

## **Humber College Rainwater Management Guideline**

### **November 2022**

Rapid development of Humber College's campuses have increased the amount of rainwater runoff. Several opportunities exist to treat rainwater as a resource rather than as a waste product and use the landscape and soils to naturally move, store and filter runoff before it leaves our campuses.

#### **How does our Rainwater Management Plan work?**

Through a process of formulating and reviewing rainwater management options, Humber College's Capital Development and Facilities Management department has committed to incorporate rainwater management measures in all new building projects order to future-proof our campuses and protect our surrounding environment.

#### **Current Practices**

Humber has already implemented many rainwater management practices into its building and campus management practices such as:

- Green Roofs in the following locations
  - 1,863 square feet on Lakeshore Commons building
  - 700 square feet on Centre for Urban Ecology building
  - 9,687 square feet on Learning Resource Commons building
  - 2,000 square feet on Lakeshore Athletic Centre
  - 2,000 square feet on Lakeshore Welcome Centre
- Porous pavement in the following locations
  - North Parking lot #7
  - Courtyard of North Building G
  - Path leading to Centre for Urban Ecology at the North campus
- Bioswale at North campus near Parking lot #8 and the Commuter Hub that act as a catchment and retention pond. Sediment is allowed to settle, and then overflow water drains into Humber River
- Humber Arboretum has two rain gardens in areas with water pooling issues
- Several stone and vegetated swales have been developed throughout our campuses

#### **Sustainable development**

Future new construction, major renovation, and development projects at Humber College will incorporate Rainwater management design features into building, parking, landscaping, paths and walkways. Rainwater management consists of reducing the rate and quantity of water flows, and improving the quality of rainwater through water retention, treatment and reducing peak rainwater flows through the delayed release of water.

The following specific techniques to reduce the rate and quantity of rainwater while improving rainwater quality will be implemented for any future development while also meeting Toronto Green Standard requirements:

- Parking systems promote ground water recharge and improve water quality through filtering (e.g. bioswales, porous paving, porous concrete, porous pavers, grasscrete and grass/pave gravel systems)
- Roof treatments address runoff from roofs (e.g. bioswales and/or biofiltration ponds, vegetated “green” roofs, deep well injection, and rain water collection for reuse in irrigation or flushing toilets)
- Hard and soft landscaping practices that utilize permeable and water efficient (drought tolerant) landscapes. Use native species that are fully adapted to our climate.
- Ensuring developments minimize the rainwater that leaves the site and manages the outflow rates to lower levels in order to minimize erosion
- In a manner best replicating natural site hydrology processes, retain (i.e. infiltrate, or collect and reuse) on site the runoff from the developed site for, at minimum, the 80th percentile of rainfall events using low-impact development or green infrastructure practices
- For all projects, the use of coal tar sealants is prohibited in any application exposed to rainwater, wash waters, condensates, irrigation water, snowmelt, or icemelt
- Installing permanent infiltration or collection features (e.g., vegetated swale, rain garden, rainwater cistern) that can retain 100% of the runoff from at minimum, the 80th percentile of regional or local rainfall events

A combination of these approaches are recommended as they will which maximize environmental benefits. These guidelines contribute the 11<sup>th</sup> (Sustainable Cities and Communities) and 14<sup>th</sup> (Life Below Water) [Sustainable Development Goals](#).