Sponsored by LiveRoof® Ontario

LIMBERLOST PLACE

Vegetated roof crowns first-of-its-kind mass timber building

Limberlost Place, a new addition to George Brown College's Waterfront Campus in Toronto, is a ten-storey, low-carbon building that will feature ecological innovation across its entire life cycle.

The first-of-its-kind mass timber building features a revolutionary exposed cross-laminated timber and glulam structure with a striking, angular rooftop silhouette.

A triple-height atrium with a series of cascading seat-stairs will display learning activities to the surrounding neighbourhood while admitting large amounts of natural light. Net zero-ready building components include a thermally-efficient prefabricated building envelope, deep lake water cooling, rooftop photovoltaic panels and two soaring natural ventilation solar chimneys to draw air up and through the building.

The new home of George Brown College's School of Architecture, Limberlost Place is a collaboration of Moriyama & Teshima Architects and Acton Ostry Architects, and designed to achieve Net Zero Carbon, LEED Platinum and Toronto Green Standard V3 Tier 4 Design.

As part of the ecological intent of the design, a vegetated roof completes the building envelope. The flat portions of the roof consist of a 150 mm (6 in.) deep biodiverse vegetated roof by LiveRoof® Ontario. The 19 different plant species, chosen in collaboration with the landscape architect, were provided in 11 different plant mixes. The plant mixes accommodate the various conditions of sun and shade experienced on the flat roof on the north side of the building, and the sunnier exposure of the smaller flat roof on the south side. The two roofs together make up 697 sq. m (7,500 sq. ft.).

LiveRoof®
The Proof is in the Roof

LiveRoof® Ontario produces and ships fully mature green roof vegetated modules which arrive on site ready to install. In this project, the 150 mm-deep modules were installed in a designed randomness layout.

According to Kees Govers of LiveRoof® Ontario, "The installation of vegetated roofs is growing as more and more municipalities have issued requirements for stormwater management. It can be less expensive to use a vegetated roof to handle stormwater rather than relying only on underground stormwater infrastructure, or to reduce the stormwater volume in existing infrastructure."

Helping to manage stormwater run-off has been well recognized as a main benefit of vegetated roofs, especially in built-up urban areas. For example, all Tier 2 applications under the Toronto Green Standard (TGS) V3 Alternative Compliance Pathway, including low rise, mid high rise, non-residential and City-owned new developments, must retain a minimum of 10 mm depth of rainfall from all horizontal site surfaces through infiltration, evapotranspiration, water harvesting and reuse for every rainfall. Since not all surfaces can be covered with vegetated roofs, the TGS acknowledges that this requirement can also be met by:

- A Green (vegetated) Roof covering at least 80% of Available Roof Space;
- An Intensive Green Roof for 80% of the Green Roof Area provided; or by a
- Biodiverse green roof to support pollinator species covering a minimum of 50% Green Roof Area.

In addition to reducing stormwater runoff, vegetated roofs can help to conserve energy, protect building envelopes, and create habitat for pollinators. LiveRoof® Ontario has installed vegetated roofs on many buildings across Ontario, both on government and private projects, including multiple hospital projects across the province, retail shopping facilities across the GTA and many offices and condo buildings in Toronto, the GTA and Ottawa, as well as multiple transit projects across the GTA.

Contact us for your next project: LiveRoof.ca
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