Accessible Playspaces in Canada

A Guidebook for Children’s Playspaces that are Accessible to Persons with Disabilities based on CAN/CSA Z614-07 Annex H

Canadian Coalition for Accessible Playspaces:
Introduction

In May 2007 the Canadian Standards Association (CSA) released an updated version of its CAN/CSA Z164-07 *Children’s Playspaces and Equipment Standard* (CAN/CSA-Z614). We are extremely pleased that this document contains a new accessibility guideline called Annex H *Children’s playspaces and equipment that are accessible to persons with disabilities* (Annex H).

Annex H represents a landmark advancement in accessibility for disabled children and their caregivers in Canada who visit a playspace. To support awareness and use of Annex H, an interagency coalition is preparing a suite of promotional resources including this guidebook. Members of the coalition include the Active Living Alliance for Canadians with Disabilities, Canadian Playground Safety Institute (CPSI), and the International Play Association Canada (IPA Canada).

Annex H is aligned closely to the Americans with Disabilities Act: *Accessibility Guidelines for Play Areas*. As such, the content and layout of this guidebook reflects the *Summary of Accessibility Guidelines for Play Areas* guide prepared by the U.S. Access Board.

Annex H

Annex H establishes minimum accessibility requirements for newly constructed playspaces as well as renovations and retrofits to existing playgrounds. It provides specifications for elements within a play area to create a general level of usability for children with disabilities. Emphasis is placed on ensuring that children with disabilities are able to access the diversity of components provided in a play area.

Annex H is an informative addition to CAN/CSA-Z614-07, however, it is written in normative or mandatory language. This means that users of CAN/CSA-Z614 must adopt Annex H formally as an additional requirement to the Standard. This can be done in a number of ways including making an adjustment to current policy and adding Annex H as a requirement within a ‘Request for Proposal’ (RFP).

Designers and owner/operators are encouraged to exceed the guideline where possible to provide increased accessibility and opportunities. Incorporating accessibility into the design of play areas should begin early in the planning process with consideration to layout, circulation paths, and the selection of play components.

To facilitate engagement by designers, owner/operators, and interested public with the content of Annex H, this guidebook is divided into 5 sections:
- Where Does Annex H Apply?
- What is a Play Component?
- How Many Play Components Must Be on an Accessible Route?
- What are the Requirements for Accessible Routes?
- What Other Accessibility Requirements Apply to Play Components?

Additional copies of this guidebook and other related resources can be obtained online at [http://www.allabilitieswelcome.ca/Playspaces/index.html](http://www.allabilitieswelcome.ca/Playspaces/index.html)
Contents

Playspace terms ..........................................................................................................................3

Where does Annex H Apply? ........................................................................................................4 - 6
  New Construction .......................................................................................................................4
  Renovations and Retrofits ..........................................................................................................4
  Phasing in Playspaces ...............................................................................................................4
  Playspaces Separated By Age ....................................................................................................5
  Geographically Separated Play Areas ......................................................................................6

What is a Play component? .........................................................................................................7 - 11
  Play Components ......................................................................................................................7
  Different “Types” ......................................................................................................................8 - 9
  Elevated Play Components .......................................................................................................10
  Ground-Level Play Components ..............................................................................................11

How Many Play components Must Be on An Accessible route? ............................................12 - 14
  Ground-level Play Components - One of Each Type ...............................................................12
  Ground-level Requirements -Based on Elevated Play Components ........................................13
  Elevated Play Components .......................................................................................................14

Step-by-Step Guide .....................................................................................................................15

Play Area evaluation example ....................................................................................................16

What are the requirements for Accessible routes? .................................................................17 - 30
  Accessible Routes ....................................................................................................................17
  Ground-Level Accessible Routes .............................................................................................18 - 19
  Accessible Ground Surfaces ...................................................................................................20
  Accessible Surfaces Located in the Use Zone .........................................................................20 - 21
  Elevated Accessible Routes ......................................................................................................22
  When Ramps Are Required .....................................................................................................23 - 25
  When Transfer Systems Are Used ...........................................................................................26 - 29
  Connected Elevated Components ............................................................................................30

What other Accessibility requirements Apply to Play components? .......................................31 - 35
  Clear Floor or Ground Space .................................................................................................31
  Maneuvering Space ................................................................................................................32
  Entry Points and Seats ..........................................................................................................33
  Play Tables .............................................................................................................................34
  Reach Ranges (Advisory) .........................................................................................................35

Acknowledgements .....................................................................................................................37
**PLAYSPACE TERMS**

**Accessible**
“a site, building, and its facilities that can be approached, entered, and used by people, including those with physical, sensory, or cognitive disabilities” (CAN/CSA-B651).

**Accessible Route**
“a continuous unobstructed pathway from the perimeter of the use zone to the equipment” (ASTM F 1487).

**ASTM International**
American Society For Testing and Materials

**CAN/CSA-Z614**
*Children’s Playspaces and Equipment* is the standard developed by the CSA Technical Committee on Children’s Playspaces and Equipment.

**CSA**
the abbreviation for Canadian Standards Association, a not-for-profit membership-based association serving business, industry, government and consumers in Canada and the global marketplace.

**Clear**
unobstructed

**Composite Playstructure**
two or more playstructures attached or functionally linked to create one integrated unit that provides more than one play activity.

**Cross Slope**
the slope that is perpendicular to the direction of travel (see running slope).

**Elevated Play Component**
a play component that is approached a bove or below grade and that is part of a composite playstructure consisting of two or more play components attached or functionally linked to create an integrated unit providing more than one play activity.

**Ground Level Play Component**
a play component that is approached and exited at the ground level

**Play Component**
an element intended to generate specific opportunities for play, socialization, or learning. Play components may be manufactured or natural and may be stand alone or part of a composite playstructure.

**Protective Surfacing Zone**
the area of protective surfacing beneath and immediately adjacent to a playstructure or equipment on whose surface it is predicted that a user will land when falling from or exiting the equipment.

**Ramp**
a walking surface that has a running slope of greater than 1:20

**Running Slope**
the slope that is parallel to the direction of travel (see cross slope).
WHERE DOES ANNEX H APPLY?

New Construction

Annex H is best applied to newly designed or constructed playspaces for children ages 18 months to 12 years.

This includes playspaces located in a variety of settings: schools, parks, childcare facilities, institutions, multiple-family dwellings, private resort and recreation development, restaurants, and other areas of public use.

Alterations

Annex H can also be applied to existing play areas where renovations and retrofits occur.

Phasing in Playspaces

When playspaces are constructed in phases, it is recommended that they meet Annex H throughout construction. The initial phase area should meet the standard, and then at each successive phase the whole play area should be reassessed to ensure compliance.

This playspace will be installed in two phases. As each phase is completed, the entire playspace should be evaluated for compliance.

Prior to phase one, the first structure is evaluated for compliance, since Annex H is based on a minimum number of play components required to be on an accessible route.
At the onset of phase two, the playspace is re-evaluated in its entirety.

**Playspaces Separated by Age**

In applying Annex H, playspaces designed for different age groups should be considered separately.

A playspace designed for 18 months to 5 year-olds is considered separate from one for 5 to 12 year-olds. Therefore, compliance with Annex H should be considered for each individual play area.

This dual playspace is designed for 18 months to 5 year-olds and 5 to 12 year-olds. Each section should be evaluated separately.
Geographically Separated Play Areas

Large geographical spaces may contain several playspaces within one park setting. Where playspaces are geographically separated on a site, they are considered separate playspaces. Annex H applies to each playspace.
WHAT IS A PLAY COMPONENT?

**Play Components**

A play component is an element designed to generate specific opportunities for play, socialization, and learning. Play components may be manufactured or natural, and may be 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.

For the purposes of Annex H, ramps, transfer systems, steps, decks, and roofs are not considered play components. These elements are generally used to link other elements on a composite play structure. Although socialization and pretend play can occur on these elements, they are not primarily intended for play.
When applying Annex H, it is important to identify the different play experiences play components can provide.

**Different “Types”**

At least one of each type of play component provided at ground level in a play area must be on an accessible route.

Different “types” of play components are based on the general experience provided by the play component. Different types include, but are not limited to, experiences such as rocking, swinging, climbing, spinning and sliding.

*A swinging type*

*A rocking type*

*A multiple individual, single play component*
The number of individuals who can play on a play component at once does not determine the quantity of play components provided in a play area. A play component can hold many children but is considered one type of play experience – or one play component – in the playspace.

Examples of Sliding types

While a spiral slide provides a slightly different experience from a straight slide, the primary experience – a sense of rapid descent or sliding – is common to both activities. Therefore, a spiral slide and a straight slide are considered one “type” of play experience.
Elevated Play Components

An elevated play component is a play component that is approached above or below grade and is part of a composite play structure. Play components that are attached to a composite play structure and that can be approached from a platform or deck area are considered elevated play components.

This climber 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**

Ground-level play components are items that can be approached and exited at ground level. For example, a child approaches a spring rider at ground level via the accessible route. The child may ride then exit directly back onto the accessible route. The activity is considered ground level because the child approaches and exits it from the ground-level route.

*Ground-level play components may be part of a composite structure.*

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. Grouping all ground-level play components accessed by children with disabilities in one location does not constitute integration.
HOW MANY PLAY COMPONENTS MUST BE ON AN ACCESSIBLE ROUTE?

Ground-Level Play Components

There are two requirements addressing how many ground-level play components must be on an accessible route:

- One of Each Type
- Ground-Level Requirements based on the number of Elevated Play Components

One of Each Type

At least one of each type of ground-level play component that is present in the playspace must be on an accessible route.

As an example, this playspace includes a composite play structure, two spring riders and a swing set (see inset). To meet the requirement, an accessible route must connect to at least one spring rider and one swing for one of each type of ground-level play experiences which are present in the playspace.
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 playspace.

The intent of this requirement is to provide a variety of experiences for individuals who choose to remain with their mobility aids, or choose not to transfer to elevated play components.

<table>
<thead>
<tr>
<th>Number of elevated play components provided</th>
<th>Minimum number of ground-level play components required to be on accessible route</th>
<th>Minimum number of different types of ground-level play components required to be on accessible route</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>2 to 4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5 to 7</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>8 to 10</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>11 to 13</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>14 to 16</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>17 to 19</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>20 to 22</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>23 to 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>
</tr>
</tbody>
</table>

If ramps provide access to at least 50 percent of the elevated play components - which must include at least three different play types - then additional ground-level components are not required.

In the playspace shown on page 12, the composite structure 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 H.1.
**Elevated Play Components**

At least 50 percent of the elevated play components must be on an accessible route.

Playspaces with 20 or more elevated components must use ramps to connect a minimum of 25 percent of those components. A transfer system or ramps may connect the other elevated play components required on an accessible route.

Playspaces with less than 20 elevated play components may use a transfer system instead of ramps to connect at least 50 percent of the elevated components.
**STEP-BY-STEP GUIDE ON APPLYING ANNEX H**

**Step-by-Step Guide**

The following step-by-step guide has been provided to assist in evaluating a playspace for meeting the minimum requirements of Annex H. The guide has been arranged in two steps and provides spaces to fill in numeric values of play components for evaluating a specific playspace design.

### Step 1)

**Assess Present Situation**

<table>
<thead>
<tr>
<th>Total # Of Components Along Accessible Route (answer = item “A”)</th>
<th>Variety Of Play Types Along Accessible Route (answer = item “X”)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Assess What Is Needed (from Table H.1)**

<table>
<thead>
<tr>
<th>Min. # Of Ground Level Components Required Along Accessible Route (answer = item “B”)</th>
<th>Variety Of Different Play Types Required Along Accessible Route (answer = item “Y”)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**How To Get There**

<table>
<thead>
<tr>
<th>Total # Of Components To Be Added (item “B” minus item “A”)</th>
<th>Total Variety Of Play Types To Be Added (item “Y” minus item “X”)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*A negative number in the either bottom box means that there is more than the minimum number already on site*

### Step 2)

**Assess Access to Elevated Components**

<table>
<thead>
<tr>
<th>Total # of Elevated Components =</th>
</tr>
</thead>
<tbody>
<tr>
<td>• If 20 or more components then ramps to 25% and ramp or transfer to an additional 25%</td>
</tr>
<tr>
<td>• If 19 or fewer components than transfer system or ramp to 50% of components</td>
</tr>
</tbody>
</table>
PLAYSPACE EVALUATION EXAMPLE

The example below shows how the step-by-step guide or ‘accessibility calculator’ can be used to determine if the requirements have been met for the playspace and what is needed for compliance if it is deficient.

### Step 1)

**Total # Of Elevated Play Components = 20**

<table>
<thead>
<tr>
<th>Assess Present Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # Of Components Along Accessible Route (answer = item “A”)</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assess What Is Needed (from Table H.1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min. # Of Ground Level Components Required Along Accessible Route (answer = item “B”)</td>
</tr>
<tr>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How To Get There</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # Of Components To Be Added (item “B” minus item “A”)</td>
</tr>
<tr>
<td>7 - 5 = 2</td>
</tr>
</tbody>
</table>

*Note: A negative number in the either bottom box means that there is more than the minimum number already on site.

This indicates that there are currently 5 components along the accessible route, but 7 components are required. Therefore, 2 components must be added.

This indicates that there are currently 3 different types of play components along the accessible route, but 4 are required. Therefore, 1 new type of component must be added.

### Step 2)

**Assess Access to Elevated Components**

**Total # of Elevated Components = 20**

- If 20 or more components then ramps to 25% and ramp or transfer to an additional 25%
- If 19 or fewer components than transfer system or ramp to 50% of components

This indicates that there are 20 or more components in the playspace. Therefore, at least 25% of the total 20 (or 5 components) must be accessible by ramp, and another 25% (another 5 components) must be accessible by ramp or transfer station.
WHAT ARE THE REQUIREMENTS FOR ACCESSIBLE ROUTES?

CSA B651 addresses accessible routes for connecting the playspace to the parking area, drinking fountains and other elements that it serves.

This section describes the various features of accessible routes within a playspace, including location, clear width, slope, and accessible surfaces.

Accessible Routes

An accessible route is a pathway specifically designed to provide access for individuals with disabilities, including those using wheelchairs or mobility devices.

There are two types of accessible routes:
- Ground-level
- Elevated

Accessible routes inside the boundaries of playspaces are addressed in Annex H. Technical provisions address the width, slope, and surface of both ground-level and elevated accessible routes.

This elevated route connects elevated play components on a composite structure.

This ground-level route connects ground components and the transfer system which connects elevated components.
**Ground-Level Accessible Routes**

A ground-level accessible route connects play components at ground level.

- 1524 mm (60.0 in) minimum clear width
- 1:16 maximum slope

The route may narrow down to 914.4 mm (36.0 in) for a distance of 1524 mm (60.0 in). This permits flexibility to work around site design features like existing equipment or trees.

Smaller playspaces - those that are less than 92.9 square metres (1000 square feet) - may have ground-level accessible routes that are 1117.6 mm (44 in) clear width. A wheelchair turning space 1524 mm (60.0 in) in diameter must be provided where the route exceeds 914.4 mm (36.0 in) in length.

At ground level, objects may not protrude into the defined ground-level accessible route up to or below the height of 2032 mm (80 in), measured above the accessible route surface.

The playspace provides a fun accessible roadway theme. The protective shelters for the benches have been set outside the boundary of the route providing the 2032 mm of clearance required on the route.
**Maximum Slope at Ground Level**

The maximum allowable slope for a ground-level route is 1:16.

Berms are sometimes used to provide access to elevated playspaces. A berm may be a natural sloped surface that is present in a hilly playspace 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. Remember the maximum slope of this “ground-level accessible route” is 1:16.

However, handrails are not required on ramps located within the ground-level, “protective surfacing zone”. This is permitted since the handrails may become a safety hazard.

*This playspace provides a bermed accessible route.*

*To accommodate a height change along the perimeter of a playspace – like these rubber safety tiles placed on an asphalt surface – an allowable 1:12 slope is utilized for the transition at the boundary of the playspace.*
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 *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.

When selecting ground surfaces, operators should request information about compliance with CAN/CSA-Z614 Section 10 - Surfacing.

Accessible surfaces can include impact-attenuating tiles made of recycled rubber and engineered wood fiber that meet the ASTM requirements for accessibility and safety. The design can be created so safety is not compromised for individuals using the playspace where both standards are applied.

Accessible Surfaces located in the Protective Surfacing Zone

If located within the protective surfacing zones, ground surfaces must be impact attenuating and meet test methods specified in ASTM F 1292 and CEN EN 1177 (CAN/CSA-Z614, Clause 10).
Accessible and non-accessible surfaces can be combined to provide variety and excitement in the playspace.

Rubber surfacing and tiles facilitate access in this playspace.

Ground surfaces should be inspected and maintained regularly and frequently to ensure continued compliance with ASTM 1951 and if in the protective surfacing zones, CAN/CSA-Z614, Clause 10. The frequency of maintenance and inspection of resilient surfacing depends on the amount of use and the type of surfacing installed.

Accessible surfacing can be designed to complement the theme of the playspace, while providing full access and visually integrating the surface into the overall design. Individuals of all abilities will enjoy the added benefits of an imaginative design.

Designers and operators are likely to choose materials that best serve the needs of each playspace. The type of material selected will affect the frequency and cost of maintenance.
Elevated Accessible Routes

An elevated route is the path used for connecting elevated play components. Elevated accessible routes must connect the entry and exit points of at least 50 percent of the elevated play components provided in the playspace.

Two common methods for providing access to elevated play components are ramps and transfer systems. Ramps are the preferred method since not all children who use wheelchairs or other mobility devices may be able to use – or may choose not to use – transfer systems.

This photo illustrates an elevated accessible route:

- 914.4 mm (36.0 in) clear width
- 812.8 mm (32.0 in) narrowed width permitted for 609.6 (24 in) length to accommodate features in the composite structure
- Top of handrail gripping surfaces shall be between 508 and 711.2 mm (20.0 and 28.0 in) 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 allow individuals who use wheelchairs and mobility devices to access elevated play components in composite play structures without transferring.

This playspace has more than 20 play components and provides ramp access to elevated play components. The ramp system, consisting of ramp runs and landings, must connect at least 25 percent of the elevated play components. The balance of the elevated components required to be on an accessible route may be connected by the ramp system, or by a transfer system.

**Rise** of a ramp is the amount of vertical distance the inclined or slanted surface ascends or descends. A ramp **run** is a length of a continuous sloped surface that is ascending or descending. The maximum run of a ramp that connects elevated play components shall be 3657.6 mm (144.0 in) from a level landing or turning space with a 1:12 slope.
**Ramps**

For each elevated ramp run:
- From ground level to landing and/or landing to landing
- 1:12 maximum slope
- 914.4 (36 in) minimum clear width
- See Annex H for exceptions

**Landings**

Landings are the level surfaces at the top and bottom of each ramp run.
- Must be as wide as the ramp they connect to
- A minimum length of 1524 mm (60 in)
- If ramps change direction, the minimum landing size must be 1524 mm (60 in) wide to accommodate the 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 1:50 in all directions (see page 32 for further details).
Handrails

Handrails are required on both sides of ramps connecting elevated play components. Handrails must comply with the following:

- Handrails shall be between 24 and 40 mm (0.94 and 1.57 in) in diameter
- The top of the handrail gripping surfaces shall be between 508 and 711.2 mm (20.0 and 28.0 in) above the ramp surface.

However, handrails are not required on ramps located within the ground-level protective surfacing zone. This is permitted since the handrails may become a safety hazard.

In this case additional handrails have been provided.
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 access to elevated play components without the use of a wheelchair or mobility device. At least 50% of the elevated play components can be connected by a transfer system in playspaces with less than 20 elevated components. In playspaces 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.

A transfer system typically consists of a transfer platform, transfer steps, and transfer supports.

Where a transfer system is provided, a combination of transfer platforms and transfer steps provide a continuous accessible route to elevated play components. A transfer system provides individuals the space necessary to physically transfer up or down in a composite play structure. Where provided, a 609.6 mm (24 in) minimum width is necessary for individuals moving around a structure.

Playful features can be part of the transfer system, providing interactive experiences from both an elevated or ground level approach.

Consider the distance someone must travel to reach play components accessed by transfer systems. On page 28, the illustration shows a transfer system placed directly next to the slide. Access to this type of elevated play component has been carefully designed to minimize the distance someone must transfer to reach it.
**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.

- 279.4 mm to 457.2 mm (11.0 in to 18.0 in) above the ground
- Minimum 609.6 mm (24 in) wide
- Minimum 355.6 mm (14.0 in) deep

*Adding a transfer step that leads to the ground’s surface increases access for children exiting components at the ground level.*

Clear floor or ground space - used for parking wheelchair or mobility devices (commonly called “wheelchair parking”) - is required at the transfer platform.

The 1219.2 mm (48.0 in) long side of the “wheelchair parking” space must be parallel to the 609.6 mm (24.0 in) side of the transfer platform.

*Annex H, Figure H.1*  
(Reprinted with permission, see page 37)
Transfer Steps

- Minimum 609.6 mm (24 in) wide
- Minimum 355.6 mm (14.0 in) deep
- 203.2 mm (8.0 in) maximum height

Annex H, Figure H.1a and b

Playspaces intended for smaller children should provide steps at smaller height increments. This will accommodate smaller sized children who must lift or “bump” up each step.
Transfer Supports

Transfer supports must be provided on transfer platforms and transfer steps at each level where transferring is the intended method of access.

Materials in a variety of different shapes and sizes are used to manufacture transfer supports including metal, plastic, and rope.

Aesthetically pleasing cut-out shapes and other design enhancements can provide hand supports for transferring.

Consideration must be given to the distance between the transfer system and the elevated play components it is intended to facilitate. Designers should minimize the distance between the point where a child transfers from a wheelchair or mobility device and the elevated play destination.

This transfer system provides access to exciting elevated play experiences like sliding while minimizing the distance individuals must traverse.
**Connected Elevated Components**

When transfer systems are used, an elevated play component may connect to other elevated play components, providing an innovative, accessible route.

*A crawl tube is an elevated play component in this composite structure. Going through the tunnel provides access to additional activities on the other side.*

Consideration should be given to how a play component is utilized when it is selected to connect to other elevated play events. When a transfer system is provided, children move through a play component like this crawling tube, using their own strength without a mobility device.

*Providing variety and excitement through elevated play spaces benefits all children. Tunnels and tubes make “getting there” an activity in and of itself.*
WHAT OTHER REQUIREMENTS APPLY TO PLAY COMPONENTS?

Annex H addresses accessible routes connecting play components along with certain spaces that are crucial to making a playspace usable for children with disabilities. Additional requirements for play components are provided to promote general usability, with application to a variety of play components.

Clear Floor or Ground Space

Clear floor space – also known as ground space – provides unobstructed room to accommodate a single stationary wheelchair and its occupant at a play component on an accessible route.

- 762 mm (30 in) by 1219.2 mm (48 in)
- May overlap accessible routes and maneuvering spaces
- Slope not steeper than 1:50 in all directions

The clear floor space is permitted to overlap onto the landing area to provide access to this elevated window activity.

Play components come in a variety of shapes and sizes facilitating a broad range of experiences. A specific location for clear floor or ground space has not been designated. Each play component is unique and the spaces must be placed in the best location for the situation.

This interactive play component has a clear ground space that allows front or side reach interaction.
**Manoeuvering Space**

Manoeuvering space is defined as 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 providing access to ground level and elevated play components by ramps, space allowances to accommodate wheelchairs and mobility devices are required.

- A 1524 mm (60 in) turning circle permits individuals with mobility devices to turn around
- A 1524 mm (60 in) T-Shaped turn allows an individual to change directions by making a series of multi-point turns
- Slope not steeper than 1:50 in all directions

Manoeuvering space is required for swings and must be located adjacent to the swing. This illustration shows options for either a 1524 mm turning circle or a T-shaped turn. While this illustration shows the manoeuvering space to the side of the swing, the space may be located behind or in front of the swing as long as it is immediately adjacent to the swing.

*Annex H, Figure H.3*

(Reprinted with permission, see page 37)

---

*Annex H, Figure H.4*

(Reprinted with permission, see page 37)
Entry Points and Seats

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 shall be between 279.4 mm (11.0 in) and 609.6 mm (24.0 in).

Examples of entry points and seats include swing seats, spring rocker seats, and crawl-tube openings.

Consider design features like open sides, back supports, and hand supports to help facilitate easy transfer, access and independent use.
Play Tables

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:

- 609.6 mm (24.0 in) high minimum
- 762 mm (30.0 in) wide minimum
- 431.8 mm (17.0 in) deep minimum

Play tables designed primarily for children under 5-years-old, may provide a parallel approach instead of knee clearance if the height of the rim surface is not greater than 787.4 mm (31.0 in).

The edge of this elevated sand table has been designed to provide access by providing a generous opening. The tops of rims, curbs, or other obstructions that would prevent access to a table surface should be 787.4 mm (31.0 in) maximum in height.
Annex H includes advisory information on recommended reach ranges.

Reach ranges are the recommended 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 manipulative or interactive features for children who use wheelchairs. Recommended forward or side reach ranges are:

- 508 mm to 914.4 mm (20.0 to 36.0 in) for 3 to 4 year-olds
- 457.2 mm to 1016 mm (18.0 to 40.0 in) for 5 to 8 year-olds
- 406.4 mm to 1117.6 mm (16.0 to 44.0 in) for 9 to 12 year-olds

The reach ranges appropriate for use by children who use wheelchairs to access play components are intended for ground-level components, and elevated components accessed by ramps. 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. This interactive panel is mounted at a height appropriate for a child who uses a wheelchair.
ACKNOWLEDGEMENTS

The Canadian coalition for accessible playspaces would like to acknowledge the U.S. Access Board for making the content of their Accessibility Guidelines for Play Areas guide available for use in the development of this document.

Pages 27 and 32 diagrams reproduced with the permission of Canadian Standards Association from “CAN/CSA-Z614-07, Children’s Playspaces and Equipment”, which is copyrighted by Canadian Standards Association, 5060 Spectrum Way, Mississauga, Ontario, L4W 5N6. While use of this material has been authorized, CSA shall not be responsible for the manner in which the information is presented, nor for any interpretations thereof.

The numerical listing below shows the source of each photo or illustration.

<table>
<thead>
<tr>
<th>Photo Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Cover Photo - KOMPAN</td>
<td></td>
</tr>
<tr>
<td>Bottom Cover Photo - Miracle</td>
<td></td>
</tr>
<tr>
<td>1. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>2. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>3. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>4. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>5. Little Tikes</td>
<td></td>
</tr>
<tr>
<td>6. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>7. Little Tikes</td>
<td></td>
</tr>
<tr>
<td>8. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>9. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>10. Landscape Structures</td>
<td></td>
</tr>
<tr>
<td>11. Miracle</td>
<td></td>
</tr>
<tr>
<td>12. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>13. Little Tikes</td>
<td></td>
</tr>
<tr>
<td>14. GameTime</td>
<td></td>
</tr>
<tr>
<td>15. Playworld Systems</td>
<td></td>
</tr>
<tr>
<td>16. GameTime</td>
<td></td>
</tr>
<tr>
<td>17. Little Tikes</td>
<td></td>
</tr>
<tr>
<td>18. Landscape Structures</td>
<td></td>
</tr>
<tr>
<td>19. Miracle</td>
<td></td>
</tr>
<tr>
<td>20. Recreation Creations</td>
<td></td>
</tr>
<tr>
<td>21. Miracle</td>
<td></td>
</tr>
<tr>
<td>22. Miracle</td>
<td></td>
</tr>
<tr>
<td>23. Landscape Structures</td>
<td></td>
</tr>
<tr>
<td>24. Miracle</td>
<td></td>
</tr>
<tr>
<td>25. Columbia Cascade</td>
<td></td>
</tr>
<tr>
<td>26. Playworld Systems</td>
<td></td>
</tr>
<tr>
<td>27. GameTime</td>
<td></td>
</tr>
<tr>
<td>28. Elizabeth Garufi</td>
<td></td>
</tr>
<tr>
<td>29. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>30. Little Tikes</td>
<td></td>
</tr>
<tr>
<td>31. Playworld Systems</td>
<td></td>
</tr>
<tr>
<td>32. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>33. Columbia Cascade</td>
<td></td>
</tr>
<tr>
<td>34. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>35. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>36. Little Tikes</td>
<td></td>
</tr>
<tr>
<td>37. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>38. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>39. GameTime</td>
<td></td>
</tr>
<tr>
<td>40. GameTime</td>
<td></td>
</tr>
<tr>
<td>41. Playworld Systems</td>
<td></td>
</tr>
<tr>
<td>42. Landscape Structures</td>
<td></td>
</tr>
<tr>
<td>43. Miracle</td>
<td></td>
</tr>
<tr>
<td>44. Landscape Structures</td>
<td></td>
</tr>
<tr>
<td>45. Little Tikes</td>
<td></td>
</tr>
<tr>
<td>46. Landscape Structures</td>
<td></td>
</tr>
<tr>
<td>47. Game Time</td>
<td></td>
</tr>
<tr>
<td>48. Recreation Creations</td>
<td></td>
</tr>
<tr>
<td>49. Miracle</td>
<td></td>
</tr>
<tr>
<td>50. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>51. Playworld Systems</td>
<td></td>
</tr>
<tr>
<td>52. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>53. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>54. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>55. Olympic Recreation</td>
<td></td>
</tr>
<tr>
<td>56. Playworld Systems</td>
<td></td>
</tr>
<tr>
<td>57. Playworld Systems</td>
<td></td>
</tr>
<tr>
<td>58. Little Tikes</td>
<td></td>
</tr>
<tr>
<td>59. Landscape Structures</td>
<td></td>
</tr>
<tr>
<td>60. GameTime</td>
<td></td>
</tr>
<tr>
<td>61. Playworld Systems</td>
<td></td>
</tr>
<tr>
<td>62. Landscape Structures</td>
<td></td>
</tr>
<tr>
<td>63. Bob Leathers</td>
<td></td>
</tr>
<tr>
<td>64. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>65. KOMPAN</td>
<td></td>
</tr>
<tr>
<td>66. Miracle</td>
<td></td>
</tr>
</tbody>
</table>