

Environmental Services

Upper York Sewage Servicing (UYSS) Project Status Update

Presentation to

Town of Newmarket Committee of the Whole

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November 7, 2016



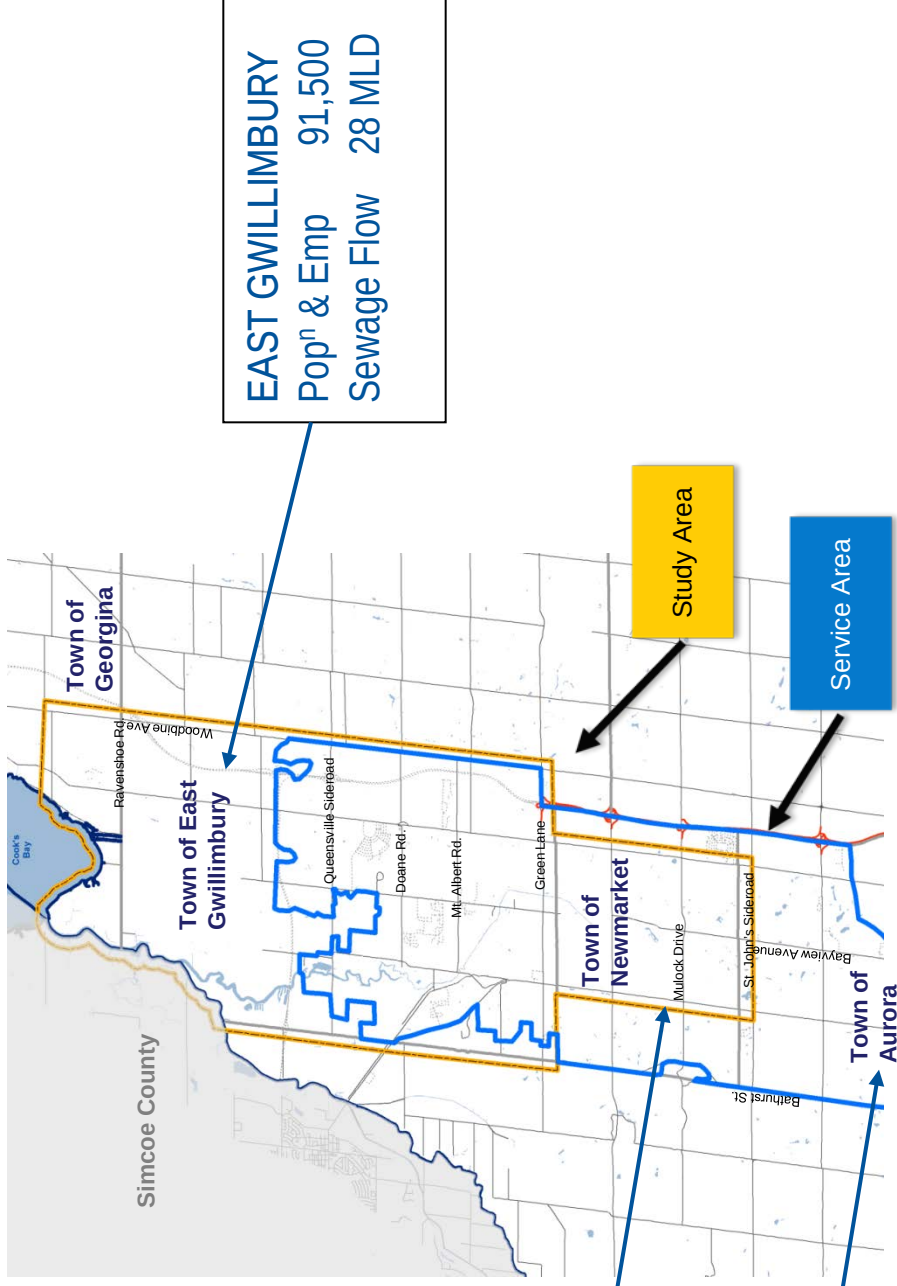
Presentation Outline

- Overview of Upper York Sewage Servicing (UYSS)
- York Durham Sewage System (YDSS) Modifications
 - YDSS Overview
 - Alignment Fly Over Video
 - Project Timeline
 - Construction Methodologies
 - Microtunnelling Shaft Compound Locations
 - Potential Impacts and Proposed Mitigation Strategies
- Project Communication
- Proposed Phosphorous Offsets
- Next Steps

Upper York Sewage Servicing (UYSS)

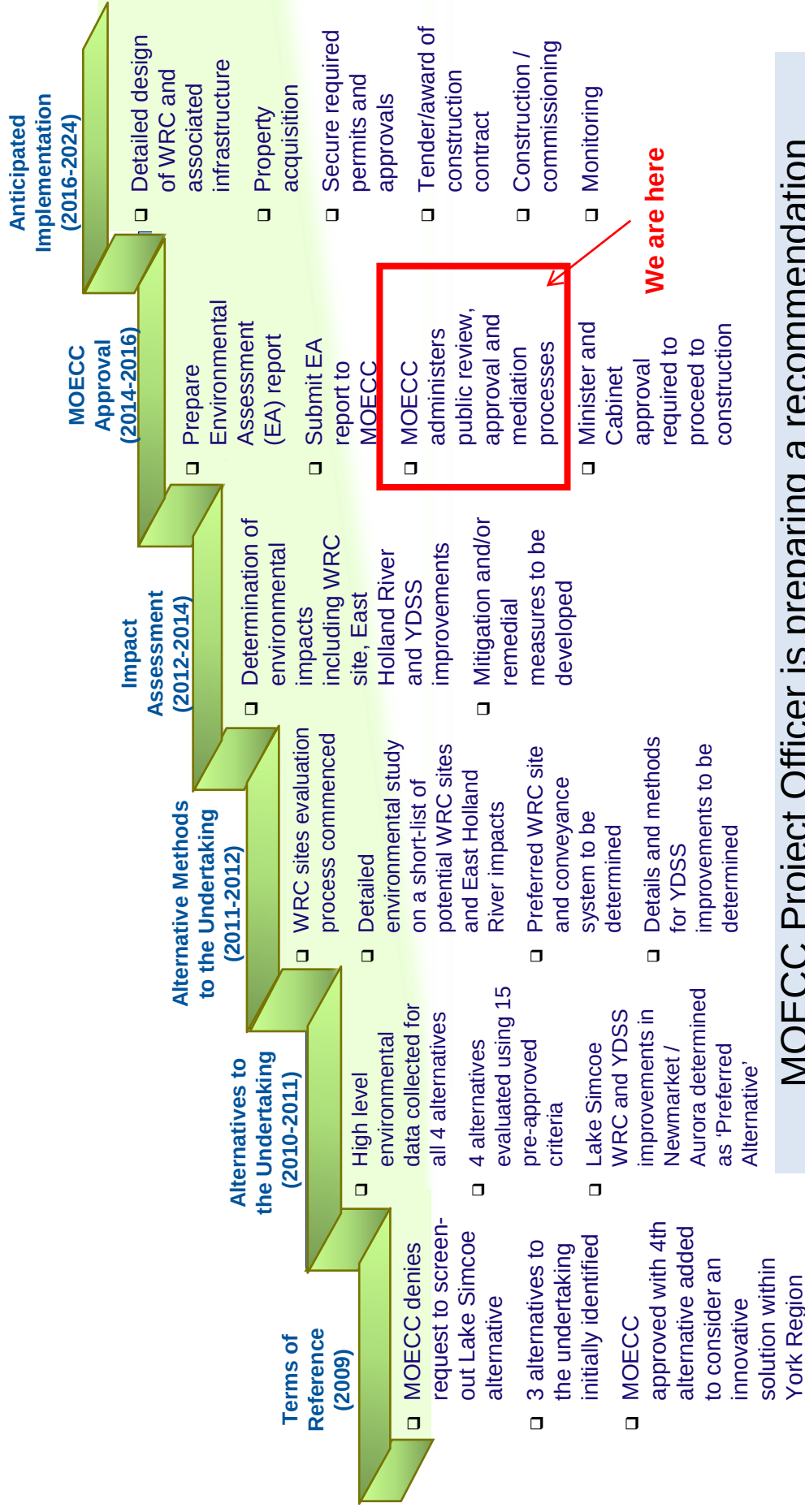
Purpose

To develop a sustainable sewage servicing solution to accommodate forecasted growth in UYSS area



47 million litres per day (MLD) additional capacity required to 2031

Upper York Sewage Servicing (UYSS) Individual Environmental Assessment Process



MOECC Project Officer is preparing a recommendation package to the Minister for IEA approval by the end of 2016

UYSS Key Elements

**Water Reclamation
Centre with Reclaimed
Water & Discharge to
the East Holland River**

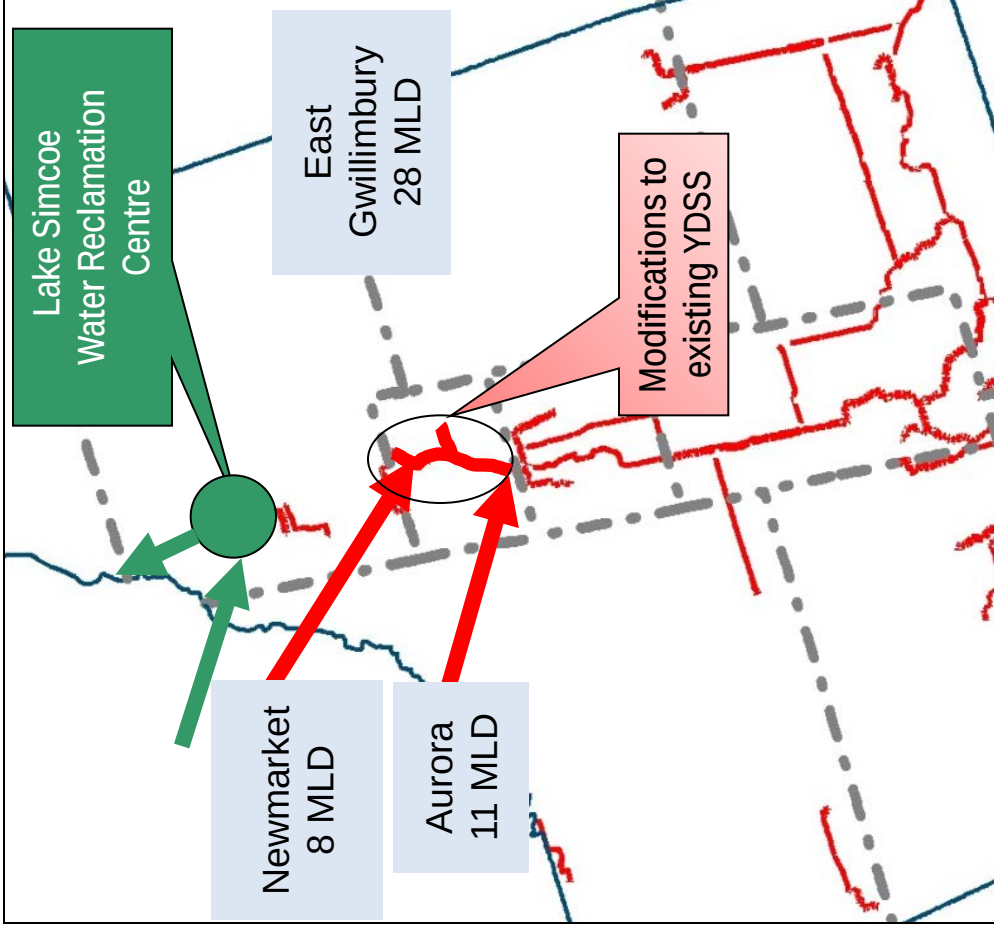
Clean treated effluent
for discharge into the
East Holland River
and reclaimed water
applications.

**Modifications to
the Existing York
Durham Sewage
System**

System reliability &
security and
protection against
severe peak flows

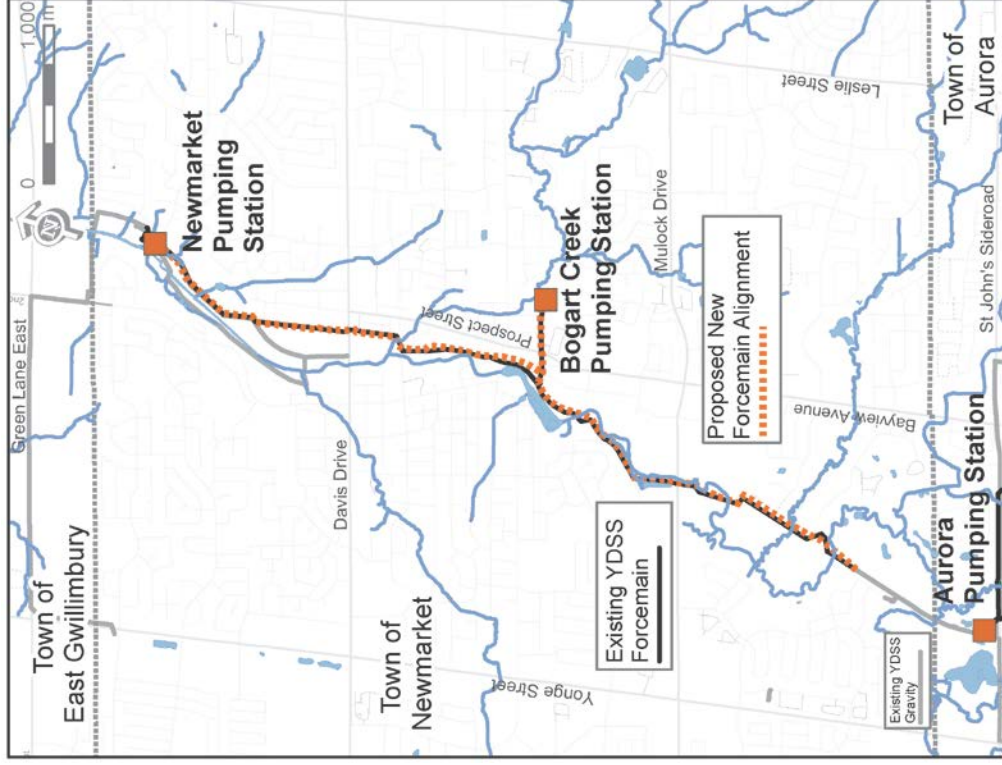
**Project Specific
Phosphorus
Off-Setting
Program**

A net reduction of
phosphorus into the
Lake Simcoe
watershed



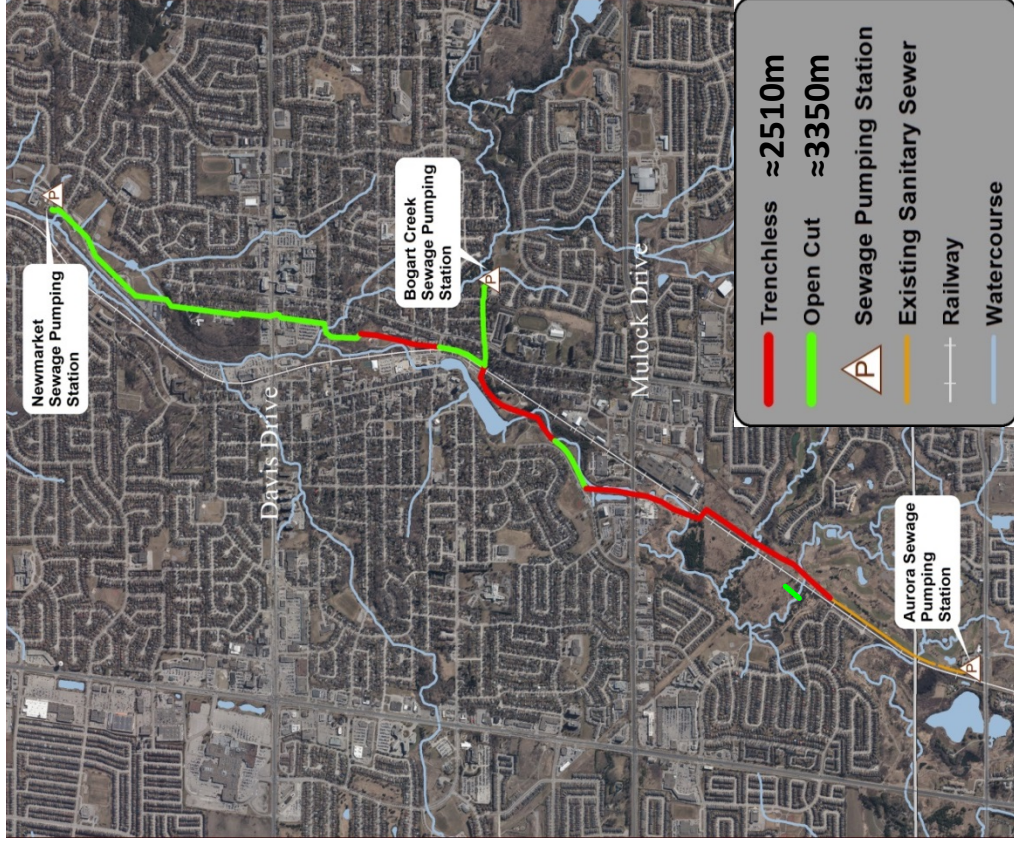
York Durham Sewage System (YDSS) Modifications

- Two new forcemains
- Modifications to Newmarket and Bogart Creek Sewage Pumping Stations
- Providing additional system reliability during high flow conditions and redundancy
- Providing capacity for additional 2000 persons benefitting Newmarket and East Gwillimbury

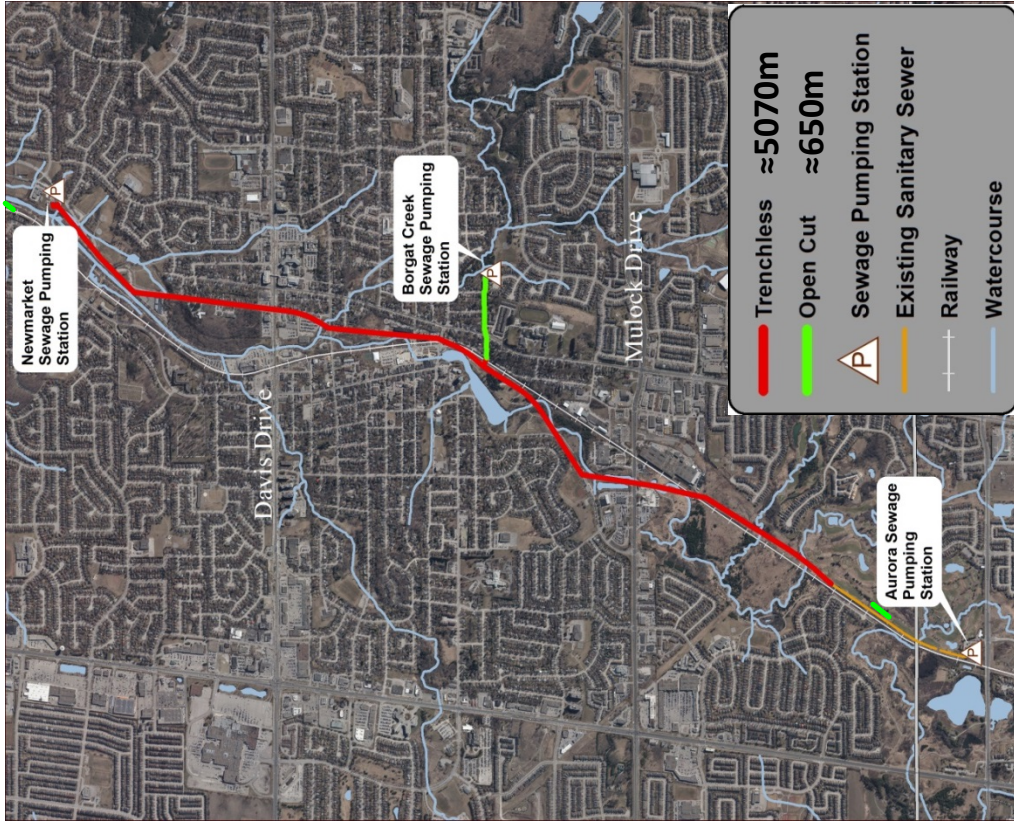


YDSS Mods Design Enhancement from IEA

IEA Alignment



Detailed Design Alignment



YDSS Modifications

Ongoing Design Work and Field Investigations

- Environmental inventory and assessment
- Geotechnical Investigations
- Hydrogeological Investigations
- Subsurface Utilities Engineer
- Property Acquisition
- Agency Consultation
- Detailed Design



YDSS Modifications

Key Design Features

- Over 5000 metres of trenchless construction from Newmarket Pumping Station to Aurora Pumping Station
- Approximately 650 metres of Open-Cut construction from Bogart Creek Pumping Station to the Newmarket forcemain at Fairy Lake.
- 10 Microtunnelling Construction Compounds
- 3 Railway Crossings
- 16 Water Crossings

YDSS Modifications Fly Over Video



YDSS Modifications Project Timeline

- **IEA approval anticipated in fall 2016**
- Property Acquisition - Q4 2016
- Detailed Design Completion - Q1 2017
- Permits and Approvals - Q1 2017
- Tender and Award - Q2 2017
- Construction Start - Q3 2017
- Commissioning - Q4 2019

Construction Methodologies

Open Cut - trench excavation providing adequate space to install infrastructure

- Requires excavation of roadways, and Road closures
- More surface area required compared to trenchless methods



Open Cut

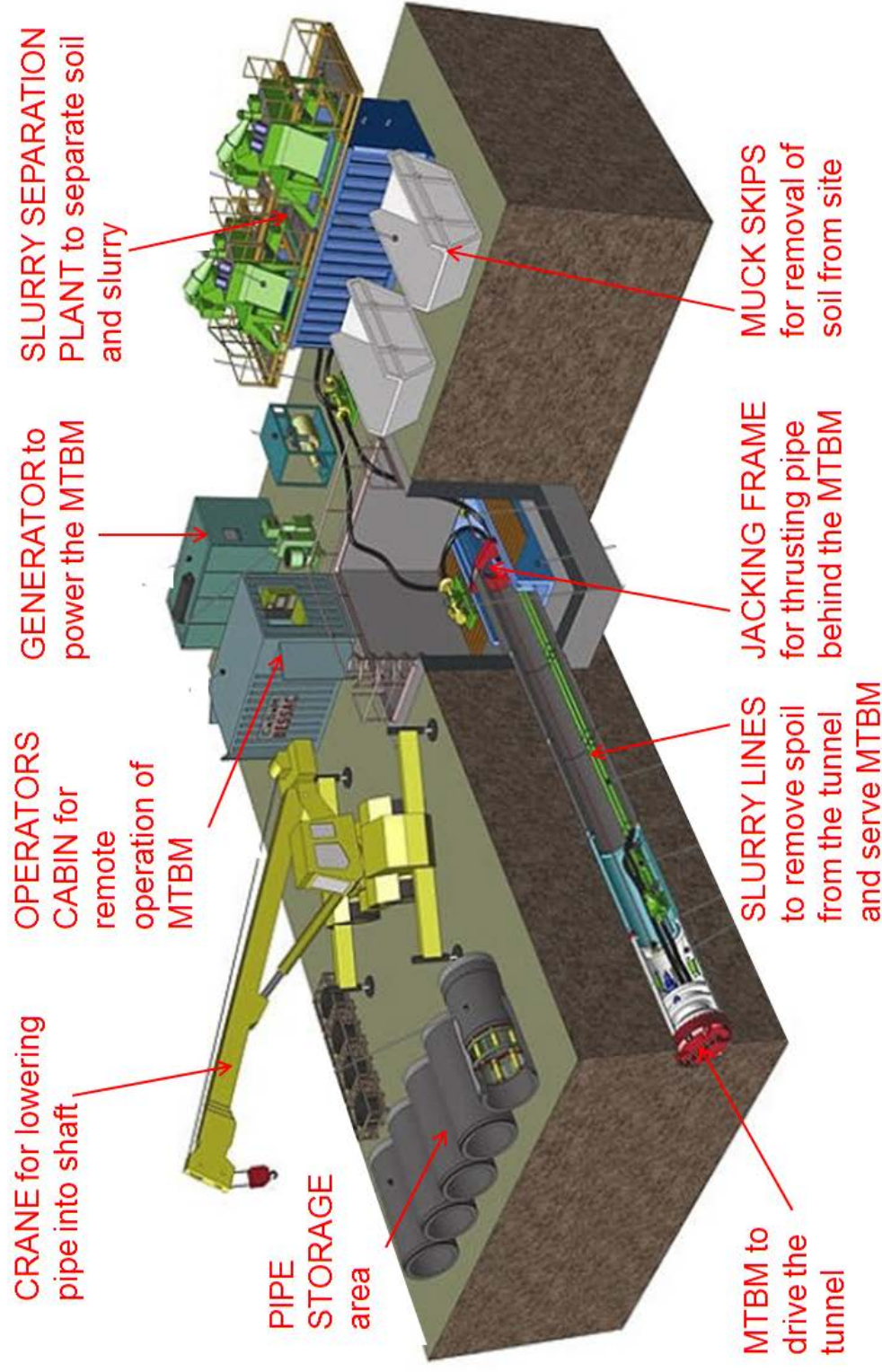
Microtunnelling – Trenchless method to install infrastructure using a remote controlled tunnelling machine

- Requires sending and receiving shafts and compounds
- Low impact to environment and surrounding community
- Low surface impacts above tunnel operation



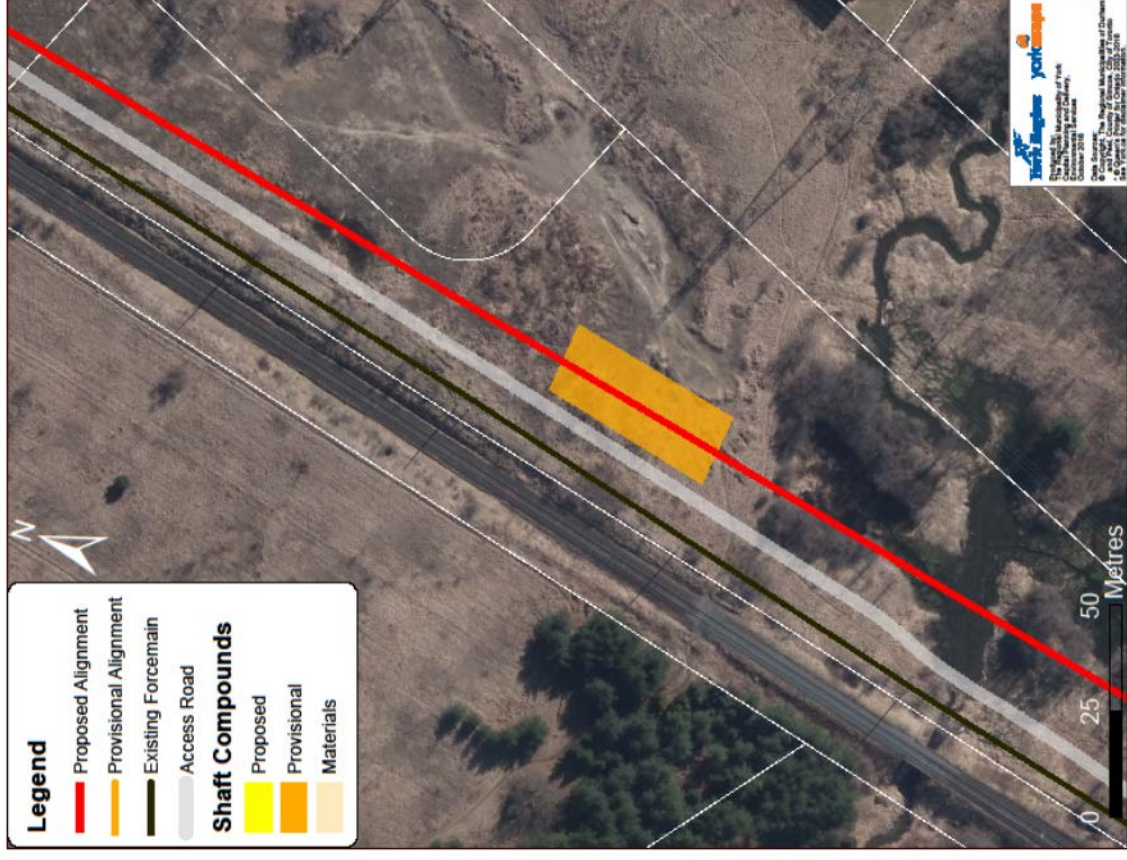
Microtunnelling

Typical Microtunnelling Compound Layout



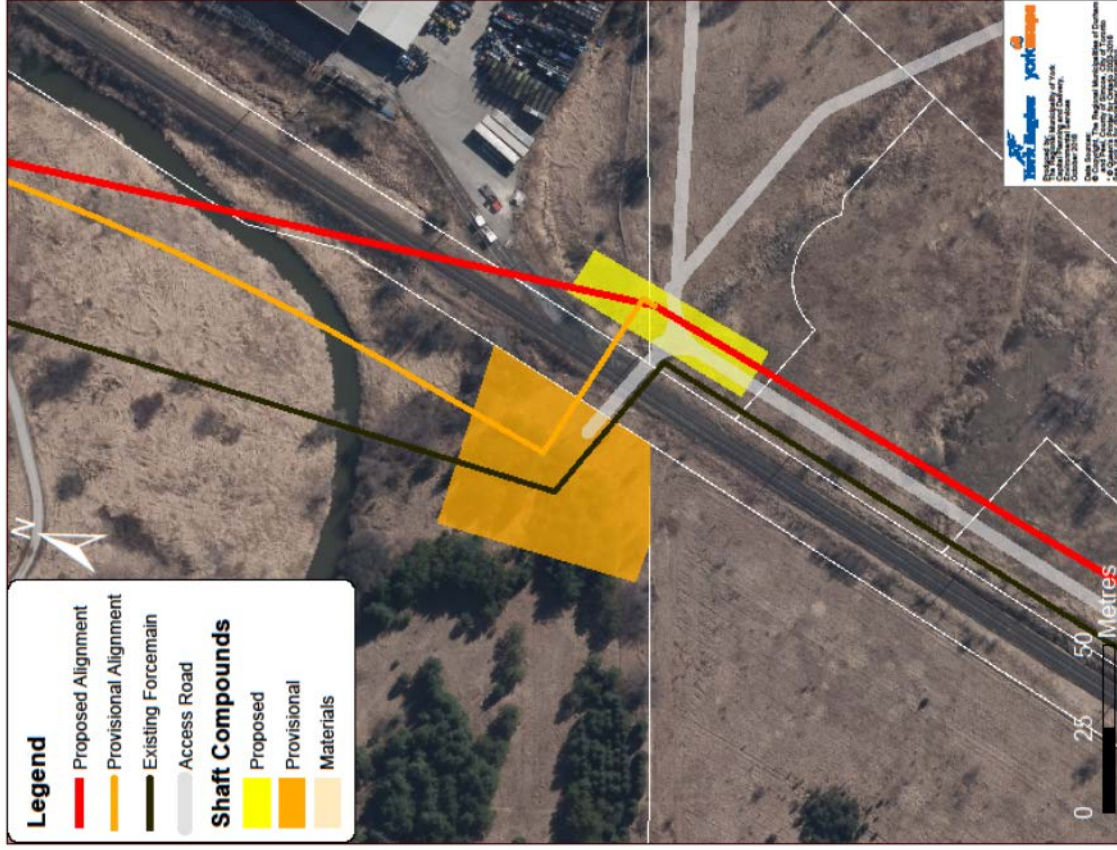
Provisional Shaft

West of silken Laumann Drive



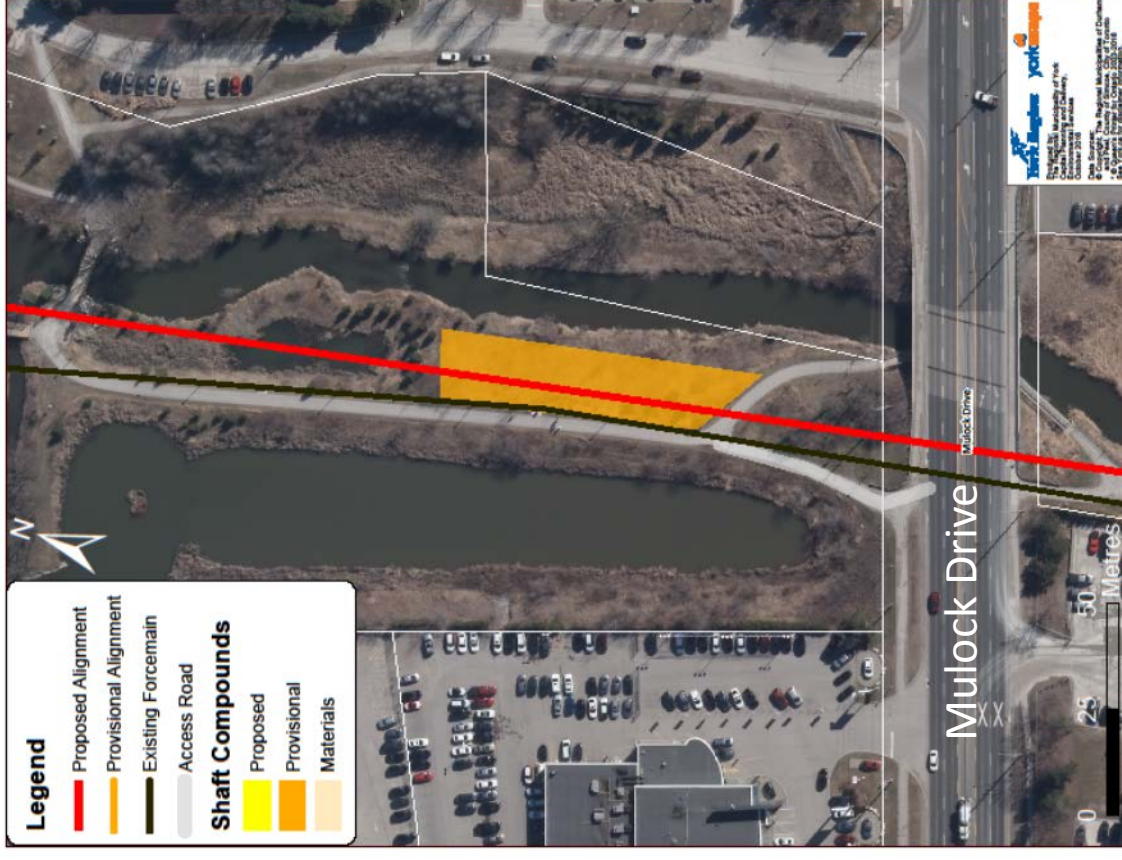
Sending Shaft & Provisional Shaft

Northwest of Sydor Court

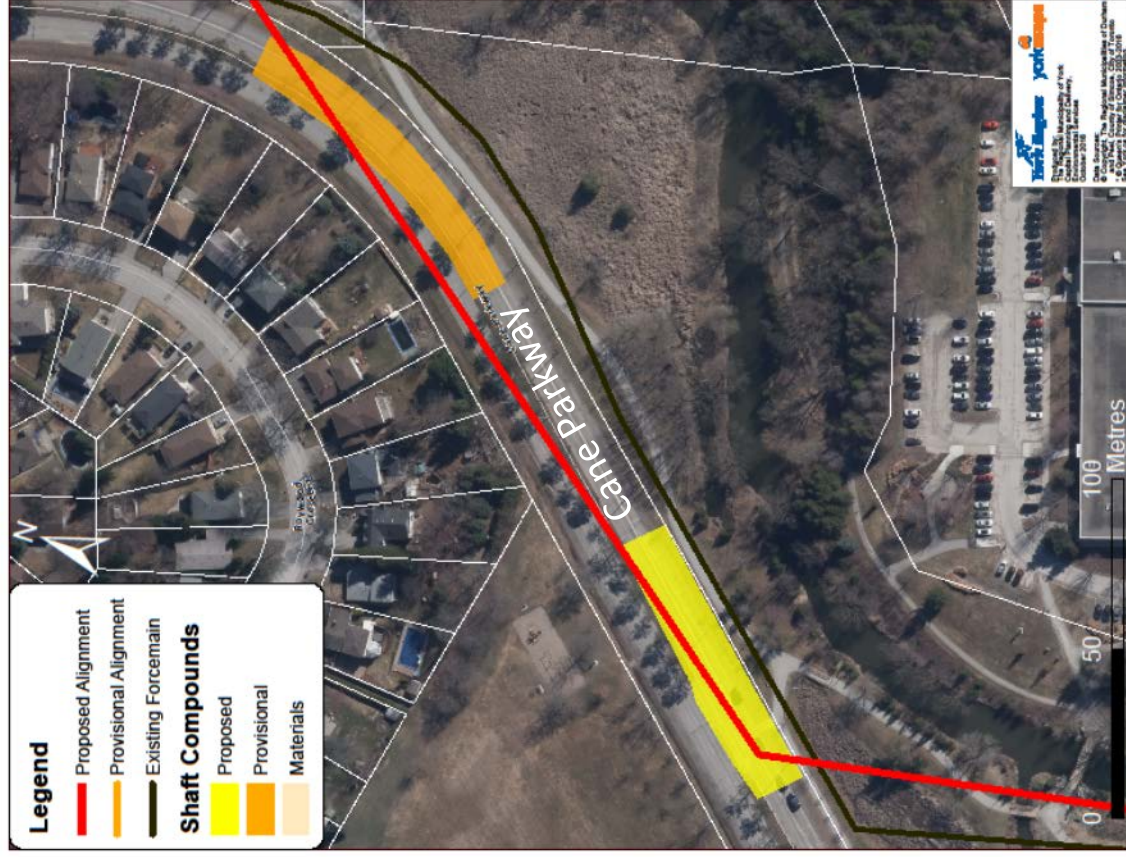


Provisional Shaft

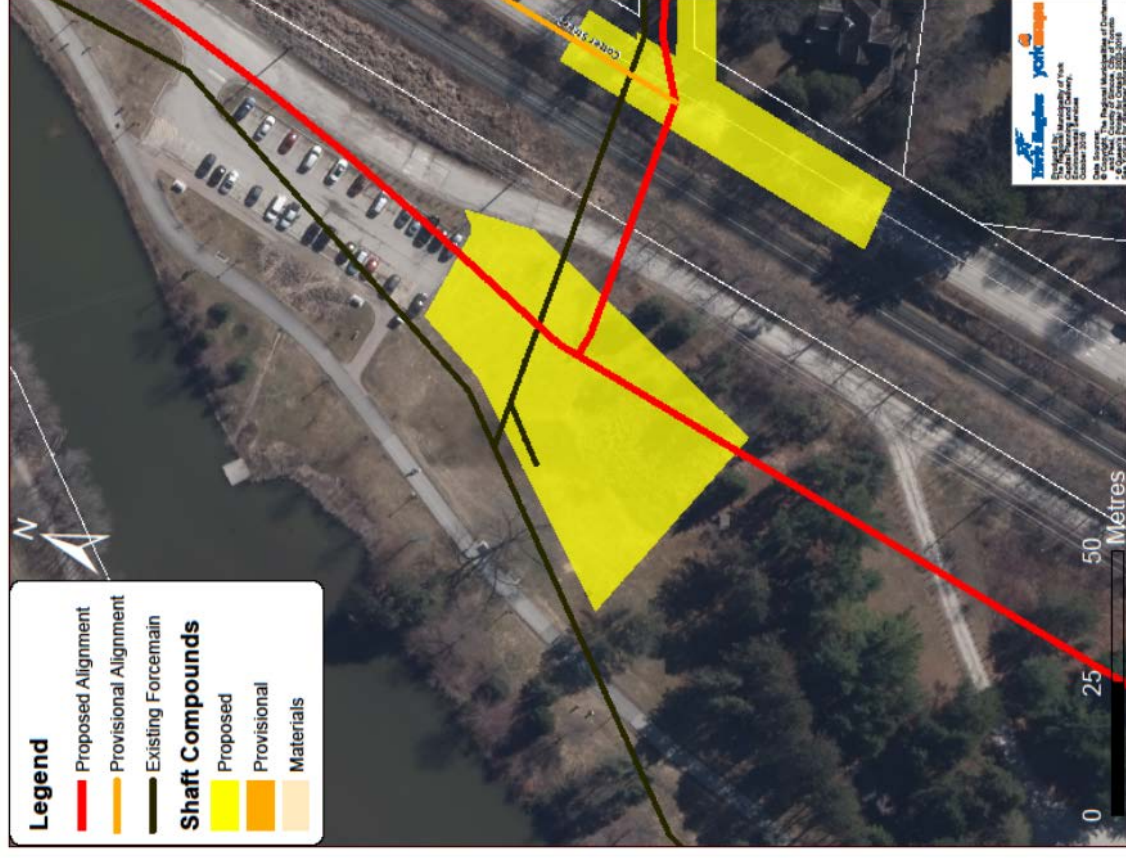
North of Mullock Drive



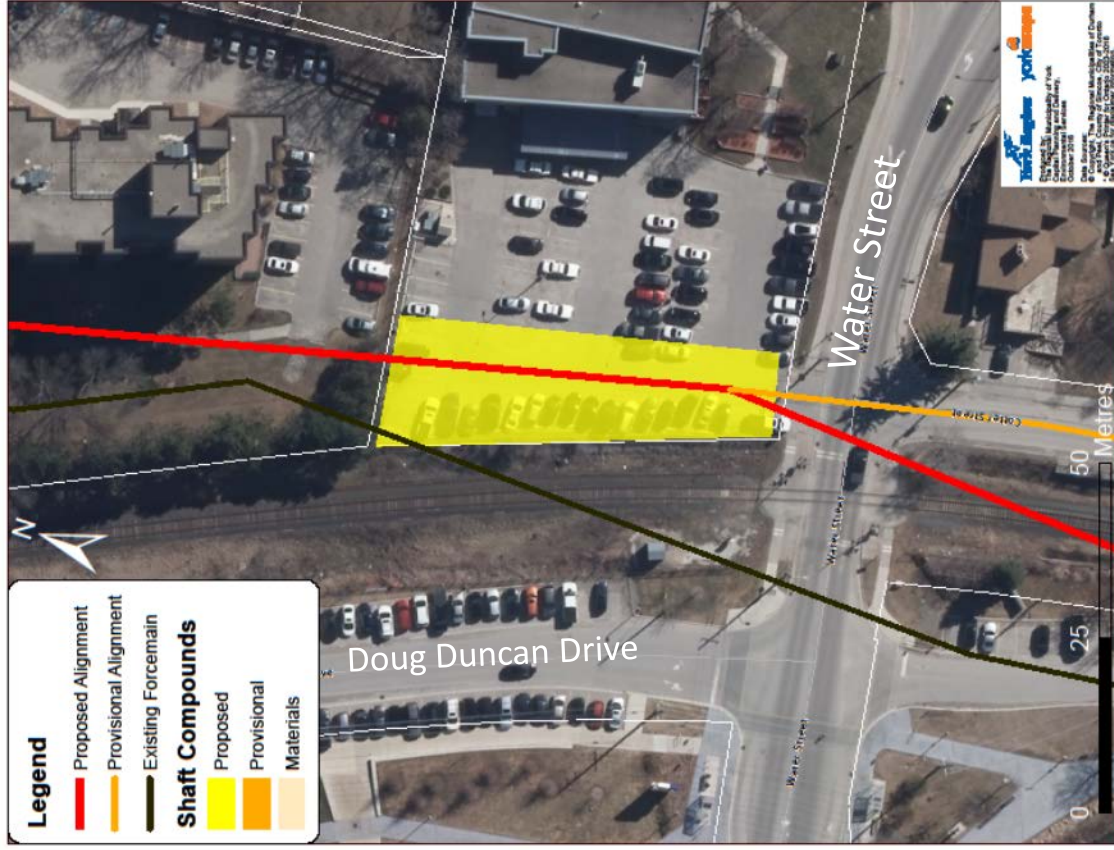
Receiving Shaft & Provisional Shaft Cane Parkway



Sending Shaft at Fairy Lake & Receiving Shaft on Cotter St.



Receiving Shaft York Regional Police – District 1

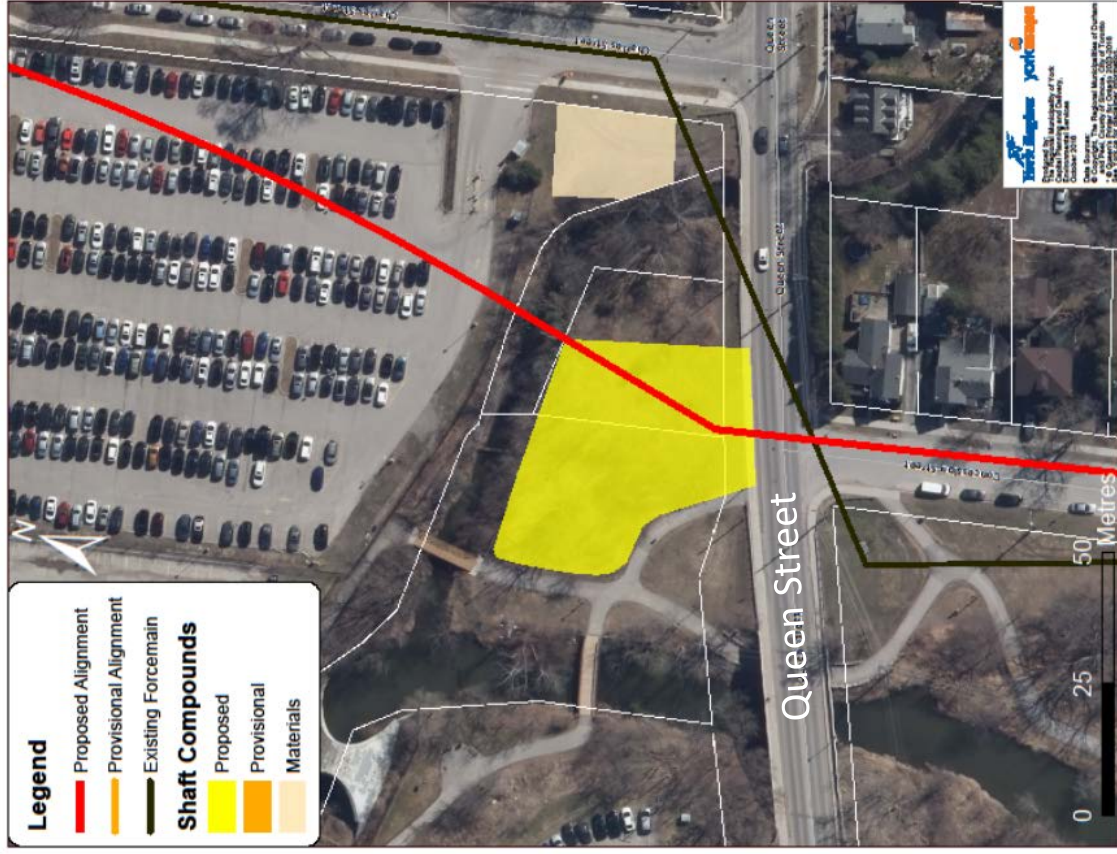


Provisional Shaft South of AOK Playpark



Sending Shaft & Materials Laydown

North of Queen Street



Receiving Shaft

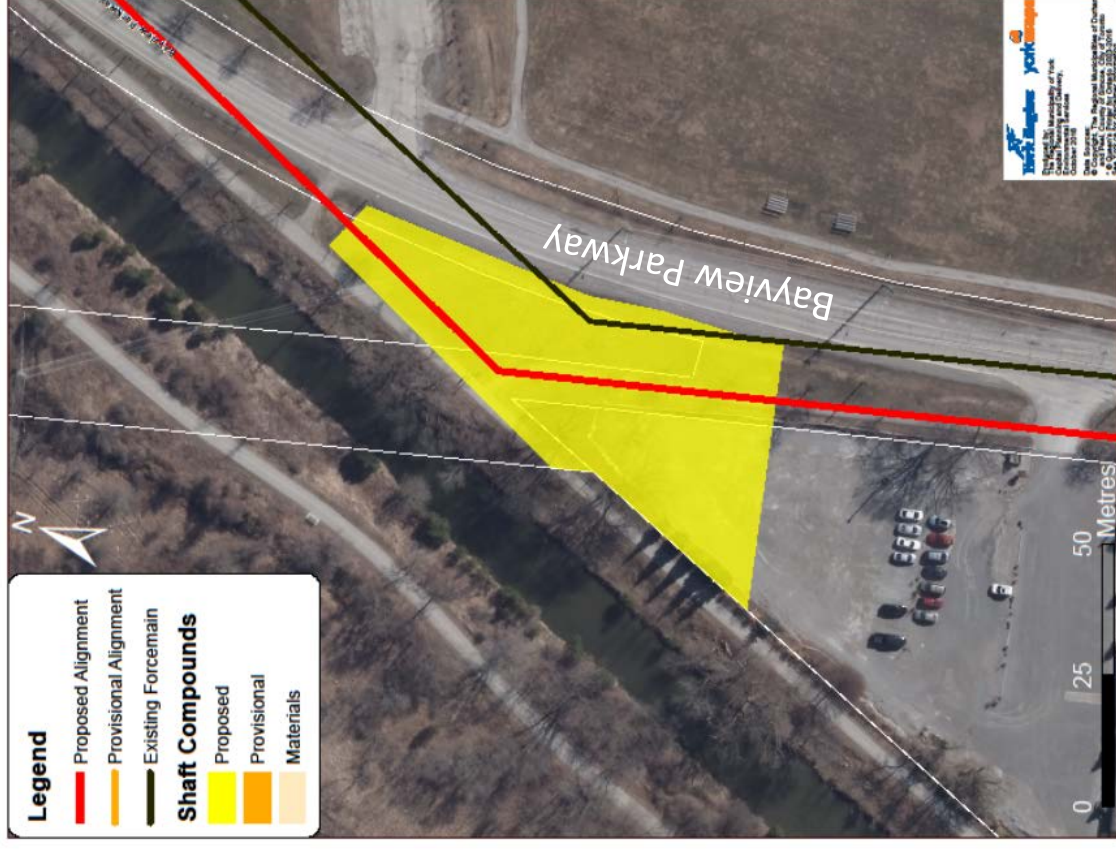
North of Davis Drive



Provisional Shaft Bayview Parkway

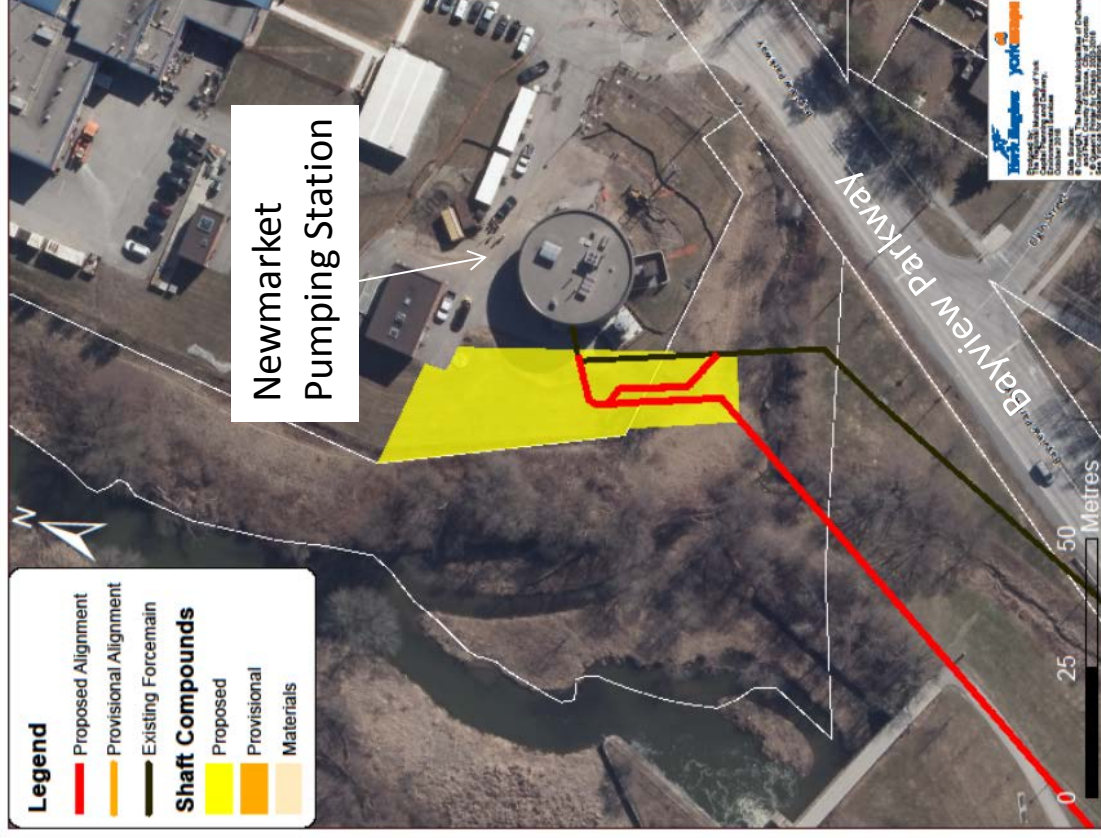


Sending Shaft Bayview Parkway



Receiving Shaft

Newmarket Pumping Station

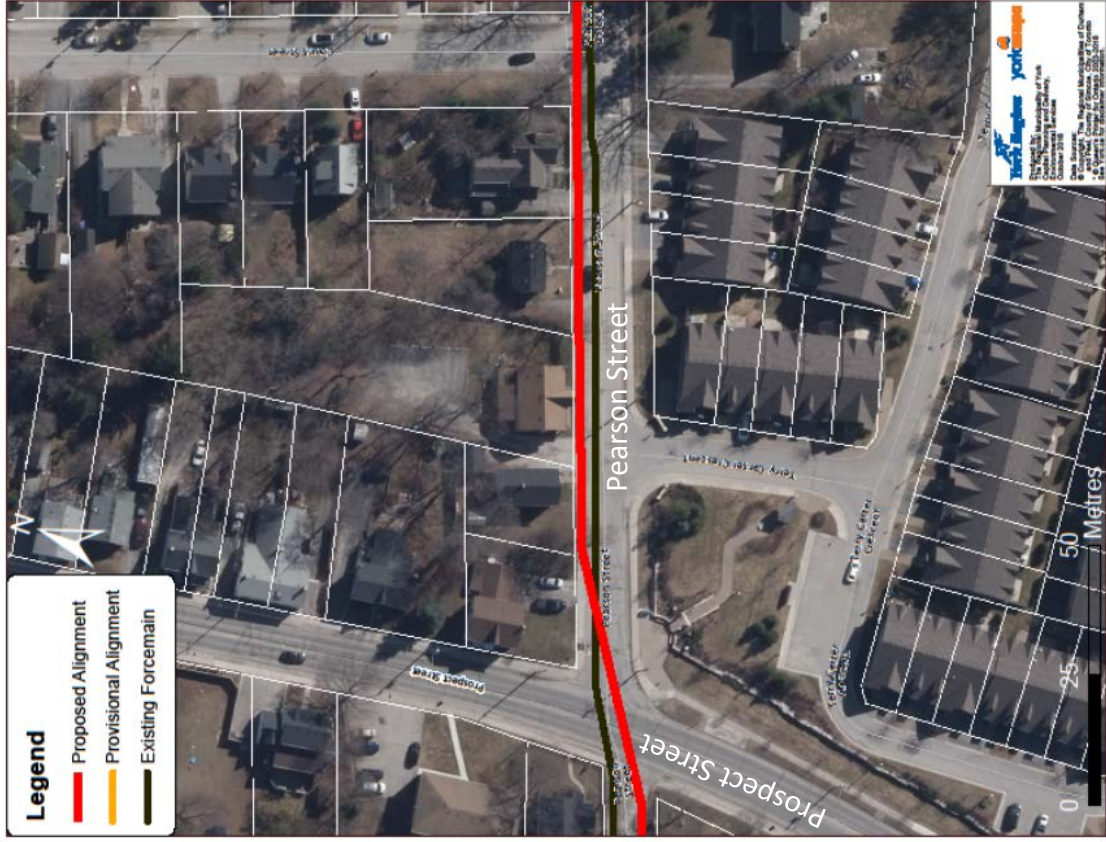


Bogart Creek Forcemain

Cotter Street to Prospect Street



Bogart Creek Forcemain Prospect Street to Court Street



Bogart Creek Forcemain Court Street to Bogart Creek PS



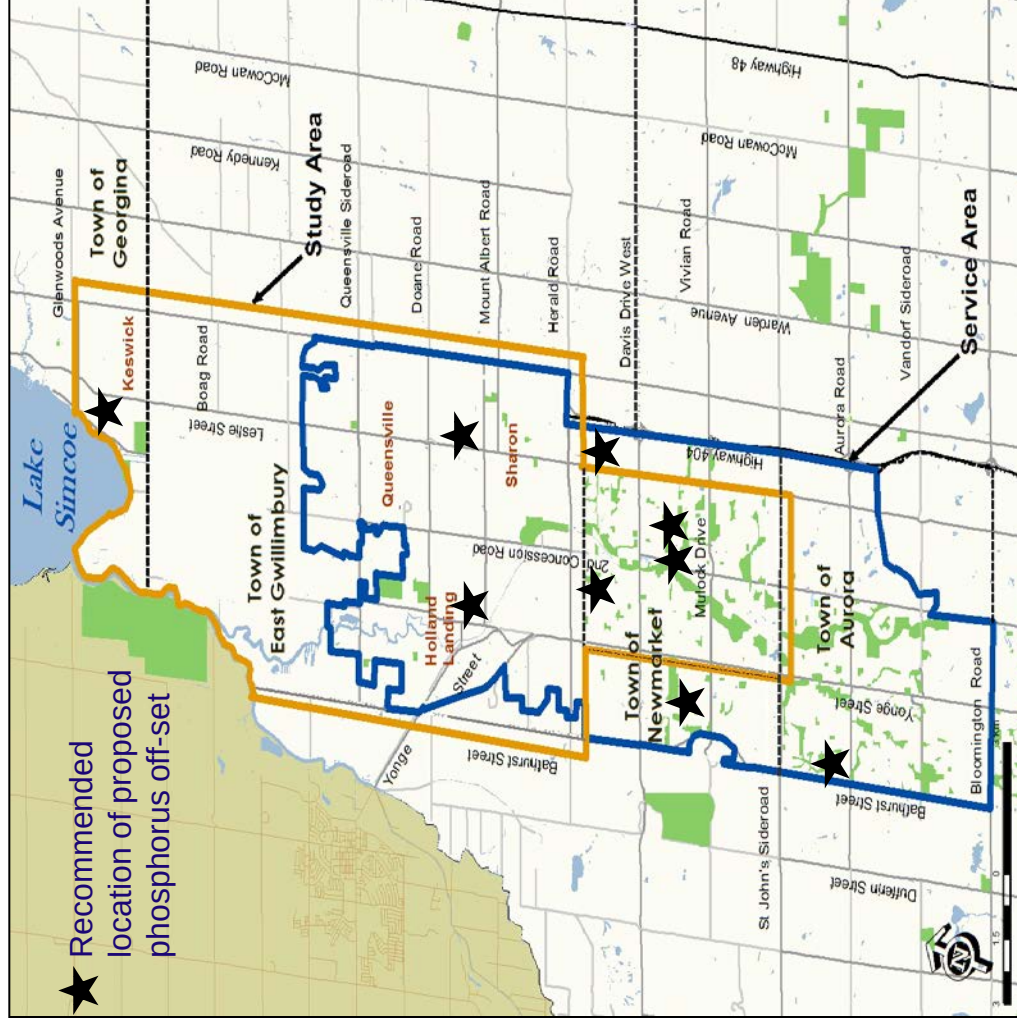
Potential Impacts - Mitigation Strategies

Potential Impacts	Recommended Mitigation Strategies
Construction Access and Egress	• Ensure Flagmen are present to coordinate traffic where necessary • Ensure compound areas accommodate a safe truck turning radius
Traffic	• Develop a traffic management plan • Paid-duty officer to direct traffic • Ensure Flagmen are present to coordinate traffic where necessary • Partial lane shifts where necessary • Restrict construction hours to avoid rush hour traffic • Schedule materials deliveries during off-peak hours • Project coordination to minimize volume of construction vehicle traffic • Provide route detours where necessary
Parking	• Avoid parking lots wherever possible • Minimize number of parking stalls obstructed where necessary • Identify and secure alternate parking areas where necessary
Pedestrians and Trails	• Avoid trail systems wherever possible • Provide detours where necessary • Ensure safety provisions are present • Install temporary lighting where necessary
Events	• Coordinate with Newmarket Community Events staff • Schedule construction around large events

Proposed Phosphorus Off-sets

- Retrofit seven existing stormwater management ponds in Aurora, East Gwillimbury and Newmarket
- Install a low impact development technology within a stormwater catchment area in Newmarket
- Develop a new stormwater management pond in Georgina

Proposed off-sets will improve water quality and quantity of downstream watercourses that ultimately flow into Lake Simcoe



Working Together Committee

An opportunity for project collaboration between the Town of Newmarket, Lake Simcoe Region Conservation Authority, and York Region.

Monthly Committee and Working Group Meetings

Discussion topics include:

- Project Coordination
- Communications Planning
- Event Coordination
- Detailed Design Review

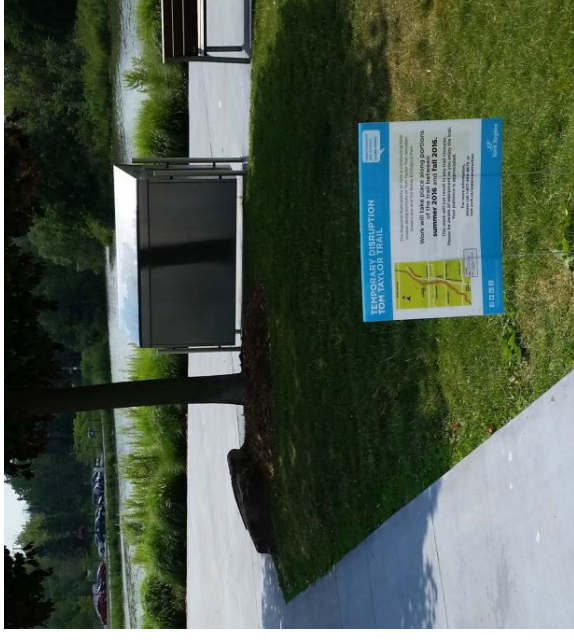


Project Communication

- Working Together Committee with the Town of Newmarket, Lake Simcoe Region Conservation Authority (LSRCA), and York Region

- Promote partnership among The Town of Newmarket, LSRCA and York Region
- Project coordination and decision making
- Working Group meetings to review technical details and make recommendations

- Project notices, letters and notification signs
- Public Open House



Next Steps

- Work with the Town of Newmarket through the Project Committee to address technical comments
- Apply for Permits and By-law Exemptions
- Work with the Town to finalize the Stormwater Management Agreement
- Provide an update to the Town of Newmarket Council once IEA approval is received, and design is completed
- Public Information Centre and Open House

Thank You

