope
- Cross Slope
- Openings
- Protruding Objects
Ground-Level Accessible Route

Clear width 60 inches minimum
Smaller Play Areas < 1000 sq. ft. must have:
- Ground accessible routes that are 44 inches in width
- Wheelchair turning space if route exceeds 30 ft. in length.
Clear width reductions

Permitted to narrow to 36 inches for a distance of 60 inches
Changes in Level

Changes in level of 1/4 inch high maximum permitted to be vertical.

Changes in level between 1/4 inch high minimum and 1/2 inch high maximum to be beveled with a slope not steeper than 1:2.

Changes in level greater than 1/2 inch high must be ramped.
Running Slope

Maximum 1:16 running slope on ground-level accessible routes
• Cross slope of ground level route must not be steeper than 1:48.
  
  – Cross slope is the slope of the surface perpendicular to the direction of travel.
  
  – Cross slope is measured the same way as slope is measured (i.e., the rise over the run).
Openings

Openings in floor or ground surfaces shall not allow passage of a sphere more than 1/2 inch diameter. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

½" Dia.
Playground Surfaces
Referenced standards

- **ASTM F 1292-99 or 04** - Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment.
- Use of “Equivalent facilitation” for more recently published versions of these standards.
ASTM F 1487-01

• Defines the use zone as the ground area beneath and immediately adjacent to a play structure or play equipment.

• Provides for unrestricted circulation around the equipment and on whose surfaces where it is predicted that a user would land when falling from or exiting play structures or equipment.
ASTM F 1292-99 or 04

• If located within the use zone, the accessible ground surfaces must also be impact attenuating

• No values shall exceed:
  ➢ 200 g-max
  ➢ 1000 HIC
ASTM F 1951-99

- Wheelchair Work Test Method
- A lab test in a controlled environment
- 7% ramp used as baseline
- Measures work per sq. ft. for straight propulsion and turning.
- Records data applied to push rim over 6 ½ ft. distance
Longitudinal Assessment

NCA Playground Surface Study
Longitudinal Study on Playground Surfaces

Selecting an Accessible Play Surface Is One of the Most Important Decisions

The U.S. Census Bureau’s American Community Survey (2015) estimates that there are 3.8 million children with disabilities in the United States. The Census Bureau (2016) estimates that one in every seven American families is affected by disabilities. For children with and without disabilities, the community playground can facilitate a positive environment for physical activity and inclusion. While the use of playgrounds is considered one of the leading factors contributing to poor health among children, the neighborhood playground offers a well-known venue to create physical activity, allowing children to play with their friends and burn calories at the same time.

When the playground has barriers prohibiting use by a child with a disability, the opportunity for play and physical activity is lost. Accessible surfaces can pose barriers for children with disabilities who may use cars, crutches, wheelchairs, or wheelchairs and are unable to navigate through the play area. Pushing a child in a wheelchair or using a walker requires measurable physical effort. When too much effort is involved, little to no energy is left for play.

The presence of physical barriers can prevent children with disabilities from accessing the play elements on the playground. Most significantly, inclusive play between children with disabilities and children without disabilities is constrained when the playground does not have accessible equipment and surfaces. Physical barriers also prevent adults with disabilities from engaging with their children and/or responding to a child in need of assistance.

Recreation professionals and playground owners are committed to creating a fun, safe, and accessible playground environment that is fair, promotes inclusion, and provides physical activity for all children. This requires a full life cycle of planning and design.

Choosing play surfaces that are accessible and that can be maintained as accessible surfaces is one of the most important decisions during the playground planning and design phases. The purpose of this guide is to provide practical information that every playground owner should know about the accessibility of their playground surfaces.
Field Testing

ASTM F1292-99/04
Impact Attenuation
Field Test: TRIAX

ASTM F1951-99
Wheelchair Work Force
Field Test: Rotational Penetrometer
Elevated Play Component Requirements

At least 50% of the elevated play components must be on an accessible route.
Minimum Number of Elevated Components

50% of all elevated play components in a play area must be reached by an accessible route.

Less than 20 elevated components: ramp and/or transfer = 50%

20 or more elevated components: 25% ramp + 25% ramp and/or transfer = 50%
Providing Ramp Access to 50% of the Play Components

No additional ground level components required
Elevated Accessible Routes

- Ramps
- Transfer Systems
Elevated Accessible Route Width

- 36-inch minimum clear width
- Exceed where possible
- Some reductions permitted
32-inch narrowed width permitted for 24-inch length to accommodate features in the composite structure
Openings

- Shall not allow passage of a sphere more than 1/2 inch diameter

- Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

- Opening criteria only applies when elevated access is by ramp
Changes in Level

Changes in level of 1/4 inch high maximum permitted to be vertical.

Changes in level between 1/4 inch high minimum and 1/2 inch high maximum must be beveled with a slope not steeper than 1:2.

Changes in level greater than 1/2 inch high must be ramped.
Running Slope

Maximum running slope for ramps on elevated accessible routes = 1:12
Ramp Rise

*Rise* of a ramp is the amount of vertical distance the inclined or slanted surface ascends or descends.

Maximum 12 inch vertical rise
Handrails

• Continuous within the full length of the ramp run

• Gripping surfaces with a circular cross section must have an outside diameter of 0.95 in. min. and 1.55 in. max.

• No extensions required
Handrails

- Top of handrail gripping surfaces must be 20 in. min. and 28 in. max. above the ramp surface.

- Clearance between handrail gripping surfaces and adjacent surfaces = 1 1/2 in. min.
Edge Protection

- Edge protection – extend deck 12 inches minimum OR provide a curb/barrier within 4 inches of ramp surface
Landings

• Level landings required at the top and bottom of elevated ramps

• If ramps change direction = 60 in. by 60 in. min.

• As wide as the ramp leading to it & 60 inches minimum in length
Turning Space, Landings, and Clear Floor or Ground Spaces may overlap
Transfer Systems

- Transfer platforms
- Transfer steps
- Transfer supports
- Clear floor or ground space
Transfer Platform

Where it is expected that an individual would transfer onto the play structure and leave behind their wheelchair or mobility device

- 14 in. deep X 24 in. wide minimum
- 11–18 in. above the floor or ground surface
- 24 in. side to be unobstructed
Transfer Steps

- 14 in. deep by 24 in. wide minimum
- 8 in. maximum height
Transfer Supports

A means of support must be provided
Clear Floor and Ground Space

Adjacent to platform

(a) elevation
Transfer System Design

Limiting the distance required for movement
Connected Elevated Play Components

• Where transfer systems are used...
  – Elevated play components may connect other elevated play components
  – Care must be taken
Clear Floor or Ground Space

- 30 in. x 48 in. min.
- Discretionary placement
- Applies to ground-level & elevated components accessed by ramp
Entry Points and Seats

• 11 in. minimum to 24 in. maximum above the ground or floor surface
• Mid-level height of 18 in. is recommended
Play Tables

- For ages 5 years old and over
- Knee clearance minimums
  - 24 inches high
  - 30 inches wide
  - 17 inches deep
- Top of rim 31 inches maximum
### Reach Ranges

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Reach Range</th>
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<tbody>
<tr>
<td>3 - 4 year olds</td>
<td>20 to 36 in.</td>
</tr>
<tr>
<td>5 - 8 year olds</td>
<td>18 to 40 in.</td>
</tr>
<tr>
<td>9 - 12 year olds</td>
<td>16 to 44 in.</td>
</tr>
</tbody>
</table>

Red arrow indicates the reach range for 5 - 8 year olds.
Water Play Components

Ground level access and transfer access to elevated play components required
Soft Contained Play Structure Entry Points

A play structure made of one or more components where the user enters a fully enclosed environment that utilizes pliable materials

- 3 or fewer entry points = 1 on accessible route
- 4 or more entry points = 2 on accessible route

Transfer system permitted
Access Board Resources

- TA Guide
- FAQ’s
- Webinars
- Access Currents
- Completed Research

Online Guides to the ADA / ABA Standards