



IMAX Corporation

Location: Mississauga
Constructed: Fall 2012

Fact Sheet



Project Overview

Credit Valley Conservation partnered with the IMAX Corporation to retrofit their parking lot with a variety of innovative stormwater management features including permeable pavers, three bioretention units and specialized stormwater treatment systems. The parking lot runoff is collected, absorbed and filtered by these low impact development (LID) practices before entering Sheridan Creek (which ultimately drains into Lake Ontario, the drinking water source for much of Ontario). The permeable pavers and other LID features have twice the lifespan of conventional asphalt, will help to reduce IMAX's winter maintenance costs, provide green amenities for staff, and improve drainage. The use of these innovative features is helping create local green jobs and build market capacity for these made-in-Ontario technologies. Construction was completed in December, 2012 with monitoring commencing in early April, 2013.

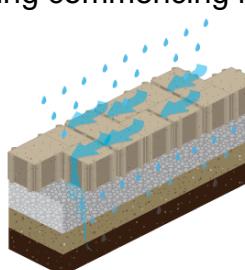
Bioretention units

Bioretention units infiltrate and filter parking lot runoff by utilizing specialized bioretention soil media and vegetation.



Permeable Pavers

An alternative to traditional pavement, permeable pavers allow rainfall and road runoff to pass between joints in the pavers into an underground gravel storage layer.



Jellyfish® Filter

This unit "pre-treats" the parking lot runoff by removing large particles and oil/grease. The treated runoff then flows into one of the bioretention units.



SorptiveMEDIA

This unit receives runoff from one of the bioretention units and provides polishing to remove phosphorus.



Successes

The successes achieved with this project include:

Innovative Project – the parking lot retrofit is one of the first commercial parking lot retrofits in Ontario incorporating a variety of LID technologies. A LID “treatment train” has been implemented with the Jellyfish Filter and SorptiveMEDIA systems to go above and beyond the level of stormwater treatment typically provided in commercial parking lots.

Extended Infrastructure Lifespan – the parking lot retrofit with LID not only provides IMAX with a proper functioning parking lot but also doubles the lifespan of the lot, as permeable pavers have double the useful lifespan of asphalt.

Operation & Maintenance Savings - the permeable pavers will help to reduce O&M costs due to reduced de-icing salt application needed for permeable pavement versus asphalt.

Better Functioning Parking Lot – the greatest success of the project was providing IMAX with a better functioning parking lot with improved drainage, less maintenance and improved aesthetics. The old parking lot posed a number of issues, including crumbling asphalt and year-round nuisance ponding which would flood the outdoor electrical cabinets causing power outages in the building. With the new design, these new technologies will improve drainage and filter runoff before it enters Sheridan Creek and Lake Ontario.

Creating Green Jobs & Building Market Capacity for Innovative Technologies - the project is also spurring the growth of Ontario green jobs through the use and promotion of the specialized stormwater management systems – the Jellyfish® Filter and SorptiveMEDIA. Testing of these new products will expand the go-to market specifically for designers, contractors, suppliers and manufacturers creating more local green jobs.

Demonstration Showcase – LID features at IMAX Corporation have been showcased through numerous presentations, events, media and site tours.



Aerial photograph of the site, showing the extent of the expanded parking lot.

Infrastructure Assessment

CVC is working with an expert advisory committee consisting of municipalities, regional government, the MOE, consultants, universities and industry to assess the performance of the LID features at IMAX. Objectives include:

- To evaluate the performance of LID at controlling and reducing runoff volume, peak flows, quality, erosion and restoring the natural water balance.
- Determine whether the LID practices are working as designed and meet maintenance requirements for optimal LID performance.
- Evaluate the degree to which LID reduces the impacts of extreme weather events due to climate change and builds resiliency in municipal infrastructure.
- Evaluate any changes/impacts to local groundwater quality and the potential to decrease chloride loadings to groundwater.
- Monitor and assess the operational and maintenance needs of LID systems and the subsequent effects on performance.
- Meet the objectives of CVC's monitoring strategy report (available at www.bealeader.ca)
- Preliminary performance data will be published soon.

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