

# INTRICATE DESIGN AND LARGE SOIL VOLUME SUPPORTED BY **DEEPROOT® SILVA CELLS®** AT THE CANADA SCIENCE & TECHNOLOGY MUSEUM OTTAWA

*A Solution to Promote Healthy Tree Growth*

## The Project

The Canada Science and Technology Museum in Ottawa recently underwent a three-year, \$80 million renovation. The plaza area was initially a courtyard space bordered by two warehouses and mechanical shops for the heritage Canadian railway. The new plaza, adjoining promenades and walkways are home to the historical railway stock as well as a flexible space for changing displays of all types of mechanical technology.

**372 DeepRoot® Silva Cells®** were used to support the intricate heavy pavers design in the plaza, along with **706 cubic feet of soil** to enhance the growth and vitality of **9 Honey Locust trees**.

The Landscape Architect, **DTAH** knew the highly flexible Silva Cell could be configured by the contractor, **UCC Group** to support large circular tree pit collars and could withstand heavy vehicle loading alongside the established railway tracks.

*"It was important to soften and shade the large, paved plaza with trees for the visitors to gather,"* said John Hillier, Partner DTAH. *"The stratified Silva Cell subgrade assembly enabled us to successfully integrate these pedestrian spaces"*

The museum has attracted 640,000 visitors since the reopening in 2017, and healthy tree growth was an important factor for the newly designed plaza opened to the public in 2019.

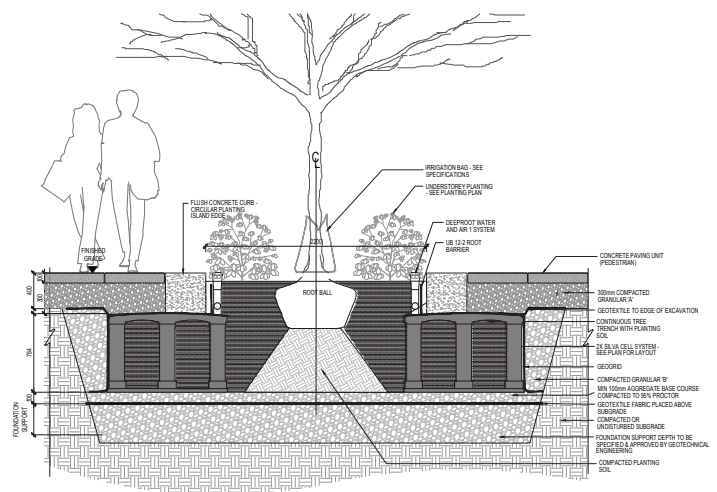
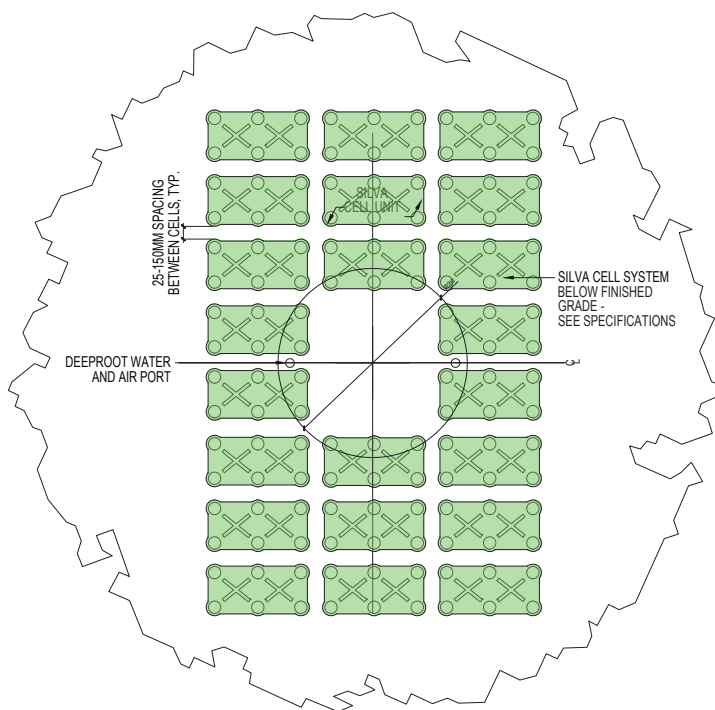


# DeepRoot Silva Cells

The DeepRoot Silva Cell is a modular suspended pavement system that integrates water, soil and tree roots and delivers on-site stormwater management through bioretention.

To ensure the healthy growth of the trees, the DeepRoot Water+Air System was used in conjunction with perforated, flexible pipe to introduce and distribute water into the tree pit and throughout the soil volume. Beneath the soil volume an underdrain was installed to collect and evacuate the excess water from within the soil column.

The end result delivers a pair of vintage cabooses and carriages nestled in between circular tree pits and Honey Locust trees in a space designed to celebrate Canadian ingenuity, and to inspire creativity and innovation.



TREE PLANTING IN TRENCH SOIL & SILVA CELL SYSTEM

## About DeepRoot

DeepRoot Green Infrastructure develops solutions to enhance urban forests and surrounding watersheds in city streets, parking lots, campuses, and other heavily-paved areas. Silva Cell, our flagship product, is an underground framework for containing lightly compacted soil that supports large trees and absorbs runoff from rain, increasing air and water quality, reducing energy loads, mitigating heat island effect, and nurturing trees for a long life in their communities. Headquartered in San Francisco with locations in Vancouver and London, DeepRoot has more than forty years of experience helping trees thrive in cities, nurturing over 500 blocks of urban treescape in the built environment around the world.