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-Z614-07 *Children's Playspaces and Equipment Standard* (CAN/CSA-Z614). We are not actually placed but 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 with respect to playspaces. 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 National Playing Association (Canada) (PA Canada).

Annex H is aligned closely to the Americans with Disabilities Act Accessibility Guidelines for Playgrounds. As such, the content and layout of this guidebook is similar to the Summary of Accessibility Guidelines for Playgrounds 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 upgrades to existing playgrounds. It provides specification for landscapes with a playspace to create a general level of usability for children with disabilities. Emphasis is placed on enabling that children with disabilities are able to access the diversity of components provided in a playspace.

Annex H is an informative addition to CAN/CSA-Z614-07 however it is written in 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).

Developers and contractors are encouraged to exceed the guidelines in order to provide increased accessibility and opportunities. Integrating accessibility into the design of playspaces should begin early in the planning process with consideration of layout, circulation paths, and the selection of play components.

To facilitate enhancement by designers, administrators, and interested public with the context 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 Made Accessible Routes?
- What are the Requirements for Accessible Routes?
- What Other Accessibility Requirements Apply to Play Components?

Additional explanation of the guidelines and other helpful resources can be found online at http://www.allianceonline.ca/playspaces/index.html

Contents

Playspace terms 3

When does Annex II Apply? ..... 4 - 6

- New Construction 4
- Renovations and Alterations 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 of Play ..... 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 - Type 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 Surface Materials in the Play Area ..... 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
- Accessible Ramps (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 mental 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.

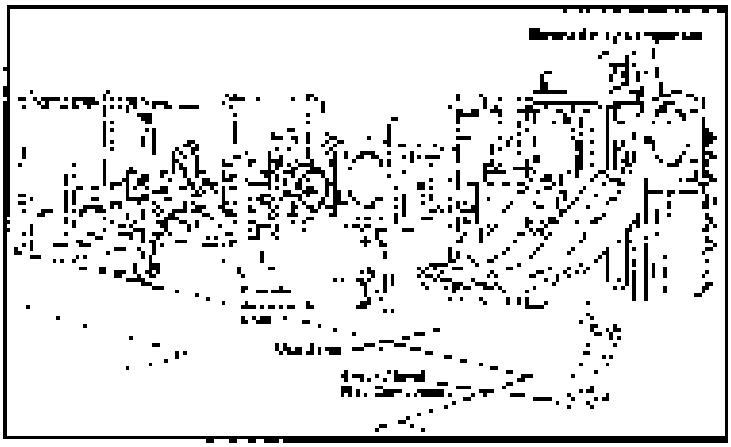
CSA — An abbreviation for Canadian Standards Association, a not-for-profit membership based association serving business, industry, consumers and governments in Canada and the global marketplace.

Clear — unobstructed.

Composite Playstructure — Two or more playstructures connected or functionally linked to form an 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 at a level or below grade and that is part of a composite playstructure consisting of two or more play components connected 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 moving, fixed or motorized and may be stand alone or part of a composite playstructure.

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

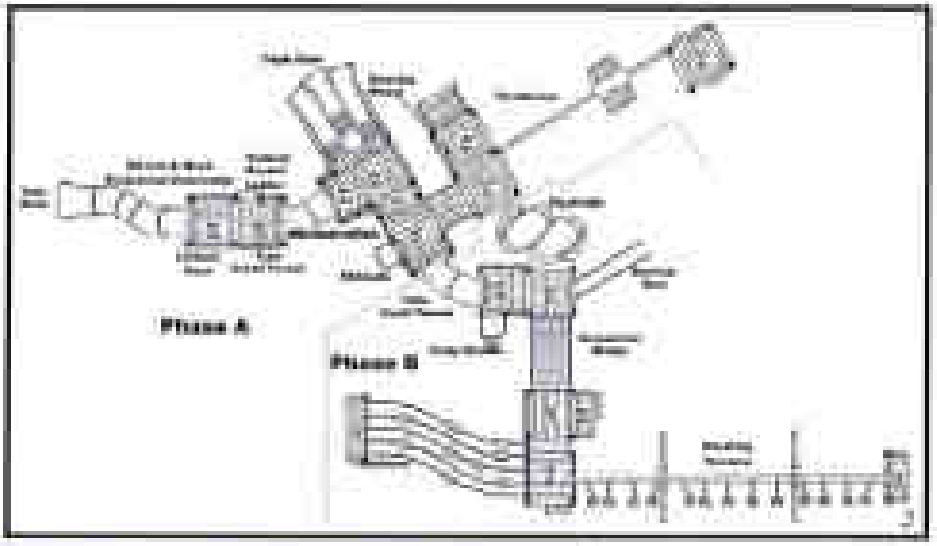
Alterations

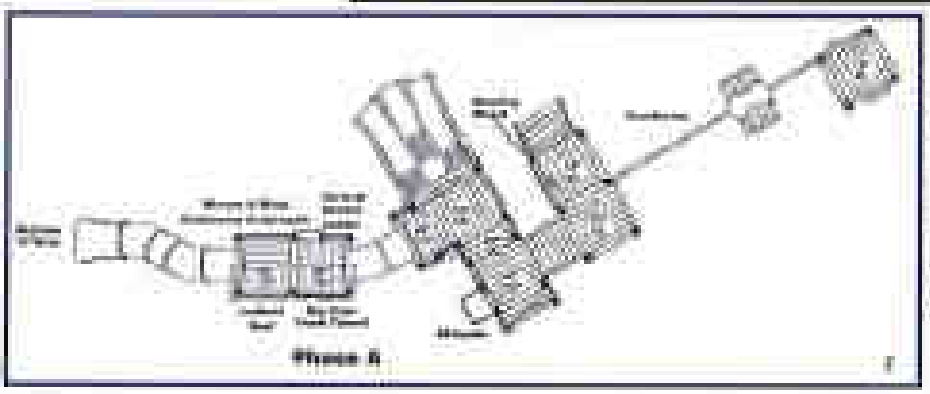
Annex H can also be applied to existing play areas where renovations and retrofits occur.

Phasing in Playspaces

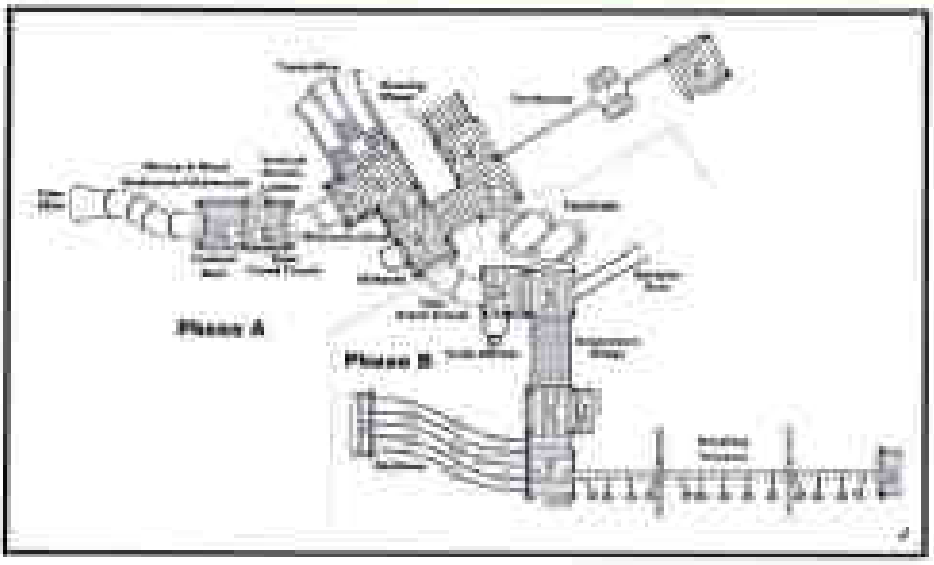
When playspaces are constructed in phases, it is recommended that they meet Annex H throughout construction. The initial phase area should meet the standard, and then at each successive phase the whole play area should be reassessed to ensure compliance.

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.

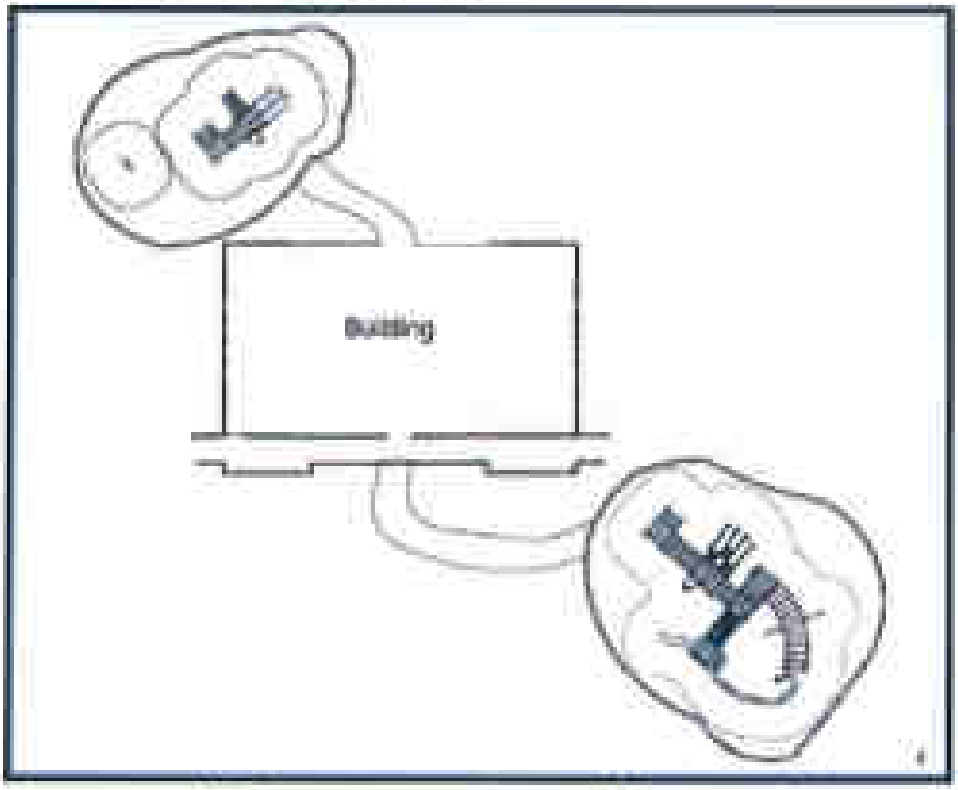
Playspaces Separated by Age

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

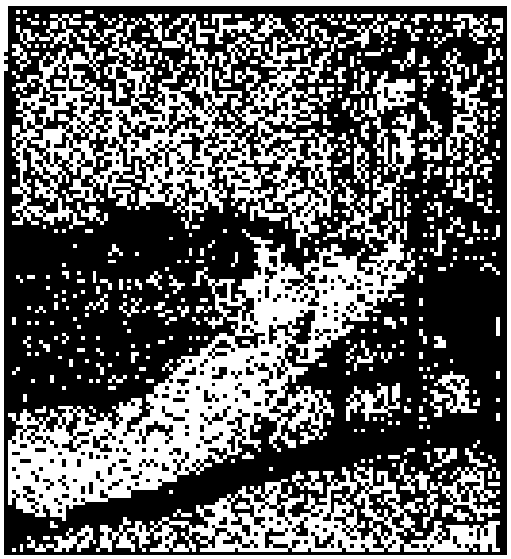
A play component is an element or elements that provide specific opportunities for play, exploration, and learning. Play components may be manufactured or natural, and may be found alone or part of a composite play structure. Swings, spring rides, water features, playhouses, slides, climbers, and many other play components.

For the purpose of Annex B, ramps, tunnels, systems, steps, decks, and natural features are not considered play components. These elements are generally used to link other elements into a composite play structure. A bridge, stepping stones, and a sand play area are examples of these elements. They are not generally intended for play.

Spring rider

Climber

Bridge



Slide

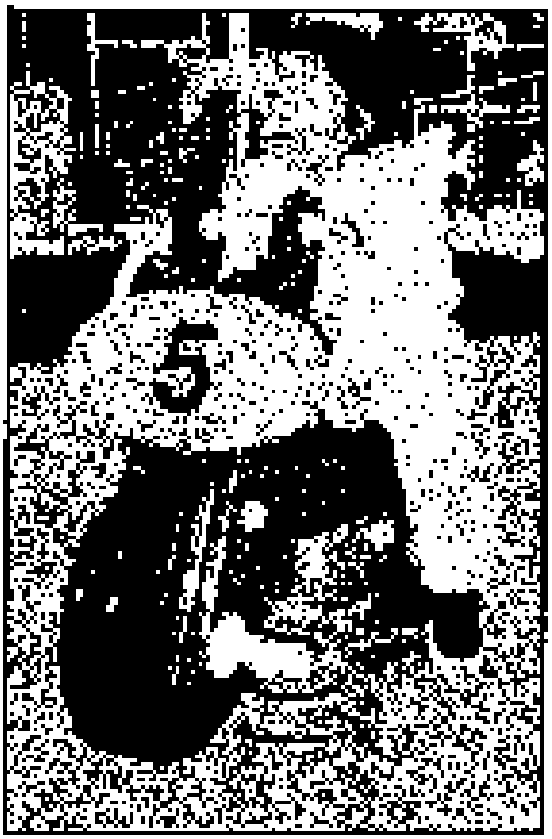
When applying the Annex II, it is important to identify the different play experiences play components can provide.

Different "Types"

At least one of each type of play component provided at ground level in a play area must be ground level and accessible to all.

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 climbing, swinging, sliding, spinning, and gliding.

A climbing type



A sliding type

A multi-activity, single play component

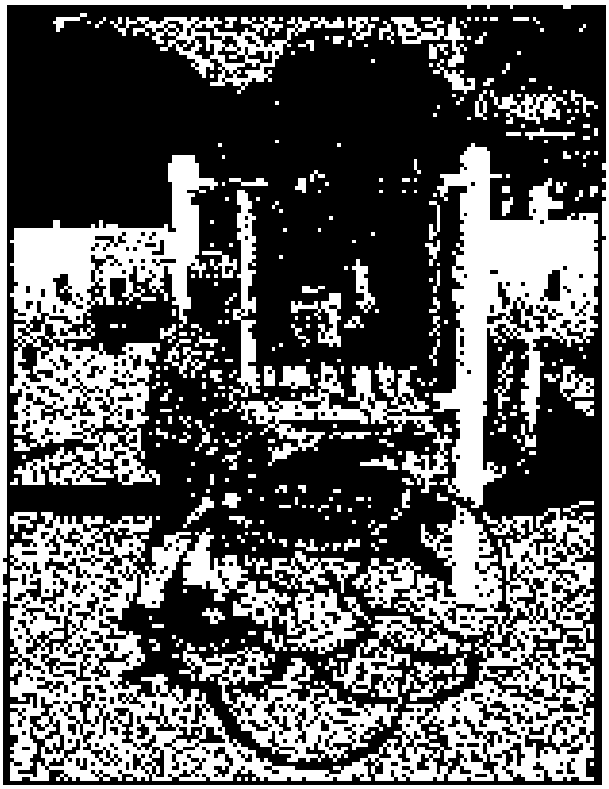
The number of children who can play on a play component at once does not determine the quantity of play experiences provided. A play area. A play component can hold many children but is considered just one type of play experience – one play component – in the play space.

Examples of building types.

While a typical slide provides a slightly different experience from a straight slide, the primary experience – a sense of rapid downward sliding – is the same in both deliveries. 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, even if it can be approached or mounted from the ground level or above grade from a platform or deck area or accessible play surface.

Ground-Level Play Components

Ground-level play components are [illegible] that can be approached and used at ground level. For example, a child approaches a spring rider at ground level via the [illegible] The child may rock the rider [illegible]. The activity is considered ground level because the child approaches and uses it from the ground-level more.

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

Ground-level components may also be free-standing in a playspace.

When more than one ground-level play component is required or an accessible route [illegible] play components must be integrated. Designers should consider the optimal layout of ground-level play components to foster interaction and socialization among all children. Including ground-level play components necessarily enables children with disabilities in the location does not [illegible] inclusion.

HOW MANY PLAY COMPONENTS MUST BE ON AN ACCESSIBLE ROUTE?

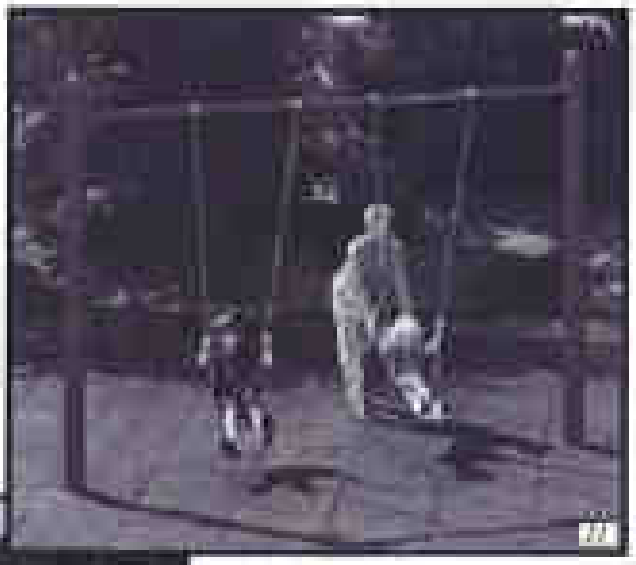
Ground-Level Play Components

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 insert). 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 H.1

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

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 these 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)

Total # Of Elevated Play Components =	
Assess Present Situation	
Total # Of Components Along Accessible Route (answer = item "A")	Variety Of Play Types Along Accessible Route (answer = item "X")
Assess What Is Needed (from Table H.1)	
Min. # Of Ground Level Components Required Along Accessible Route (answer = item "B")	Variety Of Different Play Types Required Along Accessible Route (answer = item "Y")
How To Get There	
Total # Of Components To Be Added (item "B" minus item "A")	Total Variety Of Play Types To Be Added (item "Y" minus item "X")

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

Step 2)

Assess Access to Elevated Components
Total # of Elevated Components =
• If 20 or more components then ramps to 25% and ramp or transfer to an additional 25% • If 19 or fewer components then transfer system or ramp to 50% of components

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**

Assess Present Situation	
Total # Of Components Along Accessible Route (answer = item "A")	Variety Of Play Types Along Accessible Route (answer = item "X")
5	**3**
Assess What Is Needed (from Table H.1)	
Min. # Of Ground Level Components Required Along Accessible Route (answer = item "B")	Variety Of Different Play Types Required Along Accessible Route (answer = item "Y")
7	**4**
How To Get There	
Total # Of Components To Be Added (item "B" minus item "A")	Total Variety Of Play Types To Be Added (item "Y" minus item "X")
7 - 5 = 2	**4 - 3 = 1**

*A negative number in the other 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 then 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 includes accessible routes for connecting the playground to parking areas, drinking fountains and other elements and services.

This section describes the requirements of accessible routes within a playspace, including general, 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 mobility devices.

Accessible routes inside the playspace are addressed in Section 11. Technical provisions address the width, slope, and surface of both ground-level and elevated accessible routes.

There are two types of accessible routes:

- Ground-level
- Elevated

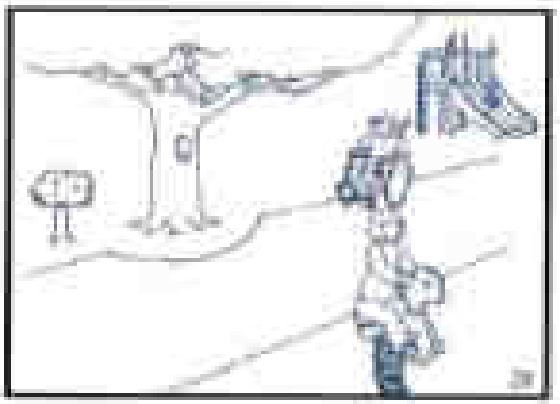
This ground-level route connects ground components and the transfer system which accesses elevated components.

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

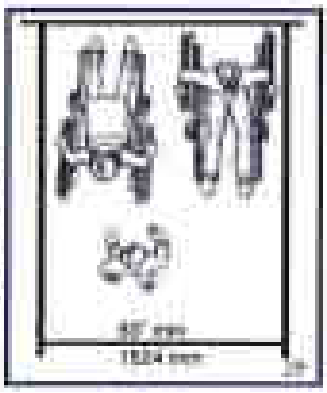
Ground-Level Accessible Routes

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.



The required 1524 mm (60.0 in) width enables two wheelchairs to pass each other or to change direction.

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.

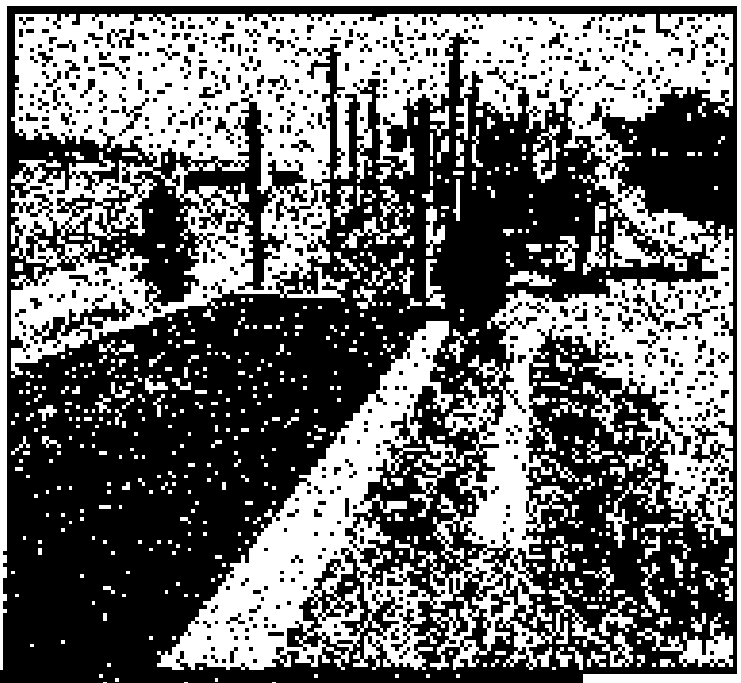
Maximum Slope at Ground Level

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

Ramps are sometimes installed to provide access to elevated play spaces. A ramp may be a natural sloped surface that is present in a hilly playspace site, or a ground level ramp that [illegible] over.

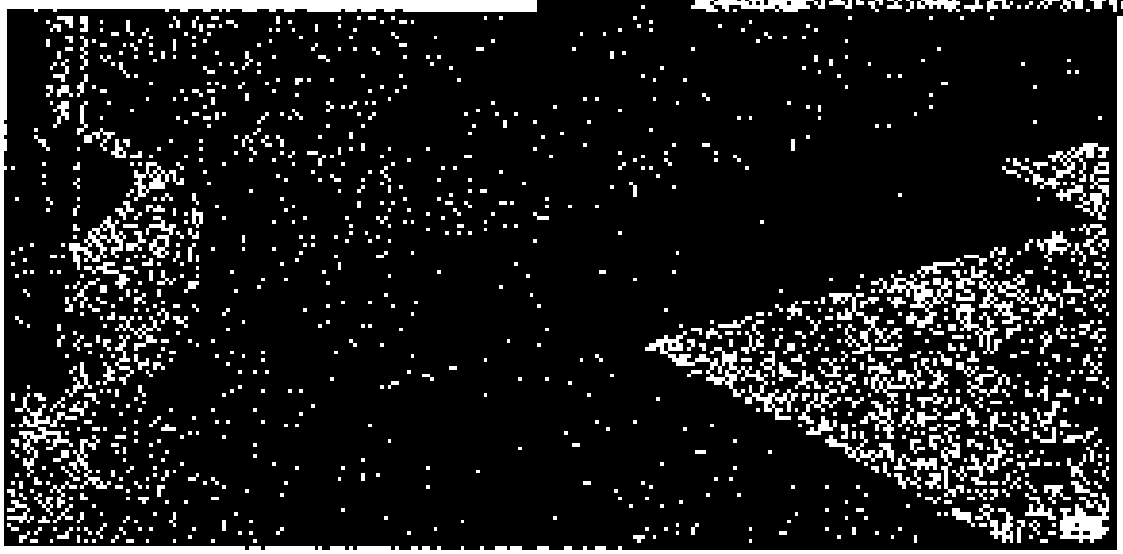
Design measures must be taken to prevent edge protection and handrails on ramps where there may be a drop off. Remember the maximum slope of this ground level accessible route is 1:16.

However, [illegible] ground level surfaces located within the protective surfacing zone. This is permitted since the hazard is may become a [illegible].



This playspace provides a designed accessible route.

To accommodate a height change, ideally the transition of a playspace. Site there rubber tiles have placed on an inclined surface — an alternative [illegible] 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.

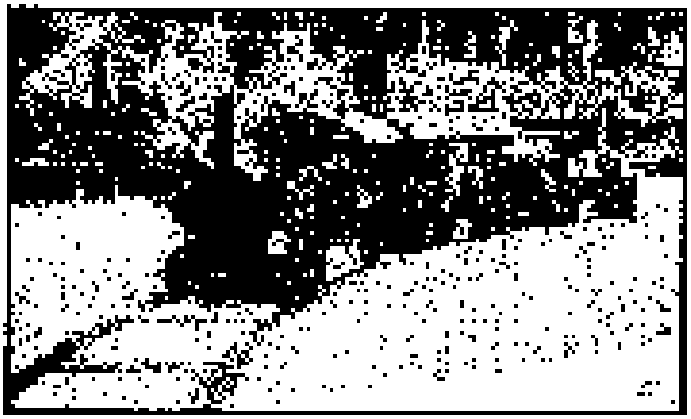
Accessible Surfaces located in the Protective Surfacing Zone

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 over the landing area, in the playspace.

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



The overall surfacing can be designed to complement the theme of the playspace, while providing safe, non-slip and visually interesting surfaces and the unique design individuality of all children will enjoy and develop images of the playspace design.

Designers and operators should carefully evaluate the options that best serve the needs of each playspace. Surfacing 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 [illegible] at least 50 percent of the elevated play components provided in the elevation.

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

[illegible] elevated accessible route

- *[illegible] mm (36 in.) clear width*
- *[illegible] mm (32.0 in.) narrowed width permitted for [illegible] in length to accommodate failure in the components to secure*
- *[illegible] gripping surfaces shall be provided [illegible] mm (2[illegible] mm) [illegible] mm (2[illegible] in.) above the ramp surface*

When Ramps are Required

Ramps are required on composite structures with 20 or more elevated play components and [illegible] connected 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 climbing.

This playspace has more than 20 play components and provides ramps 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 may have [illegible] ramp may be connected by the ramp system, or by a crawl or patch.

Rise of a ramp is the amount of vertical change the ramp climbs or descends [illegible] surface. A ramp run is a length of a continuous sloped surface that is ascending or descending. The maximum rise of a ramp for connecting elevated play components shall be 30.5 cm (12 in.) for a level landing, and [illegible] 1:12 slope.

Ramps

For each elevated component:

- [illegible] from ground level to [illegible]
- 1:12 maximum slope
- [illegible] (36 in) minimum clear width
- See Access H for exceptions

Landings

Landings are the level areas at the top and bottom of each ramp run.

- Must be at least [illegible] in length
- A minimum length of [illegible] 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 clear maneuvering space [illegible] 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 504 and 711.2 mm (20.0 and 28.0 in) above the ramp surface.

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

In this case additional handrails have been provided.

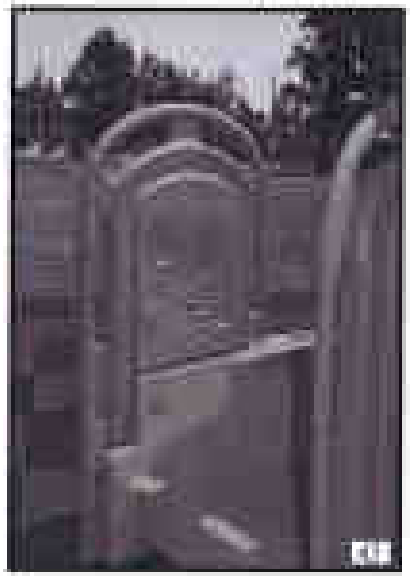
When Transfer Systems are Used

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.

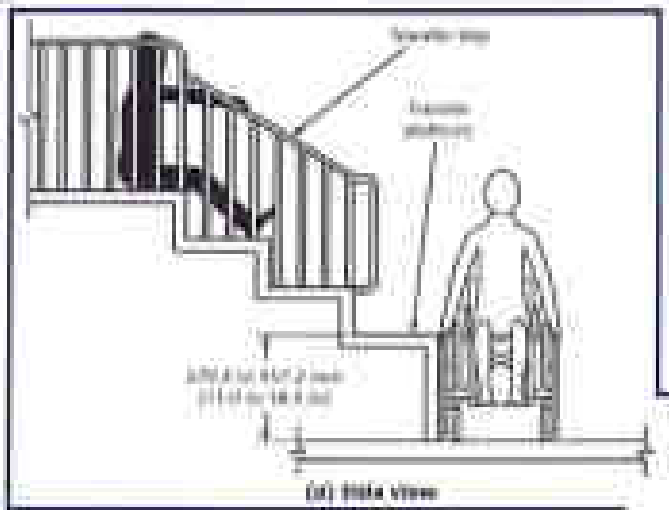
Consider the distance someone must travel to reach play components accessed by transfer systems. On page 28, the illustration shows a transfer system placed directly next to the slide. Access to this type of elevated play component has been carefully designed to minimize the distance someone must transfer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

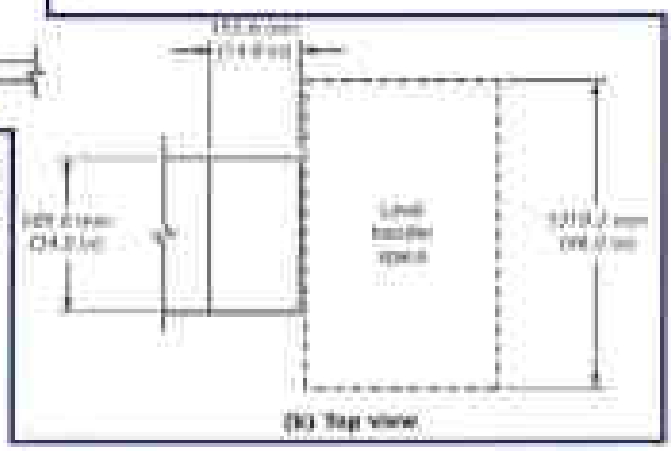
Adding a transfer step that leads to the ground's surface increases access for children exiting components at the ground level.



(a) Side view

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.



(b) Top view

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 or smaller height increments. This will accommodate smaller sized children who must lift or "bump" up each step.

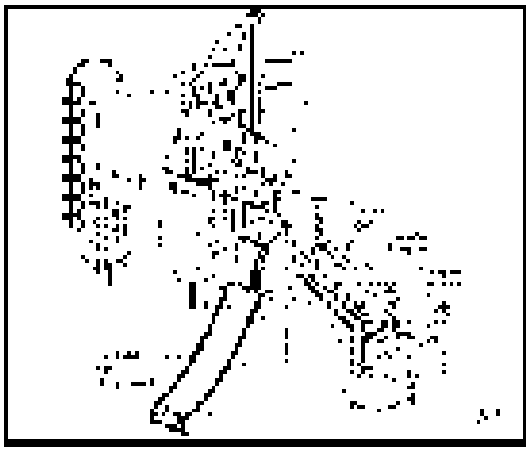
Transfer Supports

Transfer supports must be provided on transition platforms and transfer stations 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 rubber.

Aesthetically pleasing colours, shapes and other design enhancements can provide good support for transferring.

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



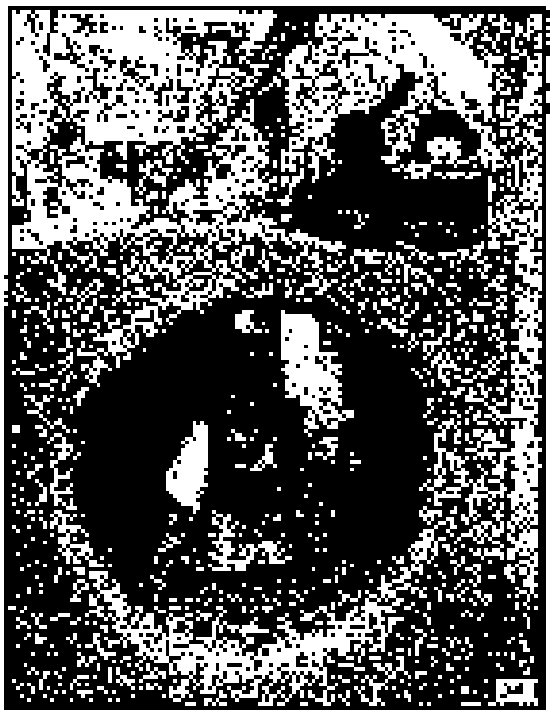
Where subject matter permits, consider adding elevated play experiences like sliding, which stimulate the overall individual movement.

Connected Elevated Components

When transfer systems are used, an elevated play component may connect to other elevated play components, providing [illegible] accessible [illegible].

A travel tube is an elevated play component in this component connection facility through for travel provides access to additional elevated [illegible].

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



Providing ramps and [illegible] through elevated play spaces benefits all children. Tunnels and [illegible] providing [illegible] in and of itself.

WHAT OTHER REQUIREMENTS APPLY TO PLAY COMPONENTS?

Annex D addresses accessible routes connecting play components, ensuring certain spaces that are crucial to making a playground usable for children with disabilities. Additional requirements for play components can help avoid injuries, 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 a level surface from which to access, accommodate a wheelchair, stationary wheelchair, or other mobility device, or provide access to an accessible seat.

- 762 mm (30 in) by 1219 mm (48 in)
- May overlap accessible route and maneuvering space
- Slope not steeper than 1:50 in all directions

One clear floor space is provided in front of the climbing area to provide access to the elevated transfer station.

Play surfaces come in a variety of shapes and sizes facilitating a broad range of experiences. A specific location for clear floor or ground space is not mandatory, and each play component is unique and the spaces must be placed in the best manner for the situation.

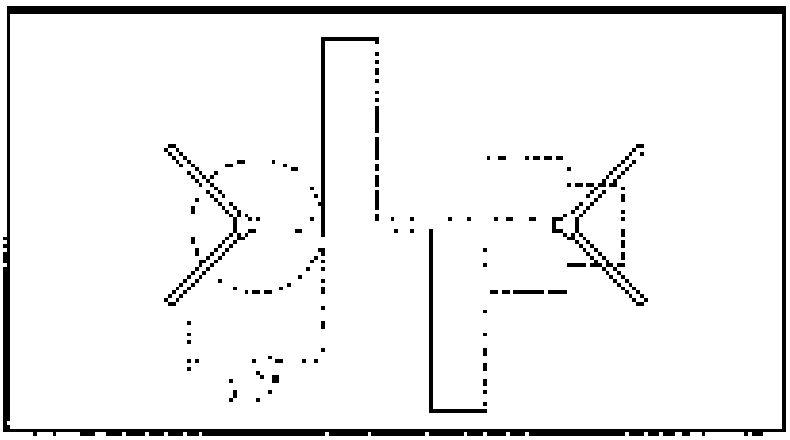
This interactive play component has a clear ground space that allows for a wheelchair transfer.

Manoeuvering Space

Manoeuvering space is defined as the space required for a wheelchair to make a 180 degree turn. A manoeuvering space must be provided on the same level as elevated play components.

When providing access to ground level and elevated play components by means of ramps, allowance must be made for wheelchair and mobility device manoeuvering space.

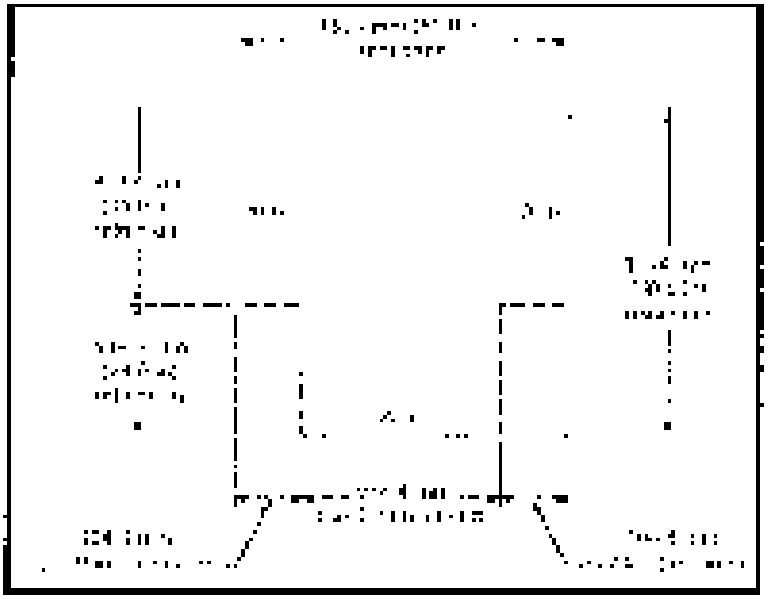
- A 1524 mm (60 in) turning circle permits individuals with mobility devices to turn around
- A 1524 mm (60 in) T-Shaped turn allows an individual to change direction by making a series of multi-directional turns
- Slopes must be shaped like a T for all directions



Manoeuvering space is required for swings and must be located adjacent to the swing. This illustration shows options for a 1524 mm turning circle or a T-shaped turn. While the 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 manoeuverable accessible to the swing.

Annex H, Figure H.7

(Illustration continues on page 73)



Annex H, Figure H.8

(Illustration continues on page 73)

Entry Points and Seats

Entry points and seats are features of play components where individuals would transition, sit, or gain access. When play components are located on an accessible route, the height required for a transfer or entry point on each of the play components shall be between 355.4 mm (14.0 in) and 609.5 mm (24.0 in).

An inclusive play space provides several features including swings, spring rocker seats, and covered tube slides.

Consider design features like ramps, deck supports, and level surfaces to help facilitate entry, 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 raw 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.

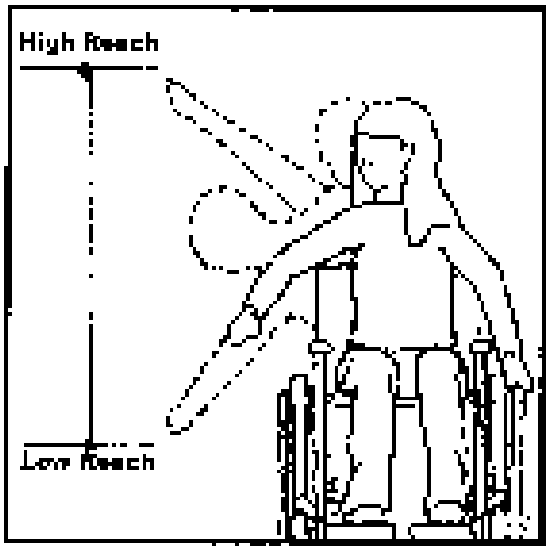
Reach Ranges (Advisory)

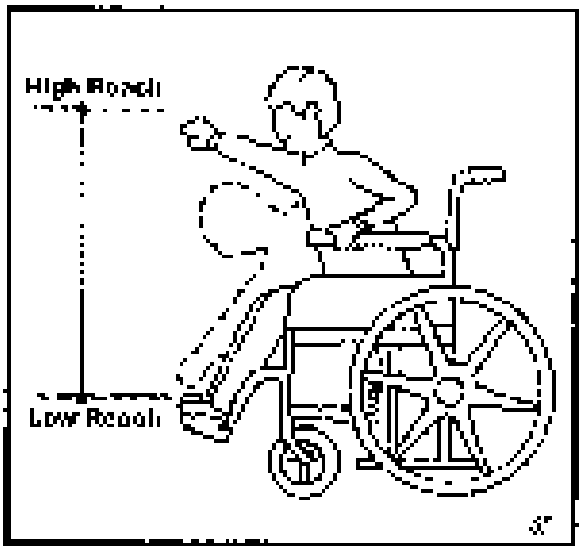
Annex H includes advisory information on recommended reach ranges.

Reach ranges are the recommended design [illegible] 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.

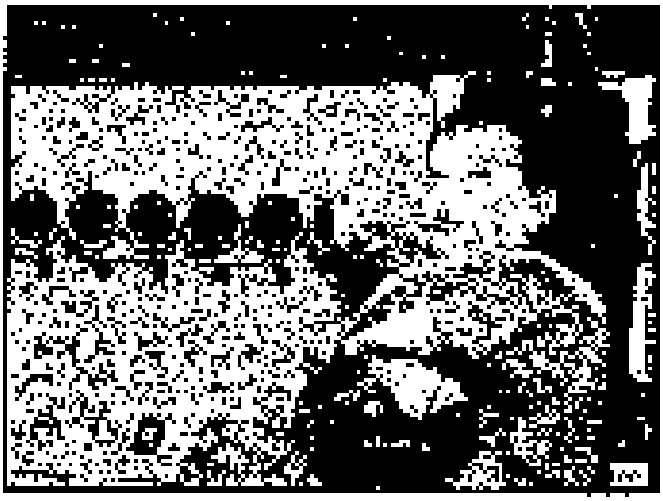
Reach ranges should be considered when providing play components with non-public-use or interactive features for children who use wheelchairs. Recommended forward or side reach ranges are:

- 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
- 706.6 mm to 1117.6 mm (27.8 to 44.0 in) for [illegible] 12 year olds





Accessible reach range requirements for children who use wheelchairs or mobility devices are provided for grounded play components, and should be considered as well for elevated play components. Reach ranges are not appropriate for play components accessed by climbing systems.



Development reach range heights will vary depending on how the play component is accessed. One accessible panel is assumed to be a height appropriate for a child who uses a wheelchair.

NOTES

ACKNOWLEDGEMENTS

The Canadian Centre for Barrier-Free Playspaces would like to acknowledge the U.S. Access Board for making the content of their Accessibility Guidelines for Play Areas public available for use in the development of this document.

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The numbers following photos are sources of each photo or illustration.

Front Cover Photo - KOMPAN

Back Cover Photo - Miracle

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2. KOMPAN
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4. KOMPAN
5. Little Tikes
6. KOMPAN
7. Little Tikes
8. KOMPAN
9. KOMPAN
10. Landscape Structures
11. Miracle
12. KOMPAN
13. Little Tikes
14. GameTime
15. Playworld Systems
16. GameTime
17. Little Tikes
18. Landscape Structures
19. Kompan
20. Recreation Creations
21. Miracle
22. Miracle
23. Landscape Structures
24. Miracle
25. Columbia Cycle
26. Playworld Systems
27. GameTime
28. Playworld Systems
29. KOMPAN
30. Little Tikes
31. Playworld Systems
32. KOMPAN
33. Landscape Structures
34. KOMPAN
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36. Little Tikes
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51. Playworld Systems
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55. Dynamic Recreation
56. Playworld Systems
57. Playworld Systems
58. Little Tikes
59. Landscape Structures
60. GameTime
61. Playworld Systems
62. Landscape Structures
63. Bob Leathers
64. KOMPAN
65. KOMPAN
66. Miracle