

Eglinton Maintenance and Storage Facility



Photos courtesy Gingko Sustainability.

LiveRoof Ontario vegetated roof delivers long-term performance and natural beauty

The new Eglinton Maintenance and Storage Facility (EMSF) in Toronto is designed to service the Eglinton Crosstown LRT. Built by Crosslinx Transit Solutions-Constructors (CTSC) for the regional transportation agency Metrolinx, the EMSF consists of four buildings: the Vehicle Cleaning & Inspection facility (VCIF), the Vehicle Cleaning Staff building, the Maintenance building, and the Operations Company (OPSCO).

The EMSF has a pre-engineered steel structure with a low-slope roof covered by an 80mil TPO roofing membrane. Design of the EMSF roof is important from sustainability and aesthetic perspectives. The roof represents an opportunity to reduce the building's heat island effect, through a combination of a vegetated roof and lighter-coloured roofing materials. The plant material for the vegetated roof areas was selected to provide year-round colour, texture and seasonal variation. Gingko Sustainability installed the vegetated roof which was supplied by **LiveRoof Ontario**. The vegetated roof covers 75% or 150,000sf of the total roof area, making it the largest installation in Ontario.

Introduced in 2006, the LiveRoof Hybrid vegetated roof system meets the contractor's need for ease of installation and the building owner's need for reliable, long-term performance.

LiveRoof Ontario services a significant portion of the vegetated roof market in Ontario - including the noteworthy podium of the Toronto City Hall, and the Bridgepoint Hospital, both winners of the prestigious Governor General's Medal for Architecture.

The LiveRoof system's modules hold the growing medium and plant material. The modules come in four depths: 2-1/2", 4-1/4", 6' and 8". The 4-1/4" module was used on the EMSF and is often the preferred product since it has adequate depth to absorb rainwater and reduce storm water runoff while not adding too much dead load to the roof.

In consultation with landscape architects at Crosslinx Transit Solutions-Design (CTSD), modules were provided with two mixes of sedums, each containing up to 15 varieties: an all-yellow flowering mix, and a red and white flowering mix. These were grown in LiveRoof Ontario's outdoor nursery and transported ready-to-install at the job site.

During installation a plastic soil elevator sleeve is removed from each module so that the plant material grows together as one monolithic green roof. Even so, the system does not lose its flexibility as modules can be shifted to accommodate new services such as plumbing stacks, or completely removed and transported to another roof.

See more projects and technical information at:
<http://www.liveroofontario.ca> and
<https://liveroof.com>

Side view of the LiveRoof 4-1/4" module in a typical installation

- 1 LiveRoof Module
- 2 Moisture Portals™
- 3 LiveRoof Engineered Soil
- 4 LiveRoof Green Roof Plants (Minimum 95% Soil Coverage at Installation)
- 5 Root Barrier
- 6 Waterproofing Membrane
- 7 Cover Board
- 8 Insulation
- 9 Roof Deck [Items 5 to 9 provided by others.]

