
# Brookfield Road Drainage Improvements

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Public Information Centre for proposed stormwater drainage improvements on Brookfield Road between Lakeshore Road West and Burnet Street.

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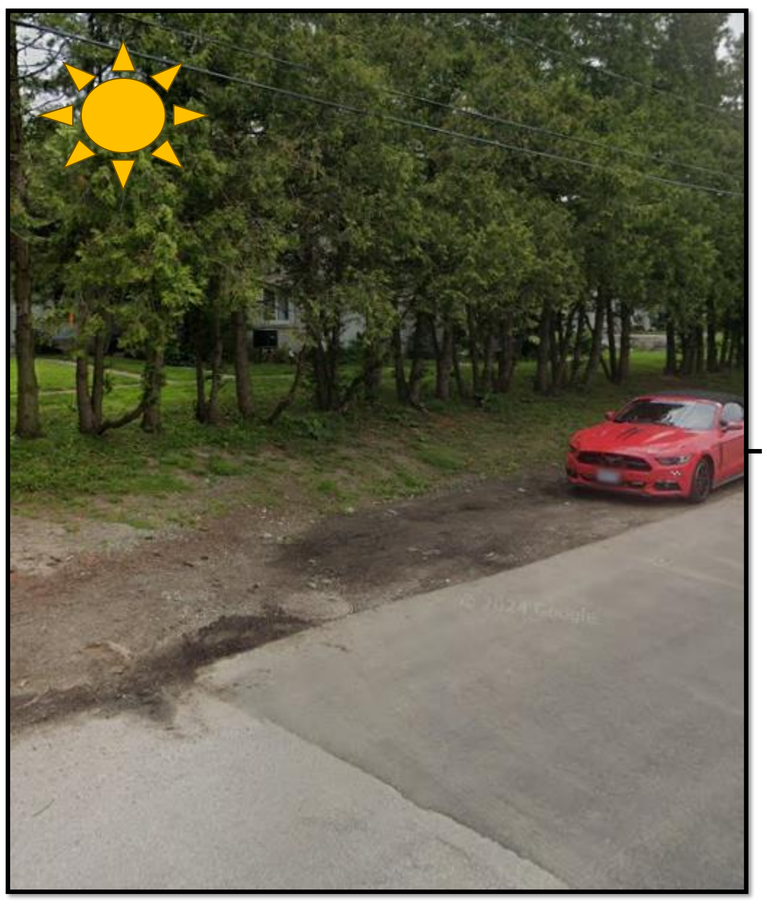
# Project History and Study Area


- Town has received flooding complaints since 2022 and the Town has been undertaking remedial measures and investigations.
- Spring 2024 – Aquafor Beech Limited retained by the Town.
  - Objective: develop & evaluate alternatives, then implement recommended solution
  - Goal of solution is to address drainage improvements and reduce flooding potential, while prioritizing green infrastructure



Roadway in front of 79 Brookfield Road facing west (Dry Conditions)

Roadway in front of 79 Brookfield Road facing west (Wet Conditions)

# Design Alternatives Goals and Objectives

## Project Goals and Objectives:

1. Reduce the frequency of spill towards private property during storm events.
2. Reduce the amount and size of “grey” infrastructure required as part of the overall drainage solution for the study area.

## Alternatives Evaluation Criteria

### Stormwater Management

- Maximize potential for local flood reduction
- Water Quality Treatment
- Erosion Control
- Water Balance Improvements

### Environmental

- Maximize use of ‘green’ infrastructure per Town of Oakville Council initiative to adopt in new or redevelopment sites within the Town to replace or avoid installation of traditional ‘grey’ infrastructure.

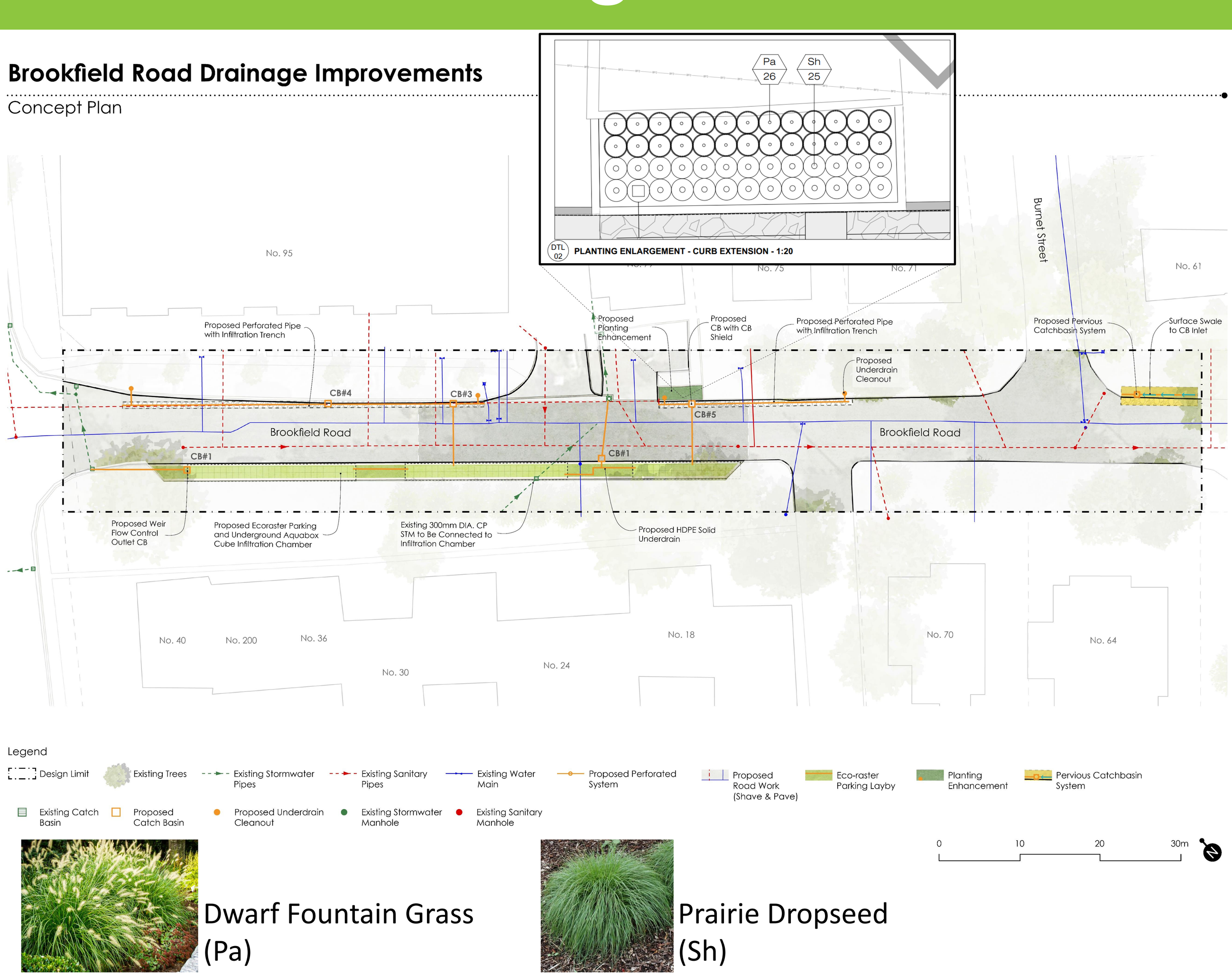
### Existing System Incorporation

- Maximize use of existing infrastructure to limit installation of new infrastructure and minimize project cost.

### Construction and Maintenance

- Minimize Construction Costs
- Minimize Operation and Maintenance Costs

# Selected Design Solution (1 of 2)






Dwarf Fountain Grass (Pa)



Prairie Dropseed (Sh)

## Layby Parking (West Brookfield)

- Captures stormwater runoff West of Brookfield Road
- Replaces existing dirt/gravel shoulder informally used for street parking
- ECORASTER Surface – Allows water to infiltrate quickly with no significant surface ponding during rain events
- Aquabox Cubes – Underground chambers to filter, store, and infiltrate captured runoff

## Perforated Pipe Trenches (East Brookfield)

- Capture stormwater runoff on east side of Brookfield Road, draining into the Aquabox storage chamber
- Provides additional storage and infiltration of runoff

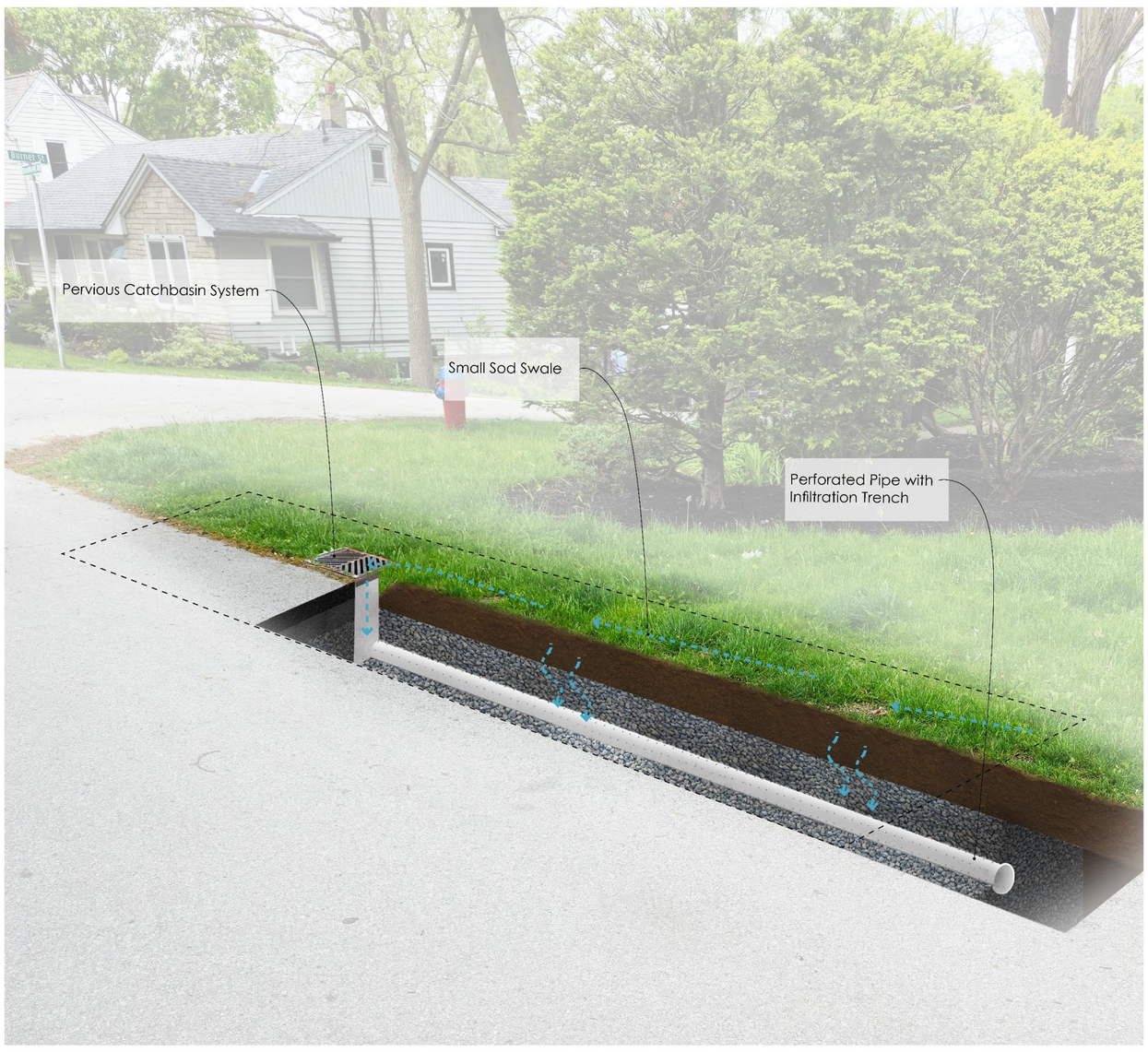
## Pervious Catchbasin (Burnet and Brookfield Intersection)

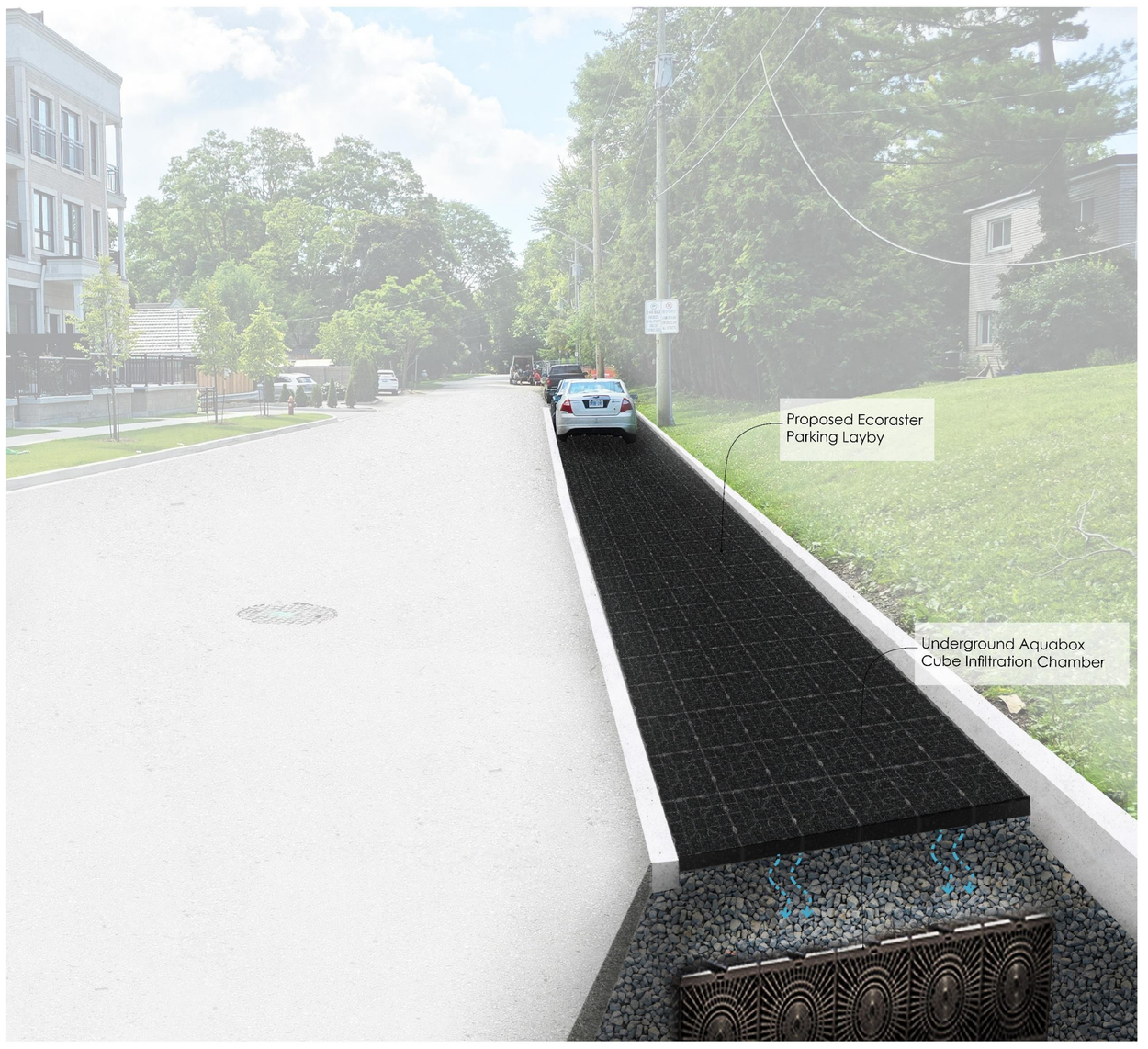
- Intercepts runoff from Brookfield Road upstream of Burnet Street via surface swale
- Infiltrates runoff to subsurface sandy soils
- Reduces erosion and flooding potential along south side of Burnet Street boulevard

# Selected Design Solution (2 of 2)

## Brookfield Road Drainage Improvements

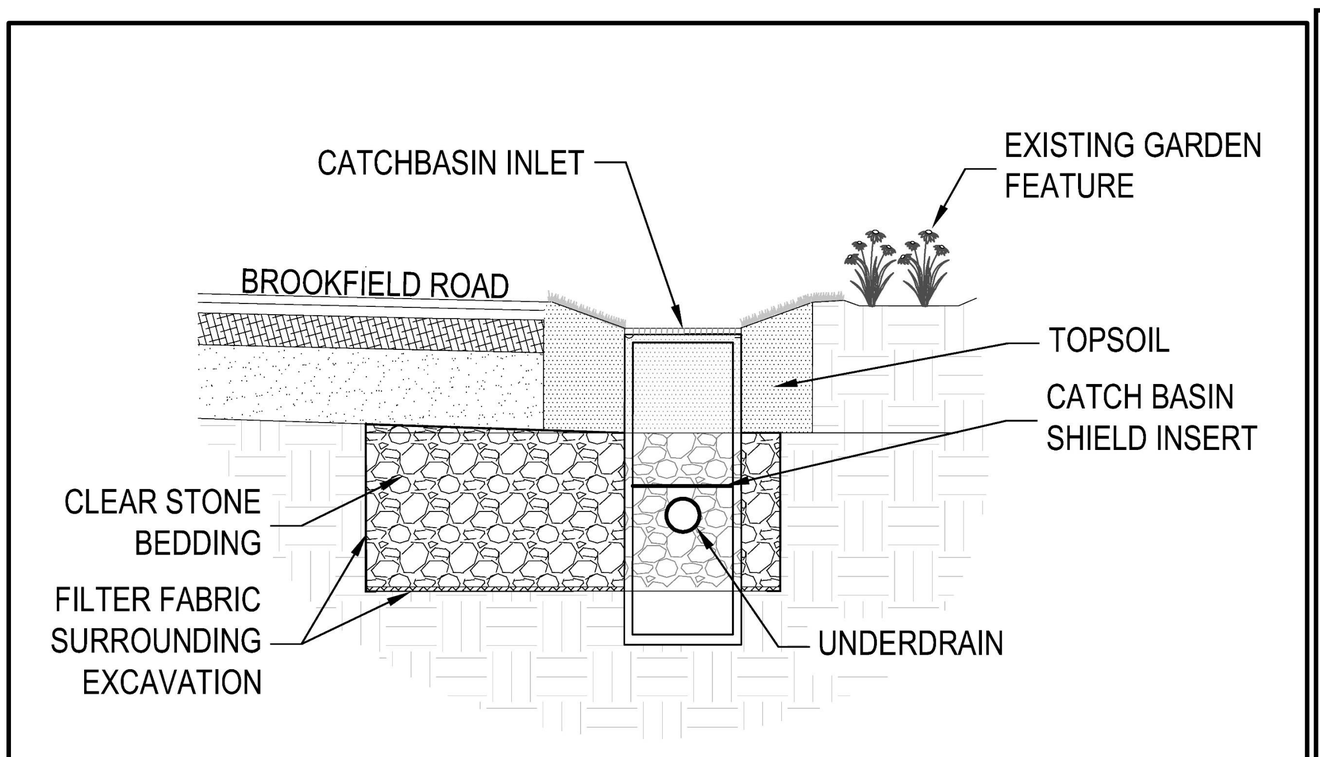
Perspectives



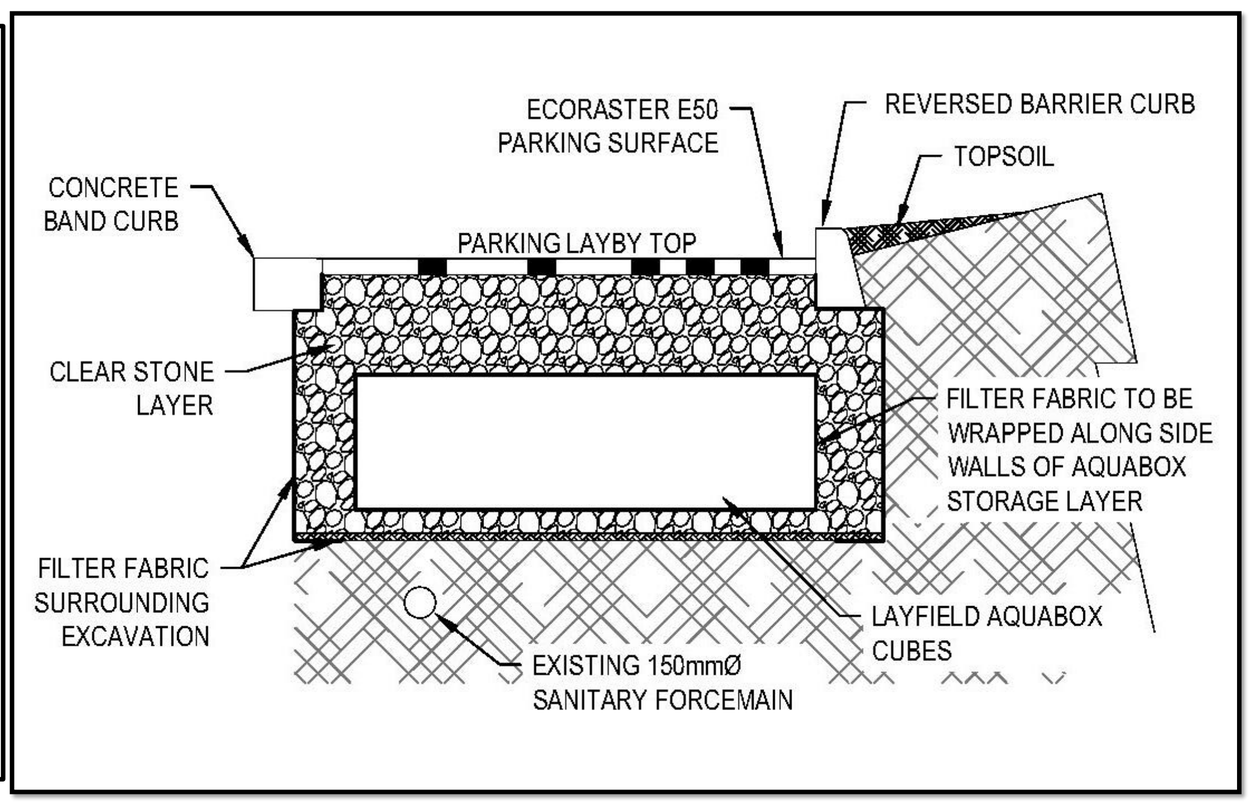




Pervious Catchbasin System

Eco-raster Parking Layby




Detail 1: Pervious Catchbasin System




Detail 2: Layby Parking System

# Design Solution Materials: A Closer Look

ECORASTER E50 provides a permeable surface layer for the layby parking facility.

ECORASTER E50 grids have load bearing capacity for trucks and are easily maintained during the winter months.

Aquabox storage modules provide maximized underground storage beneath the parking surface to promote stormwater infiltration.

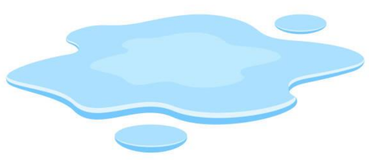
CB Shield inserts placed within catch basins to promote sediment removal and prolong service life of the infiltration systems.

# Improvements to Brookfield Road Drainage

- Design captures surface runoff and promotes infiltration
    - Local sandy soils provide high infiltration rates
- Design adopts catch basins and pervious surfaces that can maintain function in winter months

**Figure 1:** Local Sandy Soils taken from soil probe core during infiltration testing.

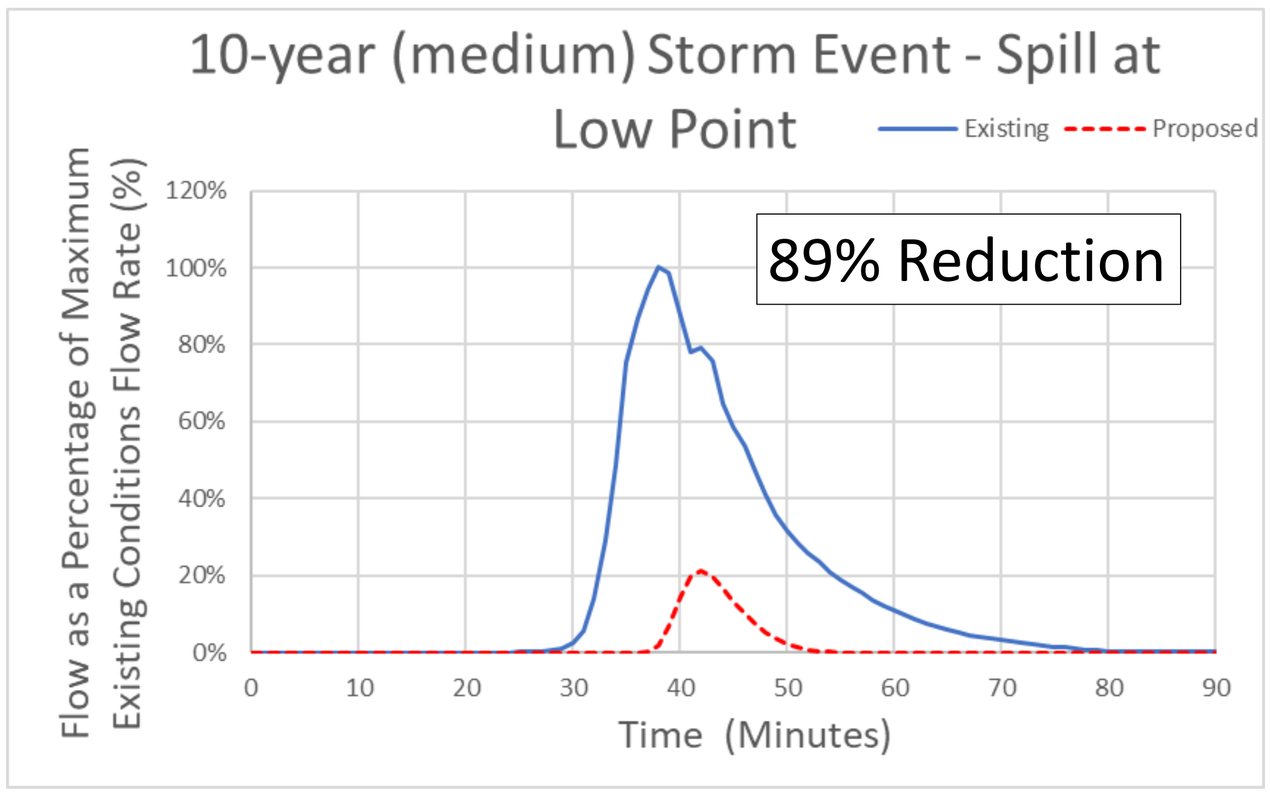
Stormwater modelling results indicate the following improvements:

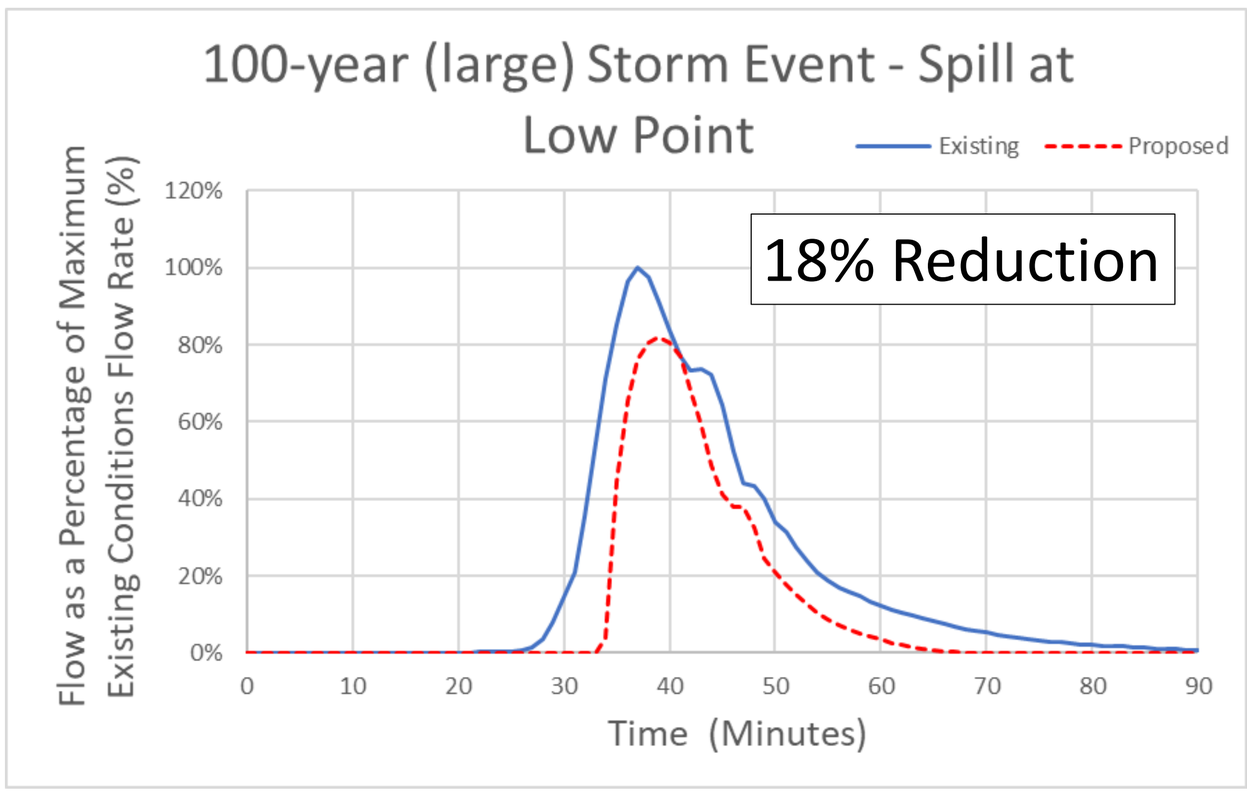


Ponded water depth at localized low point south of Harbour Place (101 Brookfield Rd) entrance is eliminated under small rainfall events and reduced in larger rainfall events.

Excess flows draining from the system via the outlet pipes are partially diverted to Lakeshore Road West storm sewer, reducing flows to the Burnet Street culvert crossing.

Burnet Street & Brookfield Road intersection pervious catchbasin intercepts, stores and infiltrates the majority of runoff flowing downhill along Burnet Street, reducing erosion and flood potential on along the south side of Burnet Street.



# Project Next Steps

**Where** are we in the study process?

June 2024 — Project Initiation

Summer 2024 — Field Investigations

Fall 2024 — Design Alternatives Evaluation

We are here!

Spring 2025 — Detailed Design

Summer 2025 — Construction Public Tendering (Anticipated)

Fall 2025 – Spring 2026 — Construction (Anticipated)

**Construction Timeline**

Approximately 2-3 months

- Intermittent lane restrictions anticipated