EVERPLAY News

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Playground Surfacing & the Proposed AODA

The fact that persons of all abilities have the right to access playgrounds is proposed to be reinforced in law in Ontario in 2010. This will affect every playground owner/operator and they will have to understand the requirements as they apply to design, installation and maintenance. Although inspection, enforcement and penalties have not yet been determined, the owner can be assured that there will be consequences for non-compliance.

This article will look at the most changeable and dynamic part of the playground, the surfacing and therefore be restricted to the ground level accessible route. With the variety of surfaces available to owner/operators, this will be a very challenging part of the playground.

The proposed AODA will require compliance to the Annex H of the CSA Z614 with the addition that there shall be an accessible route to each ground level play component. We will look at Annex H for compliance to Z614, definition of the accessible route, the requirements for the accessible route and what constitutes a ground level play component.

First and foremost, Annex H, section H4.1 states that prior to application of the requirements of the Annex, the playspace, including the structure and protective surface shall meet the requirement of the body of CSA Z614-07. For surfacing this is reinforced in H4.7.2, which requires that an accessible route within the protective surfacing zone comply with the surfacing requirements of section 10. This will require that the surface be

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Anatomy of a Playground Fall and Liability

Children are expected to fall in playgrounds as a part of good challenging play and that is why playground practitioners since the 1970's have recommended the installation of protective surfacing. During the 1980's and on, in various jurisdictions around the world, standards for playgrounds, including protective surfacing, have been written and revised. In the 21st Century the universal performance for protective surfacing is that from the stipulated drop heights, the Gmax should not exceed 200 and the HIC should not exceed 1000.

So, what about the falling child? The child could fall on a less than compliant surface and sustain a life-threatening or debilitating injury that could alter their quality of life. If the child falls on a compliant surface, the current protection in playground standards is that the child should not die, but might still sustain a serious injury. This injury could range from the noticeable bump, bruise or broken long bone to the not so recognizable concussion. Alternatively the child could be lucky and get up and continue to play without any injury.

Let's get some history on this playground and understand how the various stakeholders have contributed to the condition of the playground at the time of the fall. These might include the owner, the operator, the consultant, the general contractor, the play structure supplier, the protective surfacing supplier, the playground inspector, and the playground maintainer. Each will have a role in the development, implementation and operation of the playground.

The consultant works on behalf of the owner and or operator and is generally hired for exper-

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From page 1 column 1 installed and maintained to provide a Gmax not to exceed 200 and HIC not to exceed 1000 from the fall heights stipulated in the CSA Z614-07.

The basic definition of the accessible route is "a continuous unobstructed pathway from the perimeter of the use zone to the equipment" and there are specific physical measurements required for the three dimension of the route. The Accessible Route forms a three dimensional rectangular space that is a minimum of 1524mm (60") wide and 2032mm (80") high with a running slope not exceeding 1:16 and the cross-slope not exceeding 1:50. There will also be manoeuvring spaces at certain defined location along the accessible route that must be 1524mm (60") in each direction and a slope not exceeding 1:50 in all directions. Only exceptions to the width are allowed based on the size of the playground space and some minor narrowings, but there are no exceptions in relation to the height or slope.

Beyond the 3 dimensional measurements of the accessible route there are also additional requirements surface as:

- no change in vertical level greater than 25.4mm (1") with the first 12.7mm (1/2") allowed to be vertical and the second 12.7mm (1/2") cannot have a slope greater than 1:2.
- no elongated opening in the running direction in accessible route with an opening greater than 12.7mm (1/2")
- it could be said the when a straightedge is laid across the accessible route in any direction there should be no space under the straightedge greater than 12.7mm(1/2")
- the surface must comply with ASTM F1251 a test for the work required to manoeuvre a measure both straight line and turning movement. This Standard requires that the surface meets the requirements of ASTM F1292.

Now that the accessible route is defined, it is time to determine where the accessible route is to be. First the accessible route will connect the external (possibly hard surface) accessible route to the play components. For the elevated play components this could be a transfer system or a ramp, while on ground level this would a protective surface that meets the requirements listed above. The minimum number of ground level components in relation to elevated components is provided for in Table H1, but this does not preclude more ground level play components. A ground level play component is one that enters and exits on the ground and includes equipment such as swings, free-standing slides and climbers, spring toys and any other component not accessed directly or indirectly by the use of the ramp, transfer system or stair.

The selection of protective surfacing for the playspace will be similar to what was done prior to the AODA with the exception that the accessible route will require meeting the above requirements. Where a unitary surface is used for the entire playground, the determination of the actual layout of the accessible route will be moot; however for the more traditional protective surfacing with loose fill, will require the installation and maintenance of mate-

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Anatomy of a Playground Fall and Liability

From page 1 column 2 tise that the owner might not have. They typically will write the specifications for the playspace, including the play structures and the surfacing. The expectation will be that they are familiar with the standards and practices in the industry as well as performance standards for playgrounds, such as CSA, ASTM and the CPSC. They should also incorporate best practices into their designs and specifications to ensure functional longevity of the final playground. At the time of the injury, their contribution will be scrutinized for completeness and appropriate selection of performance requirements.

The play structure supplier will have specialized knowledge of performance standards such as the CSA, ASTM and CPSC and will make certain promises in relation to the products that will be installed. They will make recommendations with regard to layout, fall heights, and surfacing depths. They will provide labels as required in the ASTM F1487 not to install the structure over hard surfaces such as concrete or asphalt, which ultimately isn't saying much. Some manufacturers will go further to place labels on the posts to indicate the height to which a protective surface is to be placed. This is without regard to the type of surface that is being installed and they might be taking responsibility for mistaken expectations for the surfacing on the part of the owner/operator and user. Other manufactures make statements with regard to specific protective surfacing materials in relation to minimum depth or performance to CSA, ASTM or CPSC. At the time of the injury, all of the literature related to their supply and recommendations will be scrutinized for any failing.

Since the injured child landed on the protective surfacing, that supplier, manufacturer and installer will go under the microscope for their role in the injury. First and foremost will be a review of all literature and websites for their products and the expectations and promises made. Second will be a review of laboratory test reports and field tests at the time of installation and up until the injury, to determine if the appropriate standards for surfacing have been met. Third will be the maintenance procedures provided by the surfacing supplier and if following them were contributory to the injury.

The playground inspector, who has specialized knowledge due to their training, will perform the prior to use inspection for compliance to the CSA Z614 and any other standard stipulated in the specifications. They will have to ensure themselves with the appropriate tools, probes and devices of the performance of the structure and surfacing. Failure to perform a complete inspection or making statements of compliance without testing could lead to liability. Should there be a life-threatening or debilitating injury, they will have to be able to demonstrate what efforts they took to ensure the owner/operator had the information related to the hazard and the owner was given the opportunity to prevent the injury.

The owner, their staff or contractors, will be responsible to maintain the playground structures and surfacing to their "installed" conditions with some allowance for normal wear and tear. Since the protective surface is critical to the protection of the child during a fall, there will be no allowance for the surface to ever exceed the performance requirements of the CSA, ASTM or CPSC standards. The standards require regular inspections with reports and the owner will have to be able to provide these reports and they will either say that the playground is compliant or that any compliance issues as noted will be brought into compliance. These maintenance reports will be critical in any litigation.

The owner will ultimately be responsible for the playground as they will have scrutinized everyone's work and signed off on each stage of the process. At the time of the injury, they will be reviewing everyone's work and determine if they will be accepting the liability alone or finding some fault with one of the many people involved. Should any of the participants be brought into litigation, either as a third party or directly by the plaintiff, they will have their own reviews as they relate to the above.

Everyone is a partner in the playground, the prevention of injuries and the liability when an injury occurs as a result of non-compliance to safety standards.

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rials for the accessible route. A suggested layout would be to have a 1524mm (60") wide surface that meets the requirements of the accessible route travel across the playground and a surface of the same dimensions would run from the main route to the actual play components.

It is important that playground owners/operators understand that their selection of surface at the time of installation will have implications for the ongoing performance. The AODA requires that the accessible route continue to function at all times that the playground is expected to be open to public use. As a result the owner/operator will have to consider the maintenance aspects of the surfacing materials they select and a maintenance program will have to be in place and exercised to meet the required performance.

The AODA, although a significant change for many playground owners, it will not be a change that is insurmountable with some thought and consideration of accessible route. The inclusion of an accessible route in the playground will bring benefits to the community beyond what is currently anticipated and we all look forward to seeing these changes reveal themselves over the next few years.

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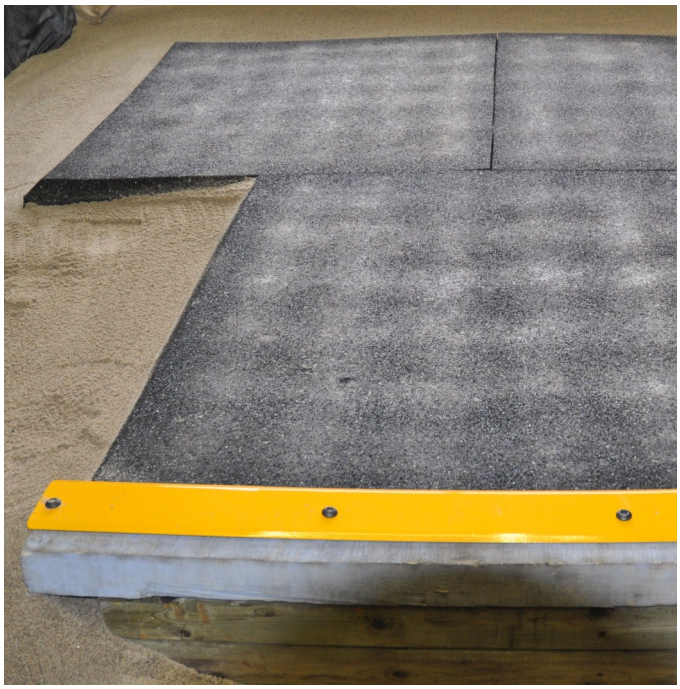
Accessible Route



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