



Porous pavement system creates grass paved parking lot

Geosynthetic product solves parking problem without reducing green space.
by Tim Starchuk

Last September, using an innovative geosynthetic product, the Geoblock porous pavement system, Layfield was able to help Regent Contracting and the City of Mississauga create a grass-paved parking lot at Jack Darling Park, part of the Lorne Park area. The Lorne Park Water Treatment Plant was being expanded to process up to 500 million litres of drinking water per day to meet future demand. Part of this expansion required the use of some of the existing parking lots in Lorne Park. After several years of debate, and many rejected alternatives, local residents agreed to have a grass-paved parking lot created, using the Geoblock system supplied by Layfield to offset the parking problem.



The decision to use the Geoblock porous paving system was made in the spirit of "green building." The goal of modern urban development is to move away from hardscaping – the process of covering urban landscape in impermeable materials such as concrete – to create more green space. If viewed from above most urban areas are entirely concrete. Hardscaping in cities causes problems with stormwater drainage. This type of environment requires artificial methods for draining the sometimes large amounts of stormwater from roofs, roads and parking lots. This water would normally be mostly absorbed into the soil, and flow into local bodies of water, instead of flowing into retention ponds or sewers. In a natural setting the stormwater would infiltrate the ground and recharge the water table by the hydrologic cycle. The Geoblock system recreates this natural system of water recycling, while allowing for traffic loads, without causing the water table to become depleted as commonly seen in urban areas.



The Geoblock system, manufactured by Presto Geosystems and distributed by Layfield, is made from recycled plastics and provides a series of interlocking blocks which makes it ideal for use in high traffic areas where natural vegetation is desired, like the Jack Darling Park.



Geoblock porous paving provides dependable and cost-effective protection of turf and load support in a wide variety of applications. Along with grass-paved parking lots, it has been used for golf course pathways and trails in recreational areas because of its relative ease of use.

In the Jack Darling Park project, the grass-paved parking lot was created within a two-week time frame, as was required for expansion of the water treatment facility. A crew of five to six workers was able to install the product in this short span of time following a relatively simple series of steps. First the sub-grade had to be leveled to create a flat surface for the parking lot.



Depending on load requirements, a varying depth of engineered base consisting of approximately two-thirds aggregate and one-third topsoil mix is recommended. The Geoblock units were then put down, and filled halfway with infill. This process is very similar to interlocking brick pavers, which the crew had years of experience installing. Lastly, sod was drum-rolled into the top half of the Geoblock, allowing vehicles to drive over the grass without destroying the roots.

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