63rd & Yukon

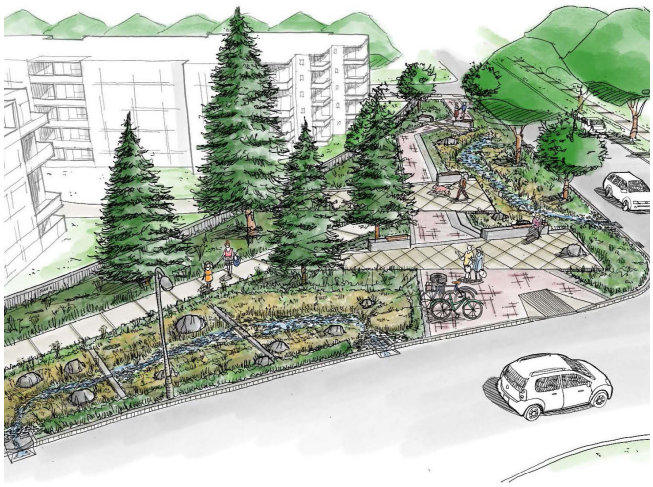
A sustainable urban rainwater management demonstration project

Green Infrastructure Implementation
Engineering Services

The City of Vancouver is in the process of developing an ambitious plan that reimagines the way we manage rainwater. The Rain City Strategy recognizes water as a resource to be managed sustainably, thereby addressing water quality issues, enhancing Vancouver's livability, and increasing the city's resiliency to the effects of climate change. This project incorporates public space, a drinking fountain, bicycle racks, and green infrastructure (GI) to pilot a new water-sensitive approach to city-buidling.

Background

The 63rd & Yukon project, located in Vancouver's Marpole neighbourhood, was first articulated in the Marpole Community Planning Process as a new neighbourhood plaza. An historic stream runs underground in the vicinity of the practice, and this informed the design of the plaza, which evokes the image of fallen trees across a typical British Columbia creek. The soils and plantings in the practice clean pollutants from road runoff and allow water to soak back into the ground; restoring a more natural water cycle. Plantings are predominantly native species, supplemented with non-native species to improve practice performance and resiliency. In addition to GI, the plaza contains seating, bicycle racks, trees, and a drinking water fountain.



Project Delivery

This project was designed and constructed by city branches. It pilots innovative inlet design, planting schemes, and onsite soil amendement and reuse. There will be ongoing monitoring of inlet function, groundwater levels, and plant health to evaluate design performance and inform future design standards.

What is green infrastructure?

Green infrastructure is an approach to rainwater management that protects, restores, and/or mimics the natural water cycle. It uses soils, plants, trees, and built structures such as swales and rain gardens to capture, store, and clean rainwater before returning it to our waterways and atsmophere.

Performance

PRACTICE SIZE

The project includes 102m^2 of dedicated bioretention systems. The practices incorporate a number of failsafes should rainwater flows exceed design capacity.

AREA MANAGED

The project manages runoff more than 1,170m^2 of adjacent impermeable area. This includes rainwater runoff generated on adjacent roads and sidewalks.

WATER DIVERTED

The bioretention practices capture 90% of average annual rainfall that falls within the 1,170m^2 drainage area. This results in 2,200m^3 of rainwater diverted from the sewer system in a typical rainfall year.

Rain garden along W 63rd Avenue

August 2018

63rd & Yukon

Green Infrastructure Practice

Spring 2018

CITY OF VANCOUVER | GREENEST CITY

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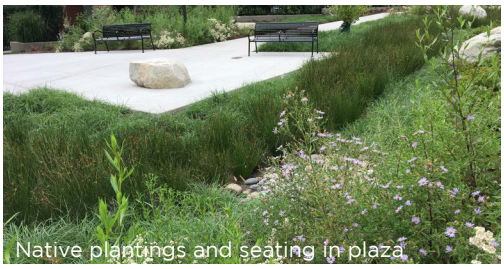
Rain garden along W 63rd Avenue

Overflow drain in rain garden



Native plantings and seating in plaza

Native Douglas aster

Rain garden and bioswale

August 2018