Expanding Peel's Asset Management Program

Undertaking an *Engineered Green Infrastructure* Inventory and Condition Assessment on Region of Peel Properties

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Outline

- Background
- Approach
- Findings
- Lessons Learned
- Next Steps

Context

Region of Peel:

Enhance Green Infrastructure as per Climate Change Master Plan

Improve asset data as per Asset Management Strategy

CVC and TRCA:

Carry out research, monitoring and evaluation of clean water technologies

Develop supporting tools, guidelines and policies

Our Approach

Objectives & Guiding Principles

Photo: Heart Lake Community Recycling Centre

1. Fit for purpose
2. Rapid assessment
3. Phased approach

Initial Project Scoping

Regional Office Complexes

Peel Regional Paramedic Services

Community Recycling Centres & Ops Yards

Long Term Care Centres

Peel Housing Corporation

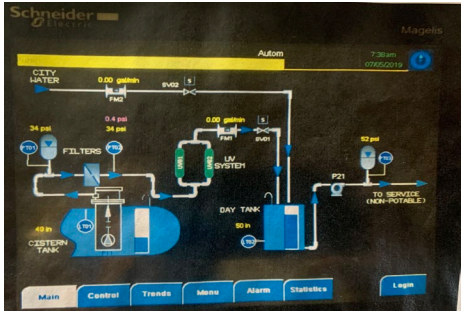
Treatment Plants

Initial Project Scoping

Green Roofs

Bioretention Features

Swales

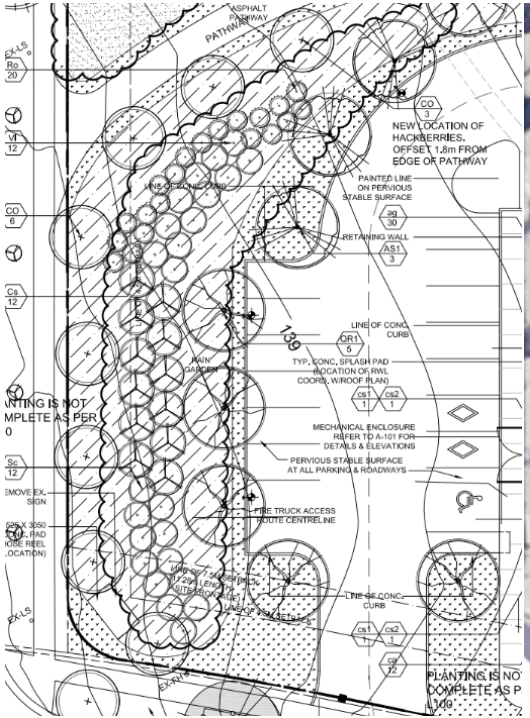


Rainwater Harvesting Systems

Permeable Pavement

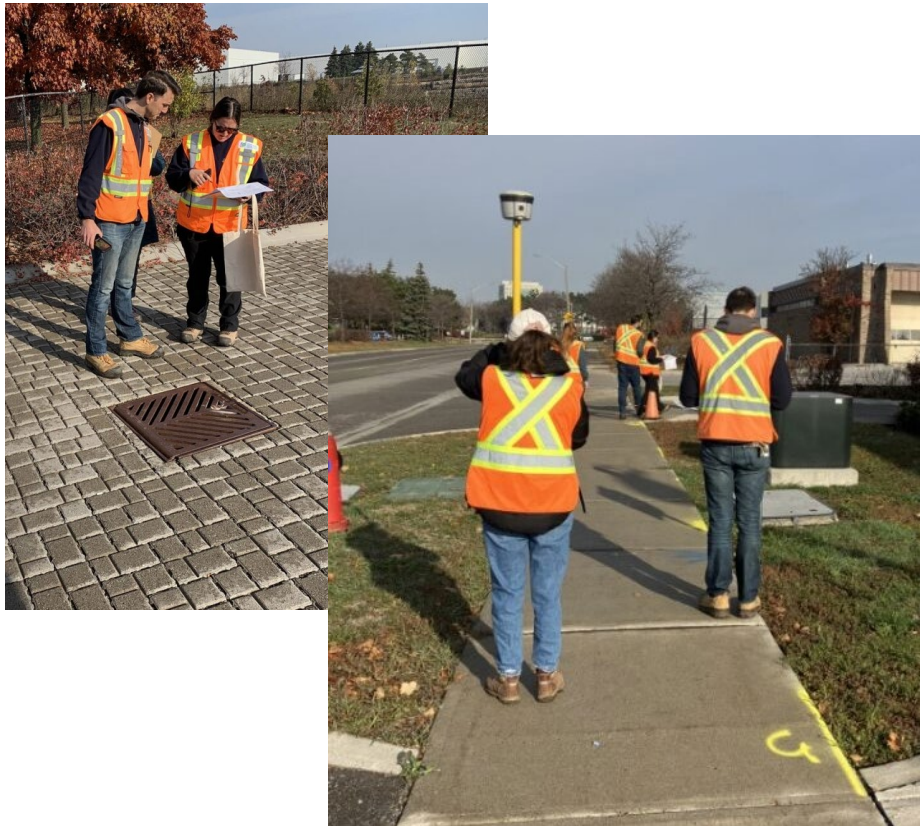
Oil Grit Separators

Review Resources & Desktop Analysis



- Use resources from Peel
- Use free tools like Google Earth
- Use paid tools like GIS, AutoCAD, Microsoft 365

Ground Truthing



- Verify correct infrastructure is on-site
- Understand assets
- Record missing assets/information
- Take photos
- Document obvious issues

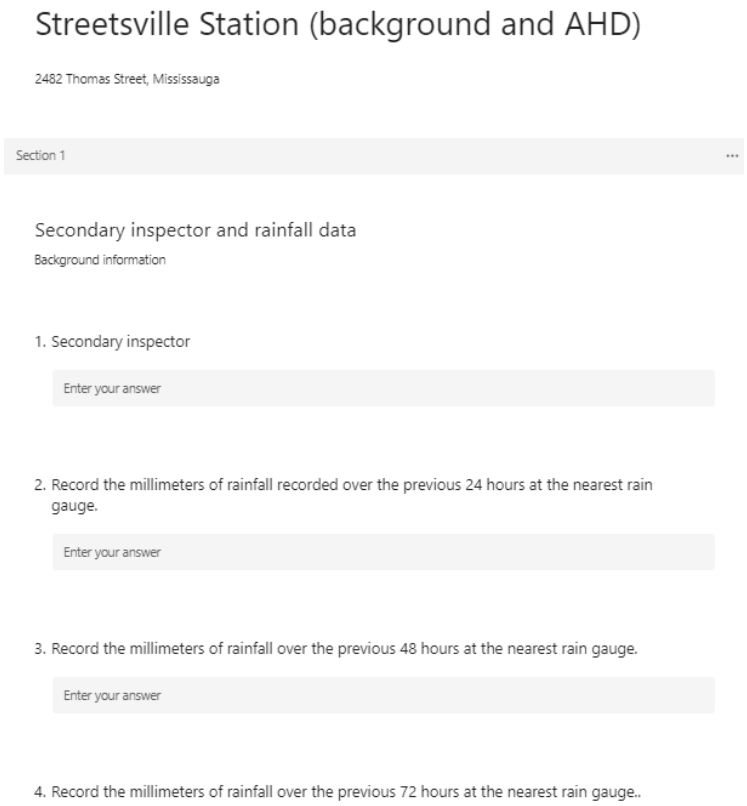
Create Final Base Map

Condition Score Development

Numerical Rating	Descriptive Rating
1 (A)	Very Good
2 (B)	Good
3 (C)	Fair
4 (D)	Poor
5 (F)	Very Poor

- Conducted jurisdiction scan
- Adapted to align with Peel's enterprise asset management system

Inspection Form



Streetsville Station (background and AHD)

2482 Thomas Street, Mississauga

Section 1

Secondary inspector and rainfall data

Background information

1. Secondary inspector

Enter your answer

2. Record the millimeters of rainfall recorded over the previous 24 hours at the nearest rain gauge.

Enter your answer

3. Record the millimeters of rainfall over the previous 48 hours at the nearest rain gauge.

Enter your answer

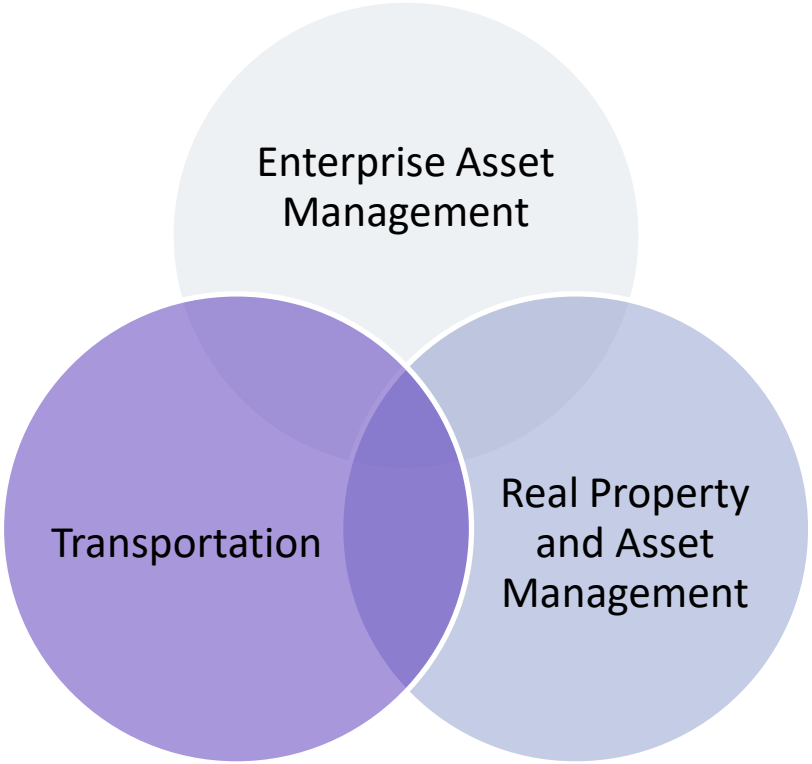
4. Record the millimeters of rainfall over the previous 72 hours at the nearest rain gauge..

- Different mechanisms for data collection
- Custom form for each site
- Data collected electronically and saved to the cloud
- Standardized scoring system from 1 to 5

Field Work

- Complete inspection form
- Take measurements, record issues, take photos
- Submit data to group

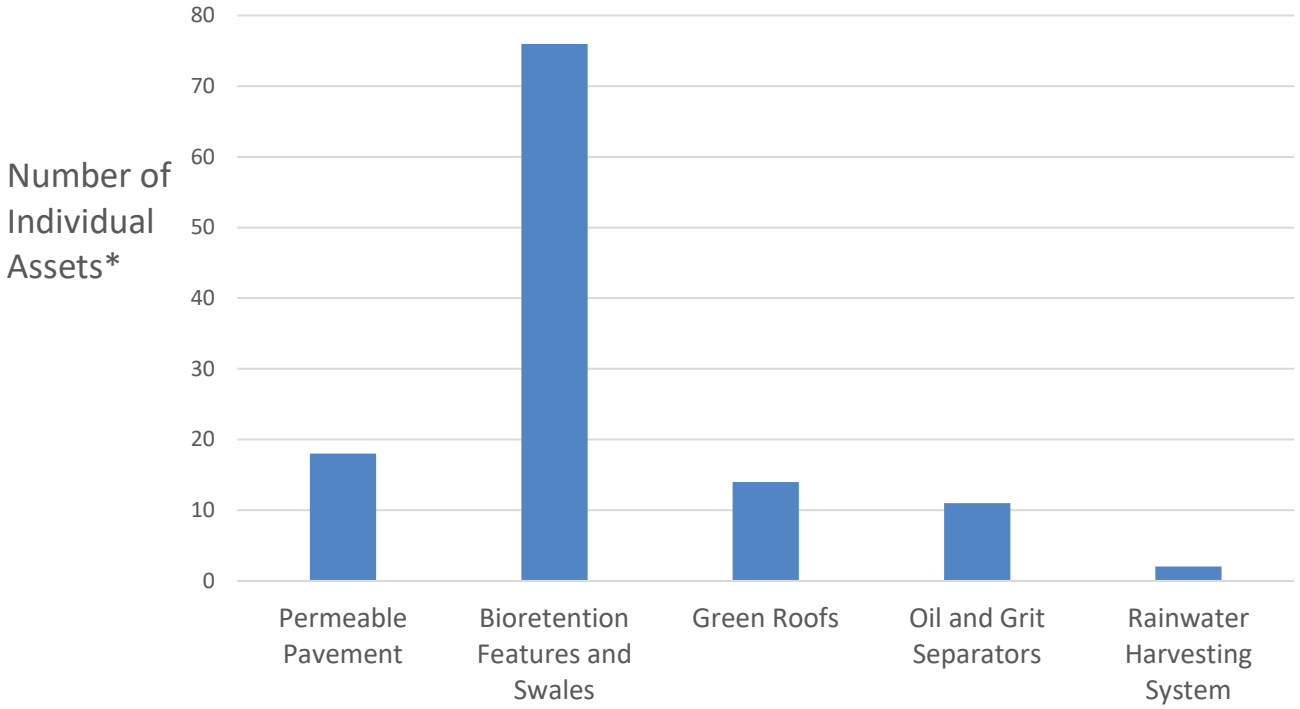
Asset Data Nomenclature & Hierarchy



1. Multiple rounds of consultation
2. Prioritized stakeholder ultimately responsible for managing the asset
3. Fit the GI assets within the existing hierarchy - Uniformat Code System
4. Build flexibility within interim asset databases

Initial Findings

Engineered Green Infrastructure Inventory



**Note: Individual assets were identified based on unique inlets, outlets and/or contributing drainage areas. Sites often had multiple Eng. GI assets on-site.*

Streetsville Station

2482/2492 Thomas Street,Mississauga

StormWater Infrastructure

- Area Drain (AD)
- Catch Basin (CB)
- Catch Basin Manhole (CBMH)
- Municipal System (MS)
- Perforated STM With Rodent Grate
- Private Storm Sewer (STM)
- Subdrain (SD)
- Conveyance Swale (SWL)
- Property Line (PL)

Roof Drainage

- Downspout Internal With Trench Drain (DITD)
- Overflow Scupper (OS)
- Downspout Internal with Splash Pad (DISP)
- Downspout External with Splash Pad (DESP)

Permeable Pavement

- Apron Heavy Duty (AHD)
- Roadway Heavy Duty (RHD)

Vegetated Features

- Bioretention (BR)
- Decorative Rock (DR)
- Garden (GD)
- Planting Bed (PB)

Roof Type

- TPO Membrane Roof (TPO)


Streetsville Station
2482/2492 Thomas Street,Mississauga
StormWater Infrastructure
Area Drain (AD)
Catch Basin (CB)
1
1
5
5

Other Examples of GI Assets with Very Good Condition Ratings

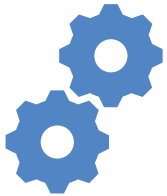
Other Examples of GI Assets with Poor-Very Poor Condition Ratings

Lessons Learned and Next Steps

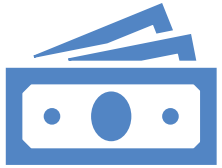
Lessons Learned

- Need for knowledge transfer & training
- Need to enhance and standardize access to GI asset data

Next Steps



Specify and prioritize Operations & Maintenance activities



Establish asset replacement costs and asset lifecycles

Conduct staff education and training

Region of Peel
working with you

Thank you!
Questions?

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