WOOLWICH TOWNSHIP

Region of Waterloo

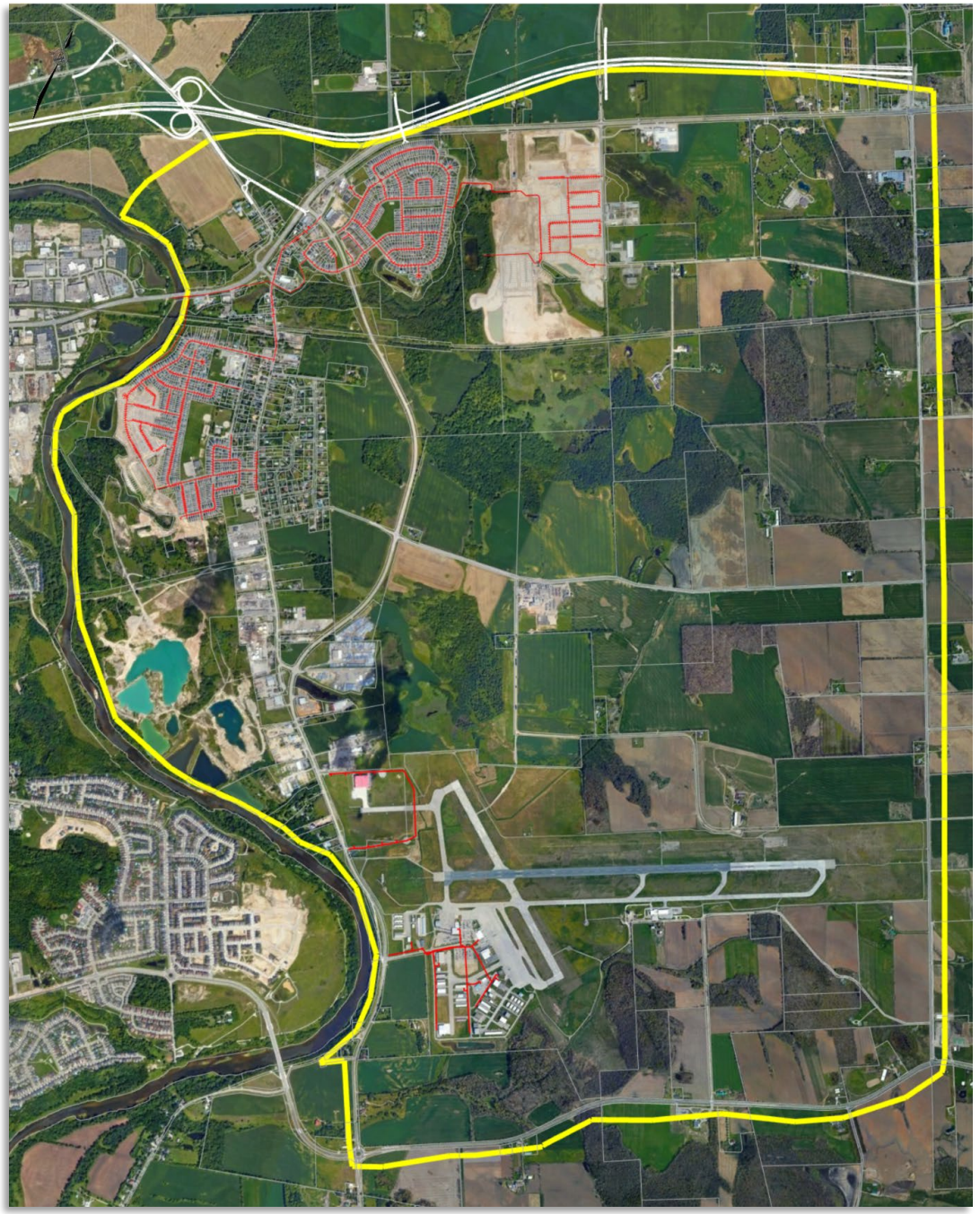
East Side Lands: Woolwich Sanitary Servicing Class Environmental Assessment

Welcome

Presentation to Woolwich Council

October 8, 2024

Associated Engineering | GLOBAL PERSPECTIVE. LOCAL FOCUS.

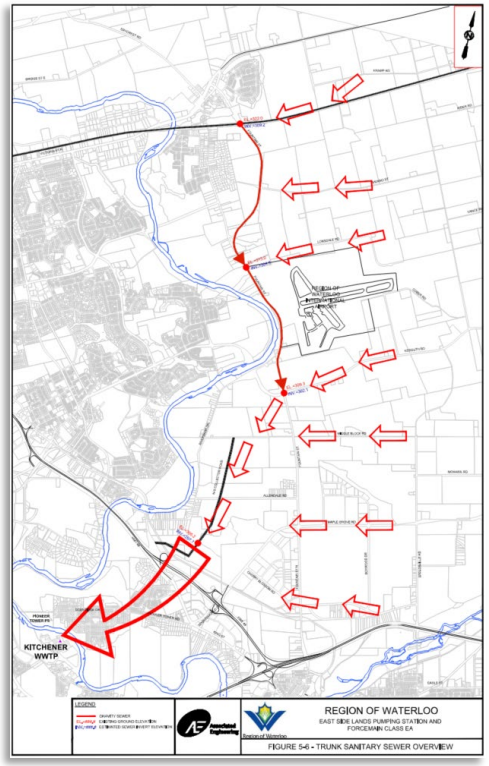


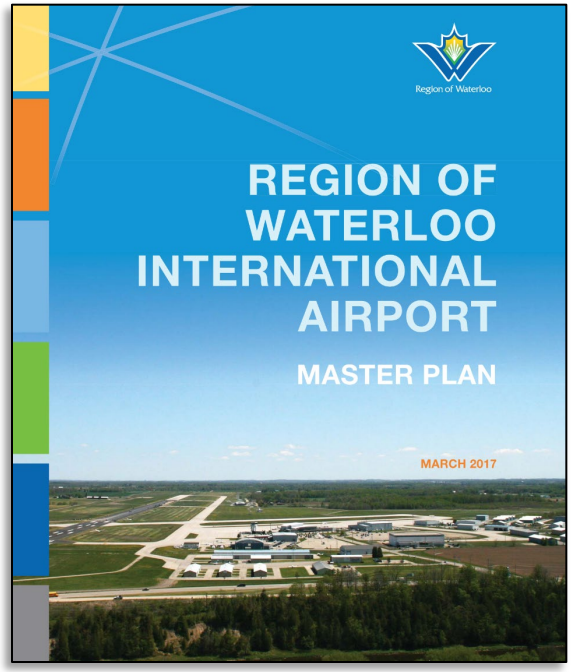
Overview

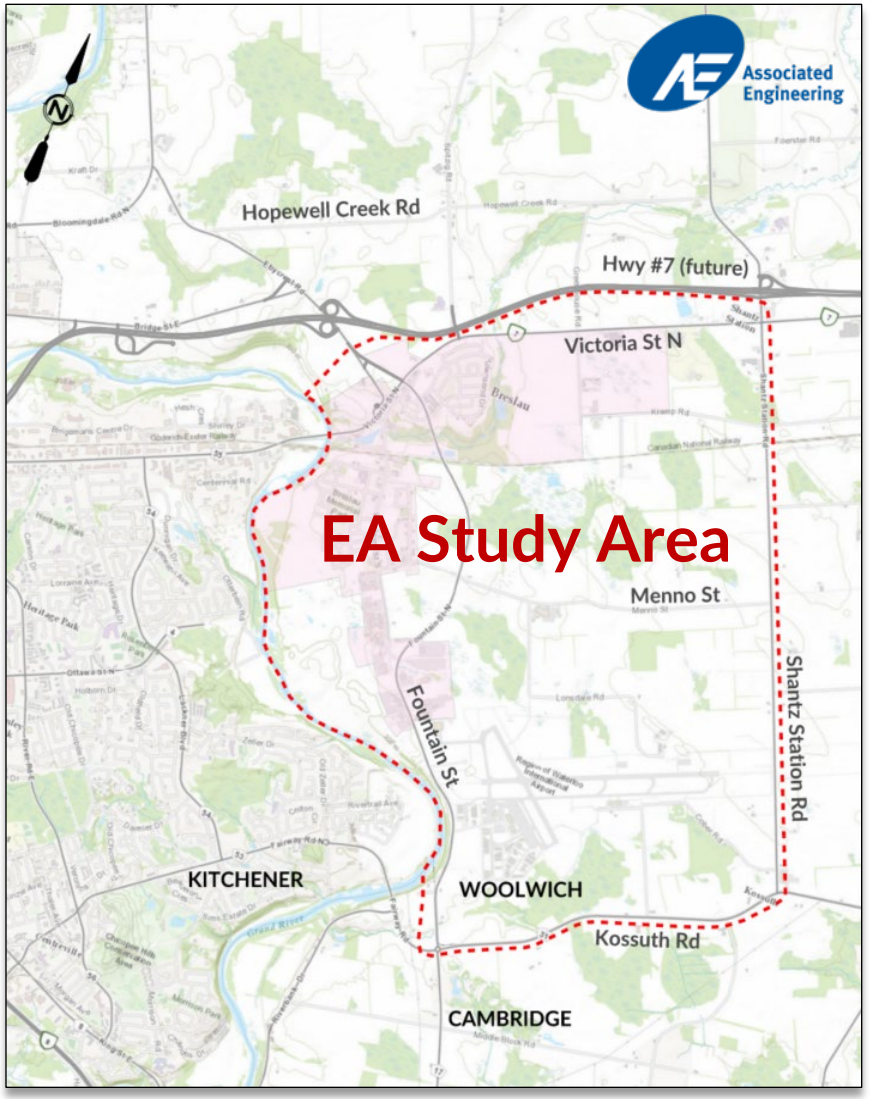
- Study Area & Project Scope
- Existing Infrastructure & Downstream Outlet
- Sanitary Drainage Areas & Flow Rates
- Future Sewer Network (Ultimate Buildout)
- Alternative Sanitary Servicing Solutions
- Recommended Preferred Solution
- Next Steps

Project History & Context

- **East Side Lands Sanitary Servicing EA**
  (Region of Waterloo 2014-2018)
- **North Cambridge Business Park Class EA**
  (City of Cambridge - 2017)
- **Airport Master Plan**
  (Region of Waterloo - 2017 & 2024)







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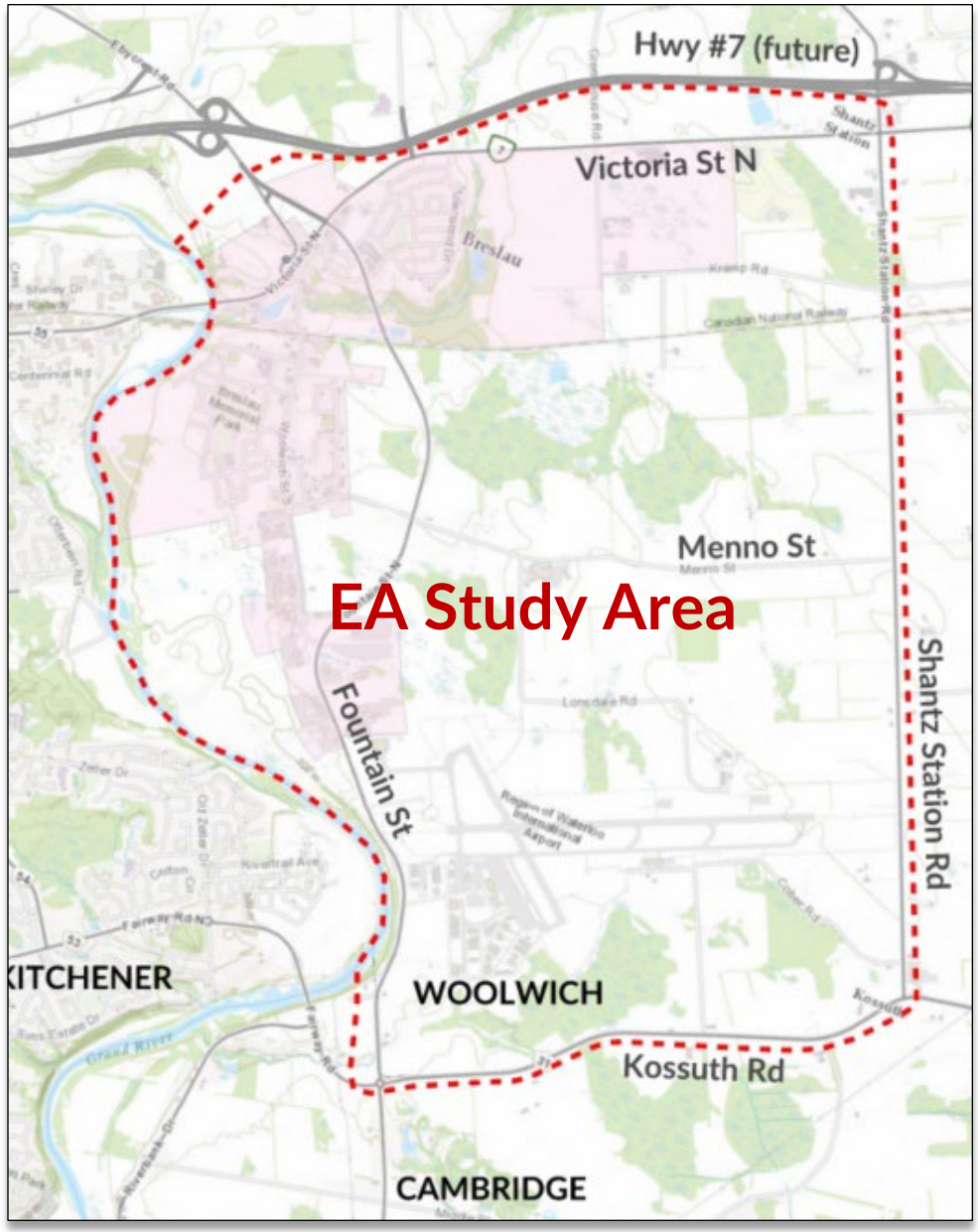
EA Study Area & Key Stakeholders

- Focus on Township of Woolwich Lands
- Existing Breslau Community
  - Serviced by the Victoria Street Pumping Station
- Expanded Breslau Boundary
  - Future Hwy #7, Shantz Station Rd and Kossuth Rd
- Key Stakeholders:
  - Region of Waterloo and Region of Waterloo Airport (YKF)
  - Future Developments in Breslau
  - Industry Partners
    - e.g. Conestoga Meat Packers, Safety-Kleen
  - City of Cambridge



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EA Problem Statement

Sanitary Servicing for the settlement of Breslau is currently provided through a cross-border agreement with the City of Kitchener which allocates partial capacity of the Victoria Street Pumping Station to the Township of Woolwich. As development continues to evolve in Breslau, the use of that capacity is approaching its limits. Planned development / expansion of existing industries near and around the Breslau area as well as surrounding the Region of Waterloo International Airport (YKF) presents an imminent need for new sanitary servicing infrastructure.

Furthermore, the 2023 Regional Official Plan Amendment (ROPA) 6 identified the expansion of the Township's urban boundary in the East Side Lands, which had previously been defined by the Township's Breslau Secondary Plan in 2017. This expansion further increases the need for sanitary servicing.

Building on the approved 2018 East Side Lands Sanitary Servicing EA as well as the recent Airport Master Plan and other known development pressures, the Township is undertaking an EA to identify the extension of the sanitary servicing infrastructure that is required to support existing and future developments within the Township of Woolwich's portion of the East Side Lands.

Specifically, suitable infrastructure is required to collect and convey flows from the northern portions of the study area to the southwest limit of the Township of Woolwich at Fountain Street and Nossuth Road, from which point they would be conveyed by sanitary servicing infrastructure that is being implemented by the Region of Waterloo and the City of Cambridge.

It is anticipated that the new Woolwich servicing infrastructure will include a combination of local and or trunk gravity sewers, pumping/lift station(s) and possibly pumping station(s) and forcemain(s).

The focus of this EA study is to **identify the future sanitary servicing infrastructure** that will be required, with a focus on the alignment of the main trunk sewer and location of a new pumping / lift station at the southwest limits, needed to service the **Woolwich lands south of Menno Street.**

The focus of this EA study is to identify the future sanitary servicing infrastructure that will be required, with a focus on the alignment of the main trunk sewer and location of a new pumping / lift station at the southwest limits, needed to service the Woolwich lands south of Menno Street. Furthermore, this study will aim to identify the future sewer alignment(s) and potential additional pumping stations that may be required to service the lands north of Menno Street.

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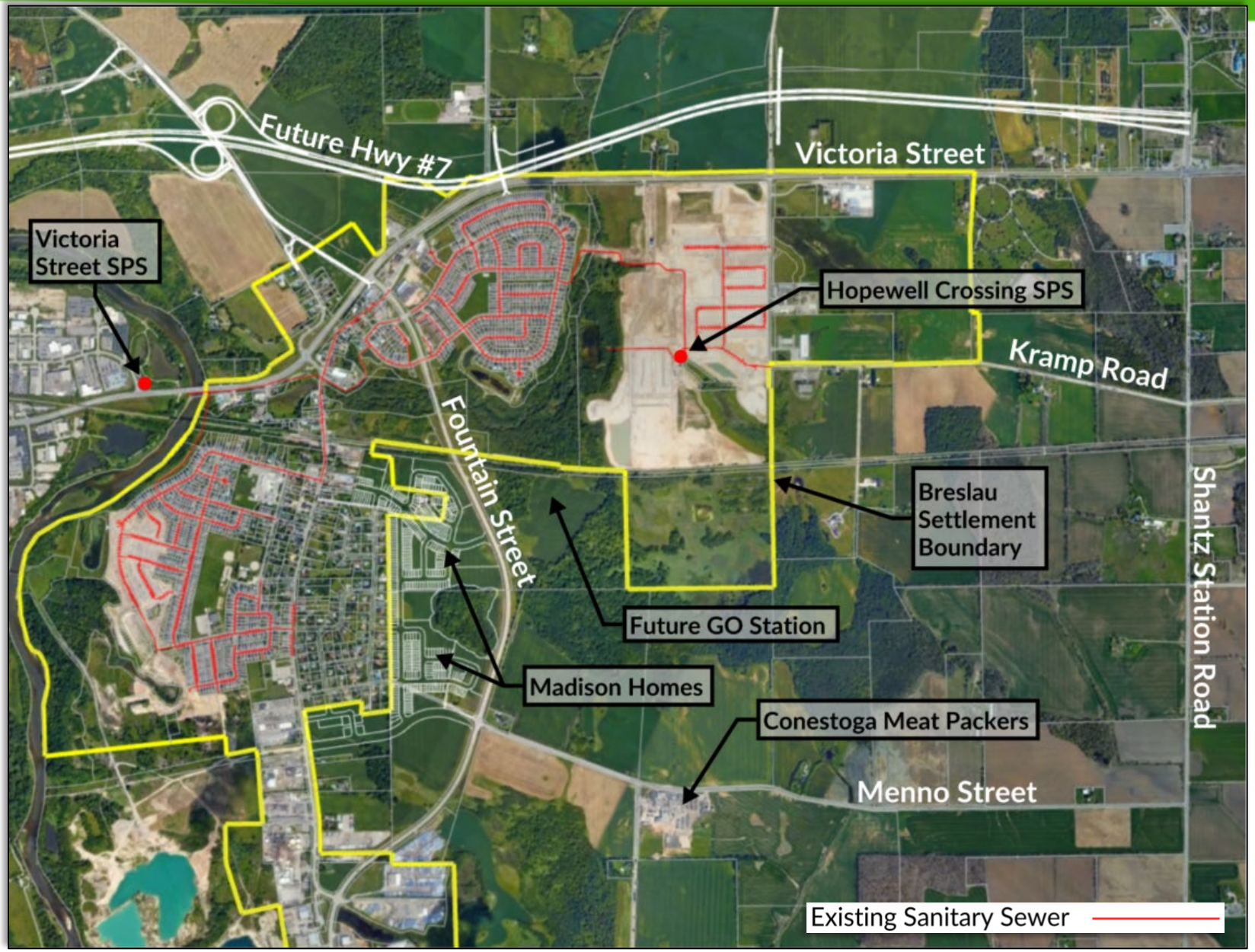
Existing Sanitary Infrastructure

Existing Breslau is serviced by the City of Kitchener's Victoria Street Sanitary Pumping Station (Max. Allowable Flow* = 189 L/s)



* Maximum sanitary flow rate based on the 2017 Cross Border Service Agreement with the City of Kitchener

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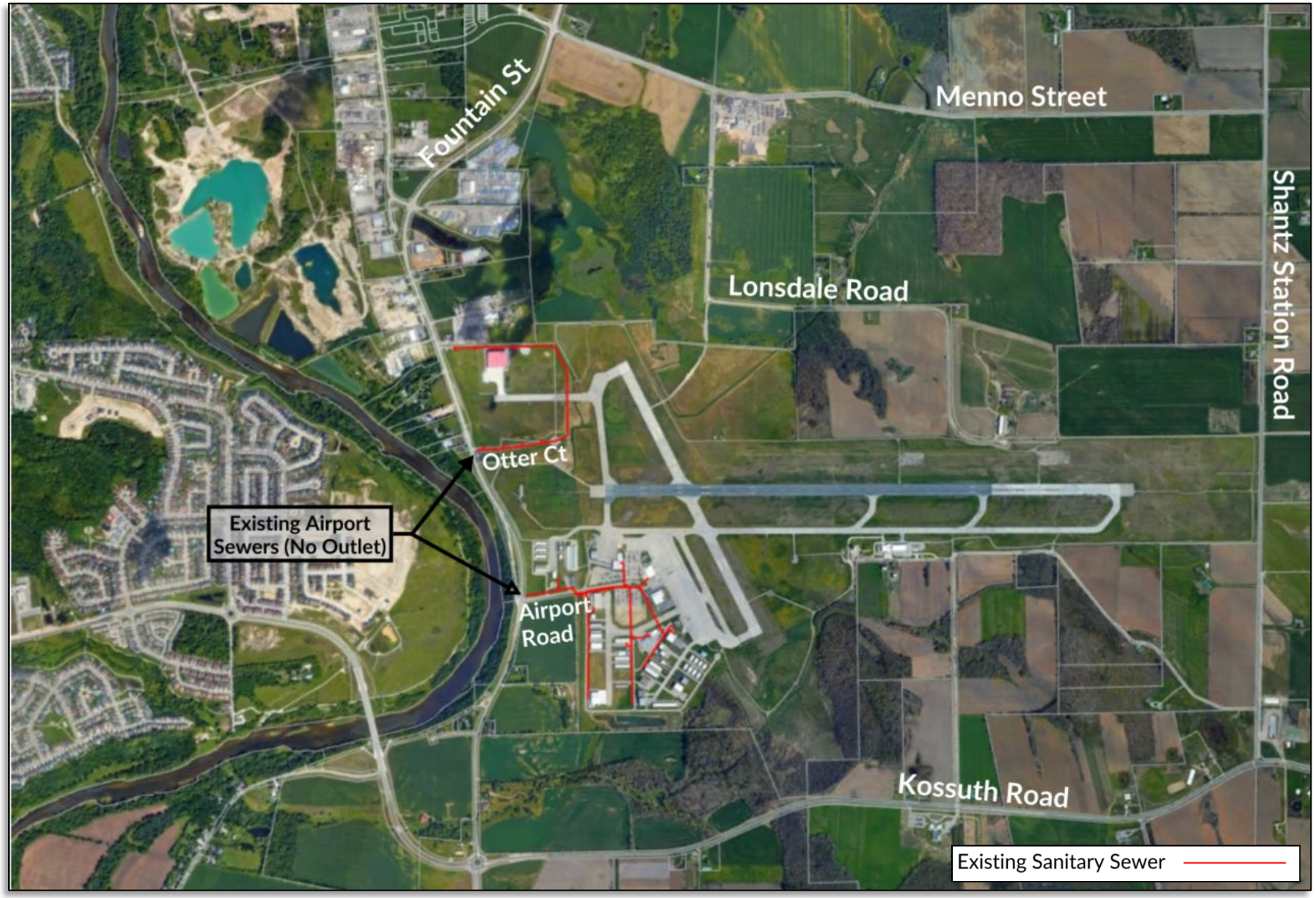
Existing Sanitary Infrastructure

The Region of Waterloo Airport and existing industrial producers require servicing upgrades to accommodate current and future planned expansions.



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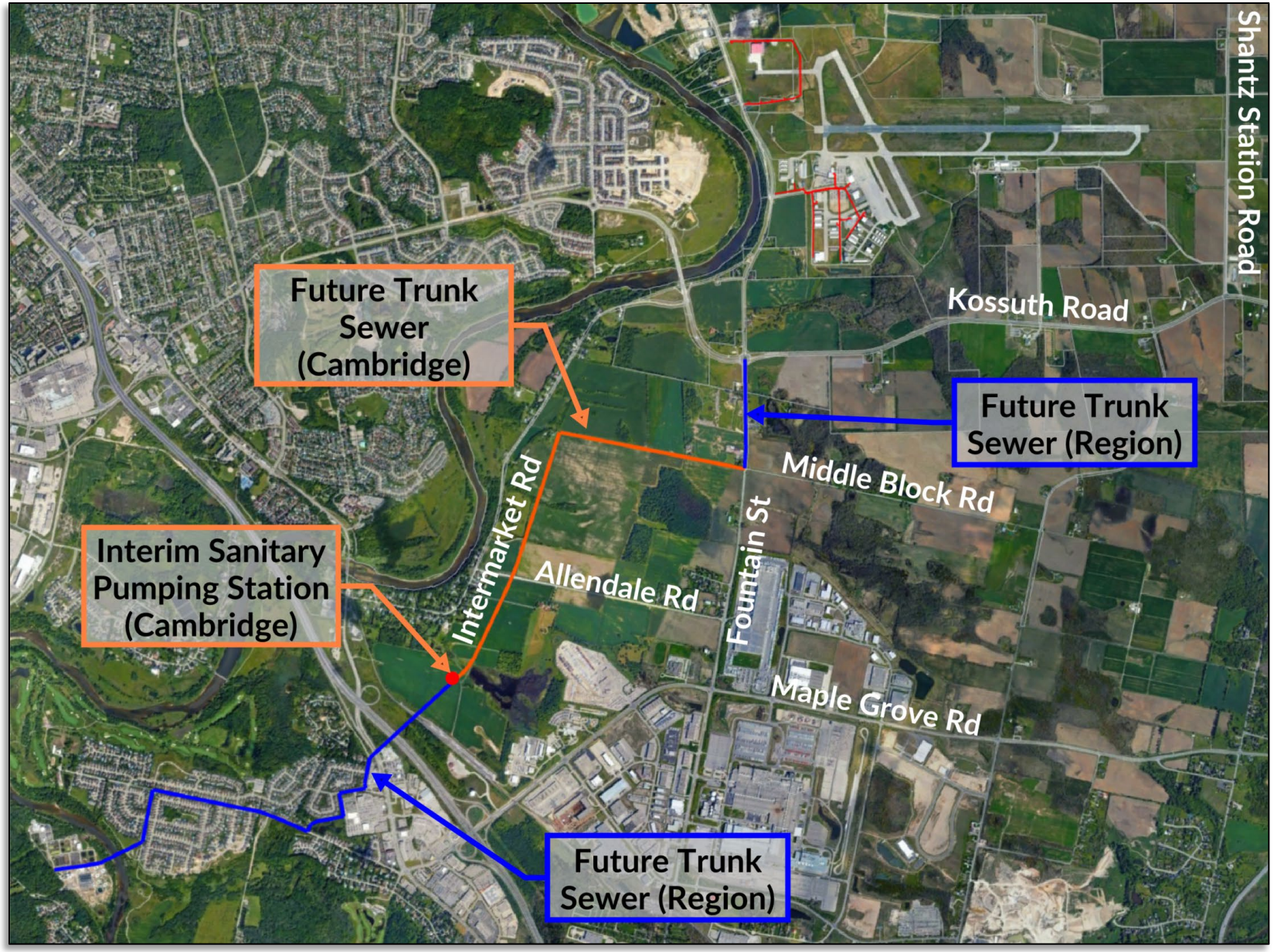
Planned Downstream Sewer Outlet

Future trunk sewers downstream of Woolwich are being constructed by the Region of Waterloo and the City of Cambridge



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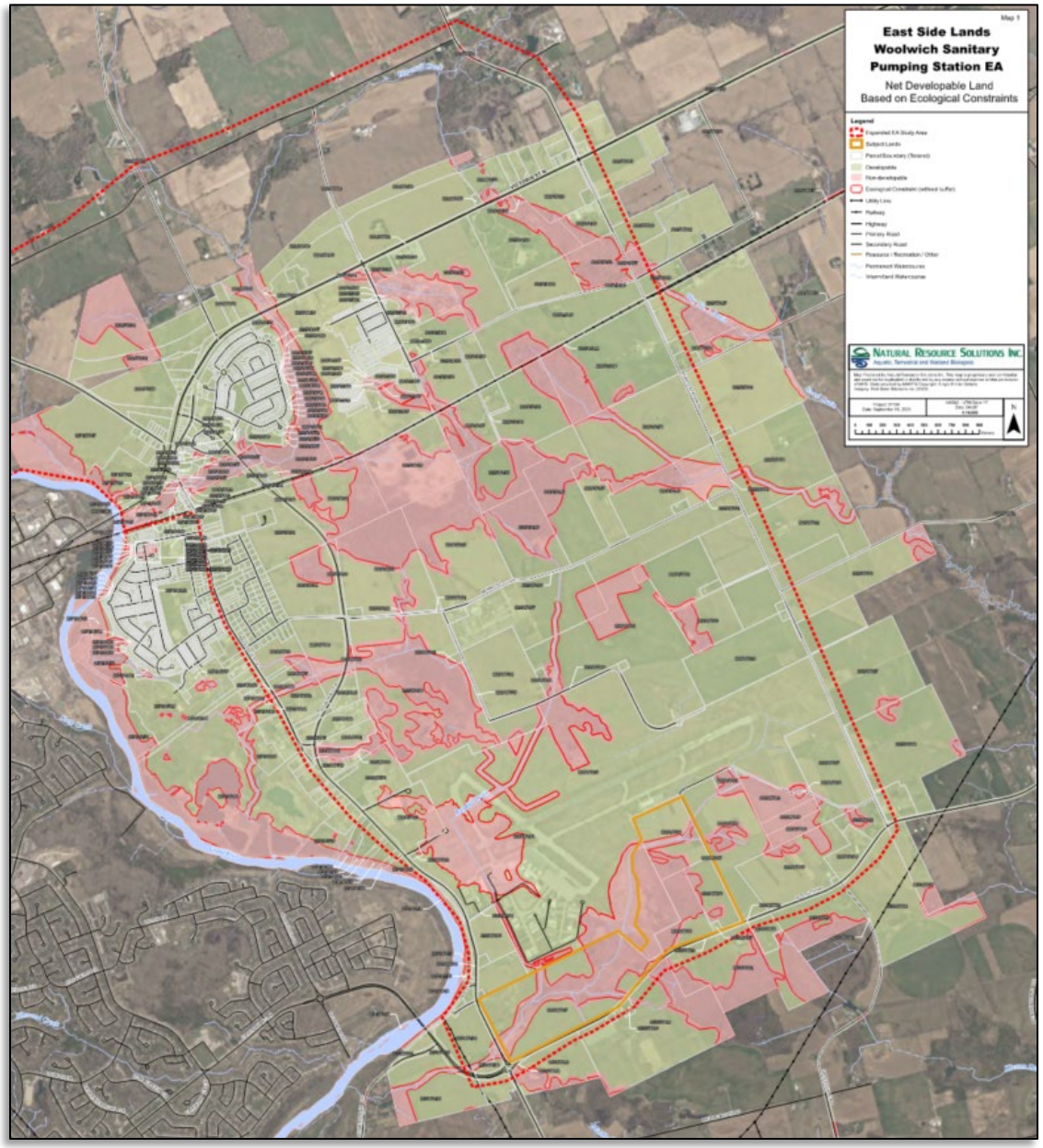
Sanitary Drainage Areas & Flow Rates

Detailed analysis of existing land uses and property ownership.

Exclusion of **Environmental Constraint areas** to determine "**Net Developable Areas**" to be used to calculate design flow rates.

Design Peak Flow Rate: 679 L/s



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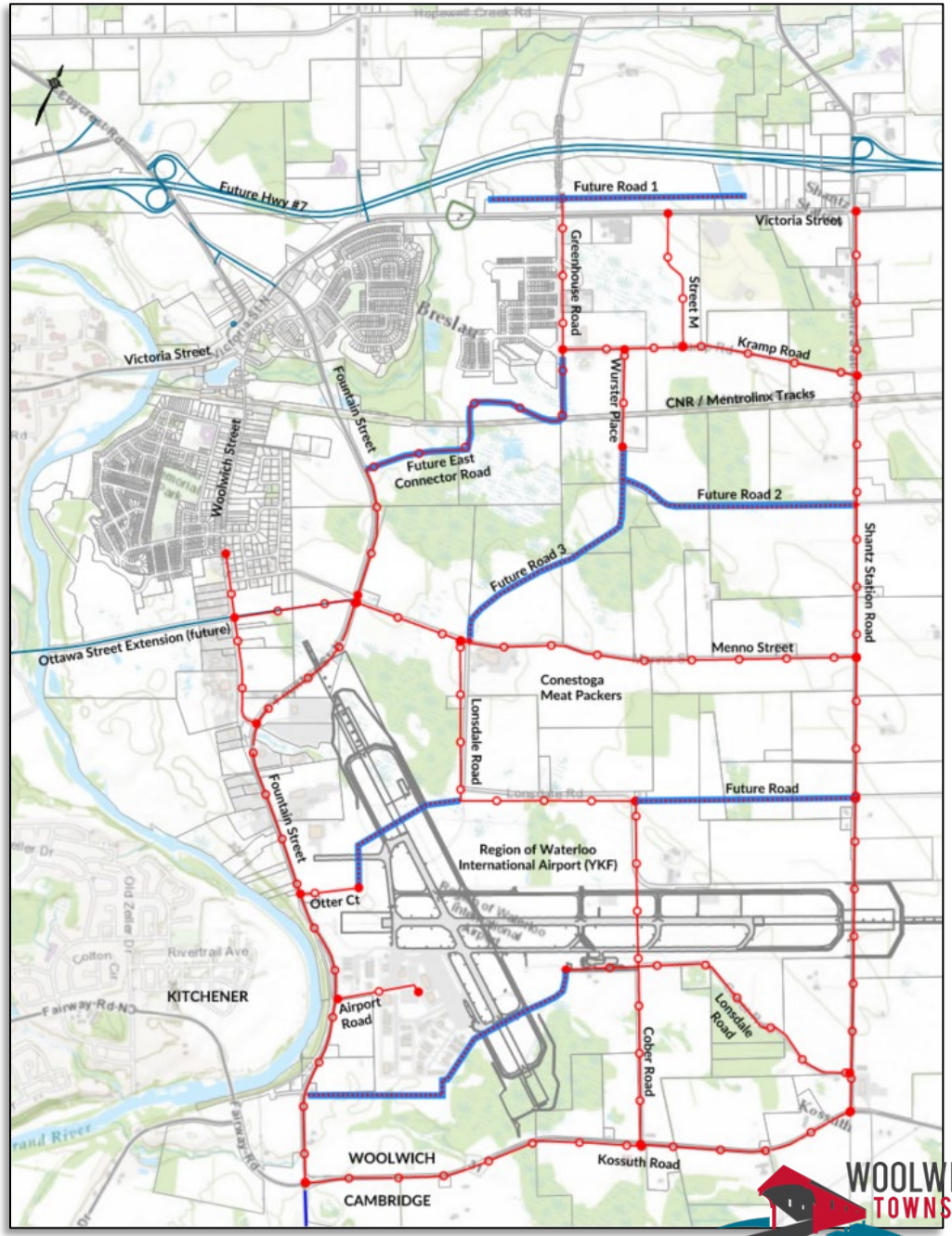
Assumed Future Sewer Network

Ultimately and as lands develop over time, the existing roads will be upgraded and will typically include new sanitary sewers. Some new roads have been assumed based on net developable areas (to be confirmed or adjusted by future planning studies).

A focus of this EA study is to determine the alignment for ultimate “Trunk” Sewer(s).



Legend

Anticipated Future Sanitary Sewer (On Ex. Road)

Possible Future Sanitary Sewer (On Possible Future Road)

Planned Trunk Sanitary Sewer (RMW)

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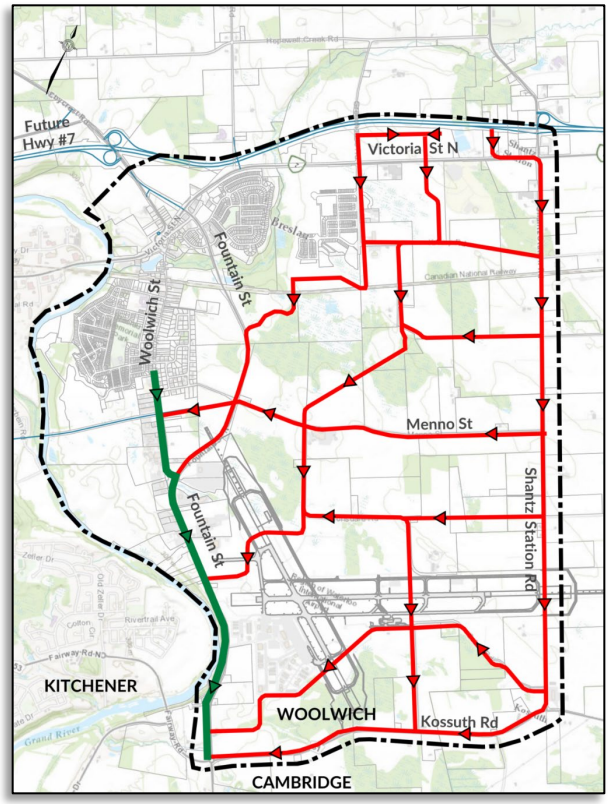
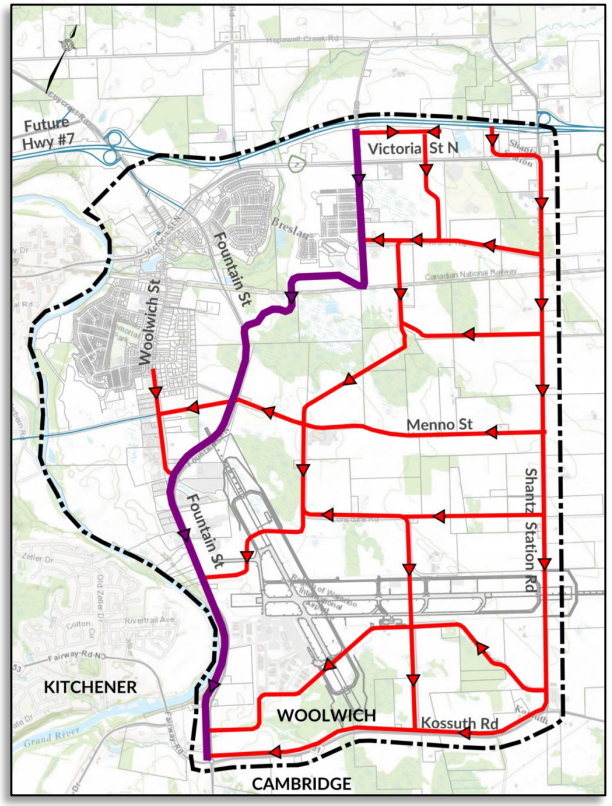
Trunk Sewer Alternative Alignments

Alignment #1



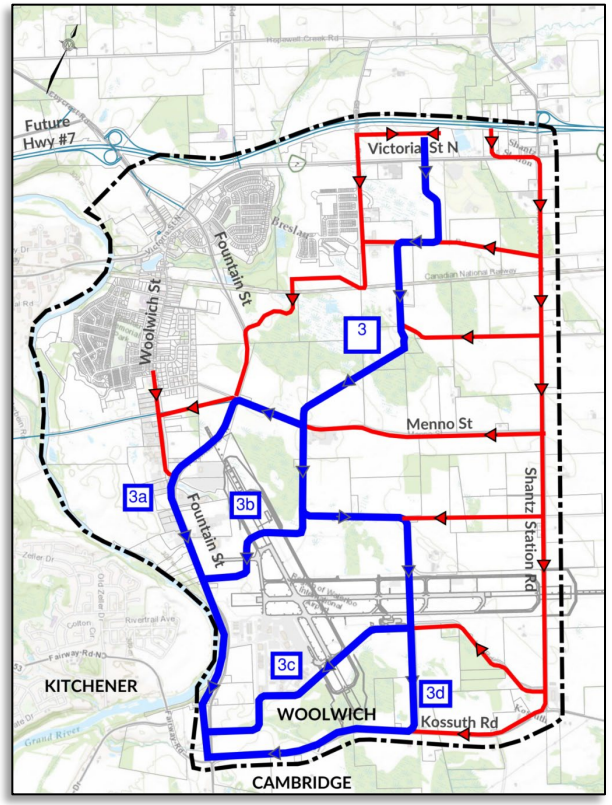
Legend:
- Study Area Boundary
- Trunk Sewer Alt #1
- Future Local Sewer

Alignment #2



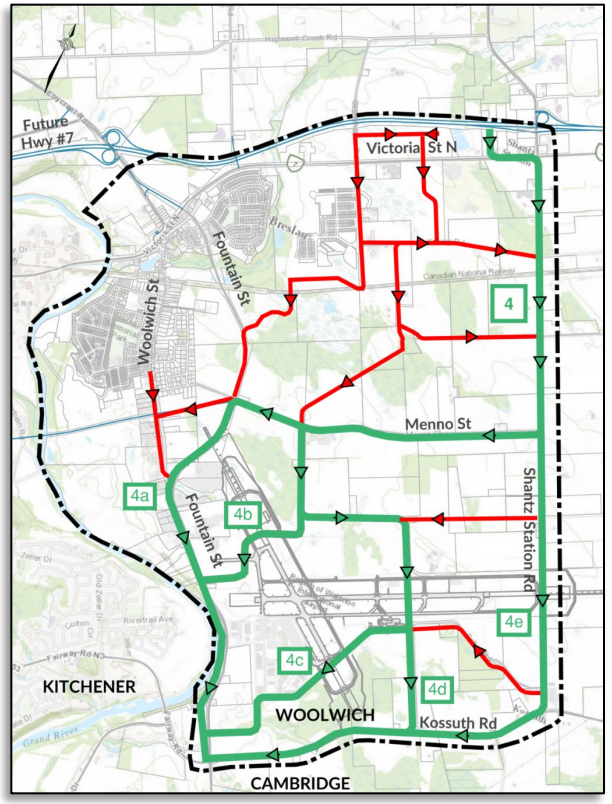
Legend:
- Study Area Boundary
- Trunk Sewer Alt #2
- Future Local Sewer

Alignment #3 (ABCD)



Legend:
- Study Area Boundary
- Trunk Sewer Alt #3
- Future Local Sewer

Alignment #4 (ABCDE)



Legend:
- Study Area Boundary
- Trunk Sewer Alt #4
- Future Local Sewer

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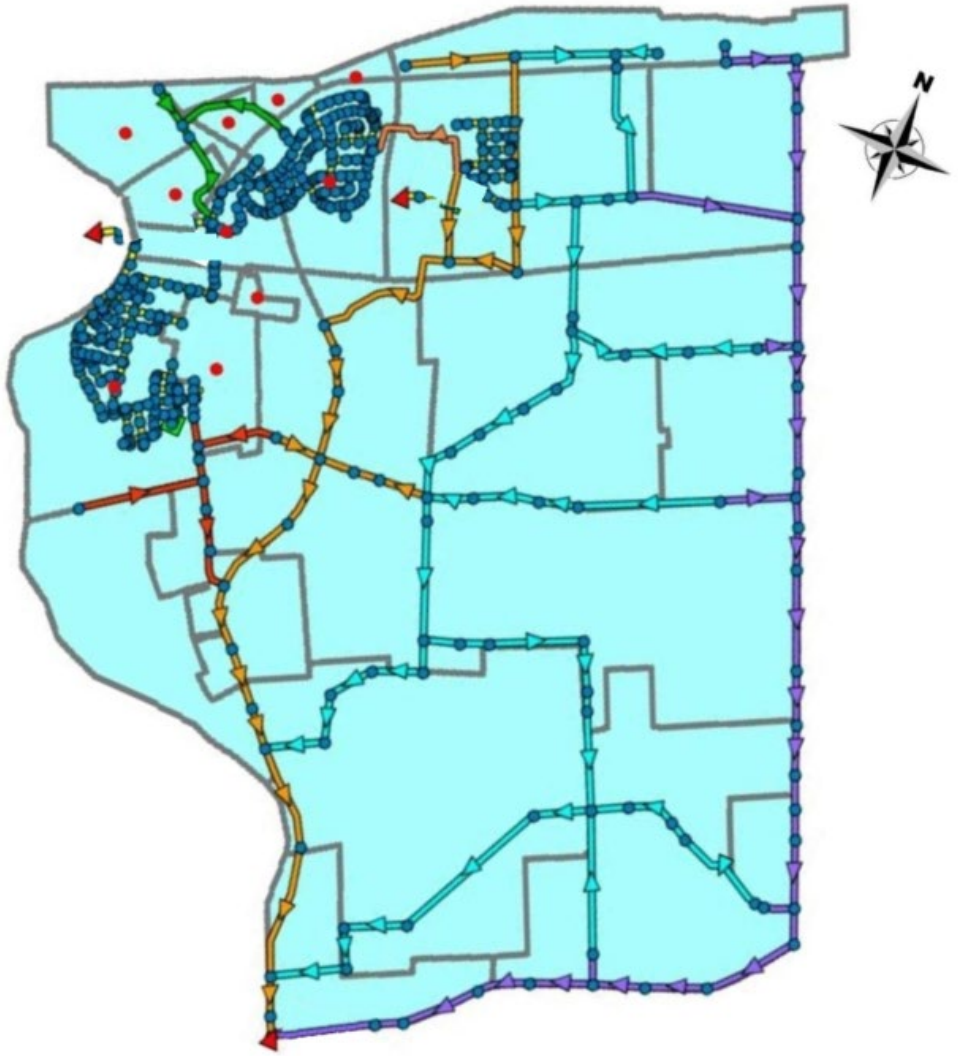
Trunk Sewer Alignments & Analysis

Gravity Sewer Depth Analysis

Atlernative Alignments	Trunk Only D/S Depth (m)	All Sewers D/S Depth (m)
Alt. Trunk #1	12.2	18.2
Alt. Trunk #2	10.6	16.9
Alt. Trunk #3A	10.6	16.9
Alt. Trunk #3B	**9.0**	**15.6**
Alt. Trunk #3C	12.8	20.1
Alt. Trunk #3D	14.4	21.0
Alt. Trunk #4A	16.9	19.7
Alt. Trunk #4B	15.6	18.5
Alt. Trunk #4C	20.1	22.9
Alt. Trunk #4D	21.0	23.8
Alt. Trunk #4E	14.6	23.8

1 Alt. Trunk #1 - Woolwich + Fountain
2 Alt. Trunk #2 - Greenhouse Road to East Connector to Fountain
3 Alt. Trunk #3A = Street M + Wurster Place + New Road + Menno + Fountain+
4 Alt. Trunk #3B = Street M + Wurster Place + New Road + Lonsdale + Otter + Fountain
5 Alt. Trunk #3C = Street M + Wurster Place + New Road + Lonsdale + cross runway + Norseman + Fountain
6 Alt. Trunk #3D = Street M + Wurster Place + New Road + Lonsdale + cross runway+Cober+ Kossuth
7 Alt. Trunk #4A = Victoria + Shantz Station + Menno + Fountain
8 Alt. Trunk #4B = Victoria + Shantz Station + Menno + Lonsdale + Otter + Fountain
9 Alt. Trunk #4C = Victoria + Shantz Station + Menno + Lonsdale + runway + Norseman + Fountain
10 Alt. Trunk #4D = Victoria + Shantz Station + Menno + Lonsdale + Runway + Cober + Kossuth
11 Alt. Trunk #4E = Victoria + Shantz Station + Kossuth

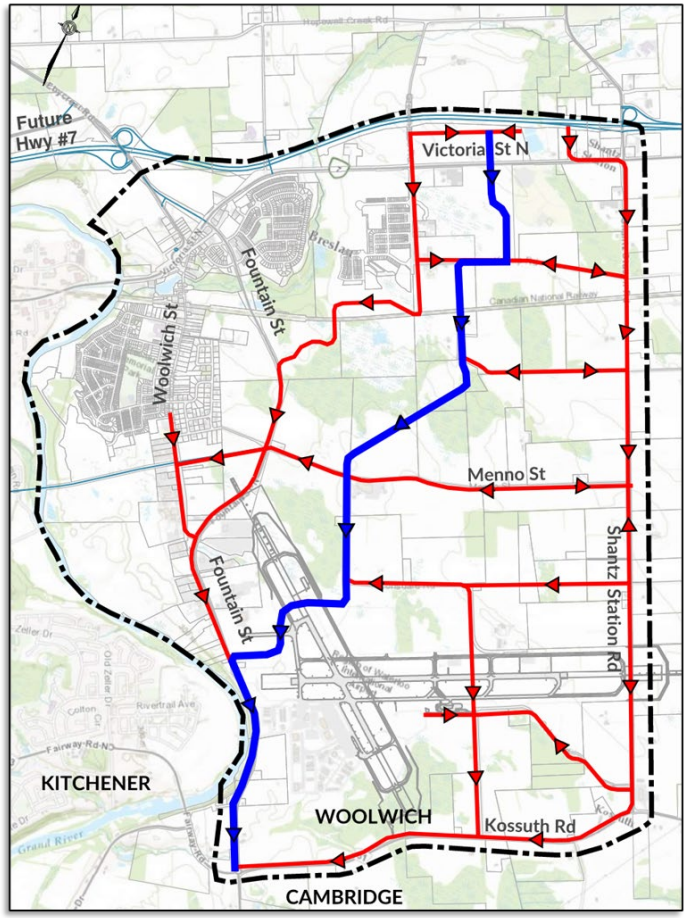


Alternative Sanitary Servicing Solutions

Scenario	Alignment #3B	Alignment #3D
Scenario # 1: Gravity sewers only, plus a large deep lift station at the downstream end (Fountain and Kossuth).	**Alt #1**	**Alt #3**
Scenario #2: Gravity sewers + smaller lift stations (as needed for sewer depths < 10m), plus a large deep lift station at the downstream end (Fountain and	**Alt #2**	**Alt #4**
Scenario #3: Optimized version of Scenario #2 with flatter sewers… ***avoids large deep lift station.***	**Alt #5**	**Alt#6**

Alternative Sanitary Servicing Solutions

Alignment 3B



Alternative #1 – (**3B**) Gravity Sewers Only (Deep) + Lg Lift Station @ Fountain/Kossuth

Alternative #2 – (**3B**) Gravity Sewers (10m max) + Local LS + Lg Lift Station @ Fountain/Kossuth

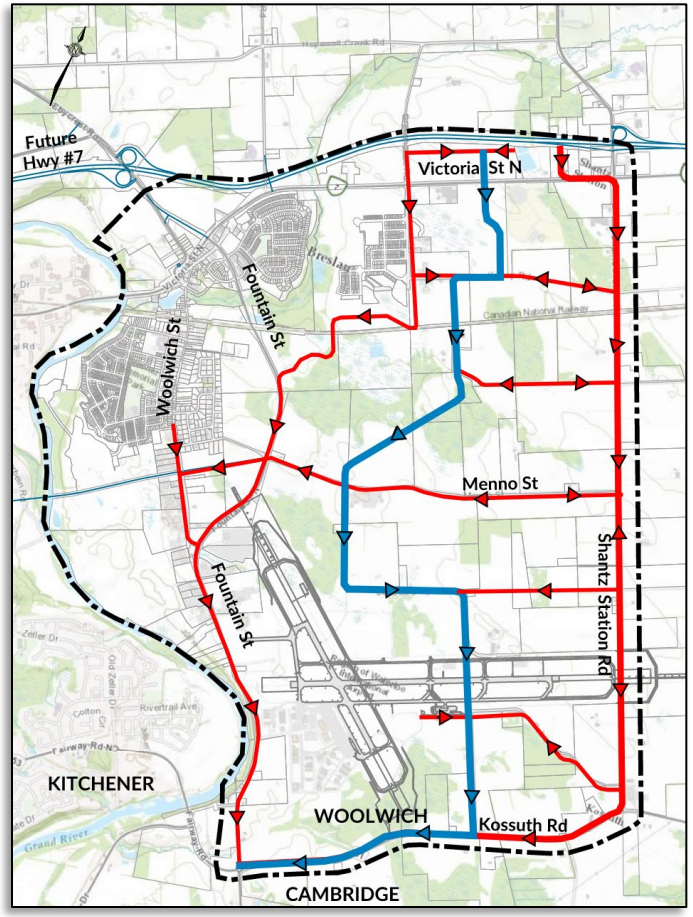
Alternative #3 – (**3D**) Gravity Sewers Only (Deep) + Lg Lift Station @ Fountain/Kossuth

Alternative #4 – (**3D**) Gravity (10m max) + Local LS + Lg Lift Station @ Fountain/Kossuth

Alternative #5 – (**3B *Optimized****) Gravity Sewers + Local LS

Alternative #6 – (**3D *Optimized****) Gravity Sewers + Local LS

Alignment 3D



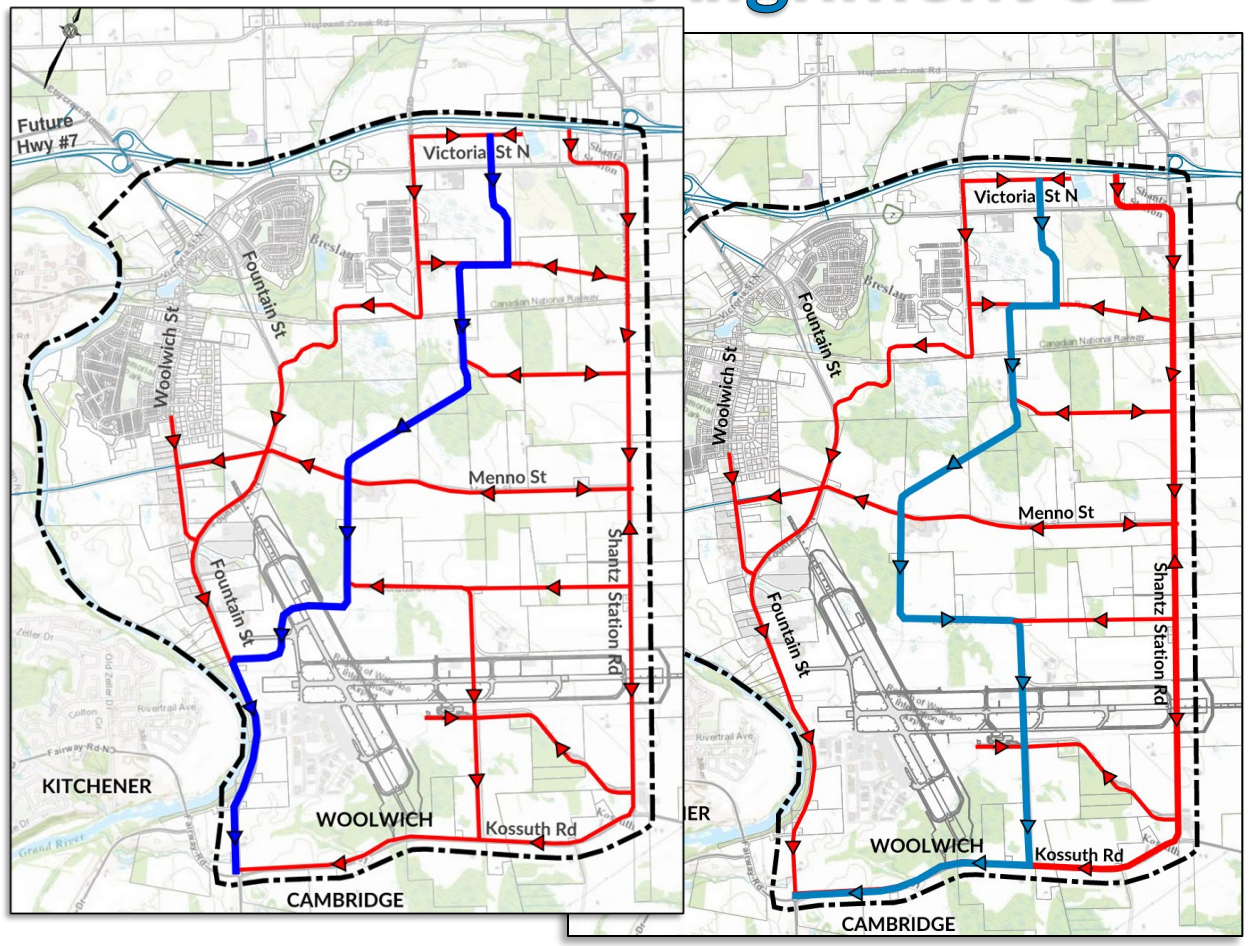
Alternative Sanitary Servicing Solutions

Note that the alternatives developed considered the entire sanitary servicing system, including:

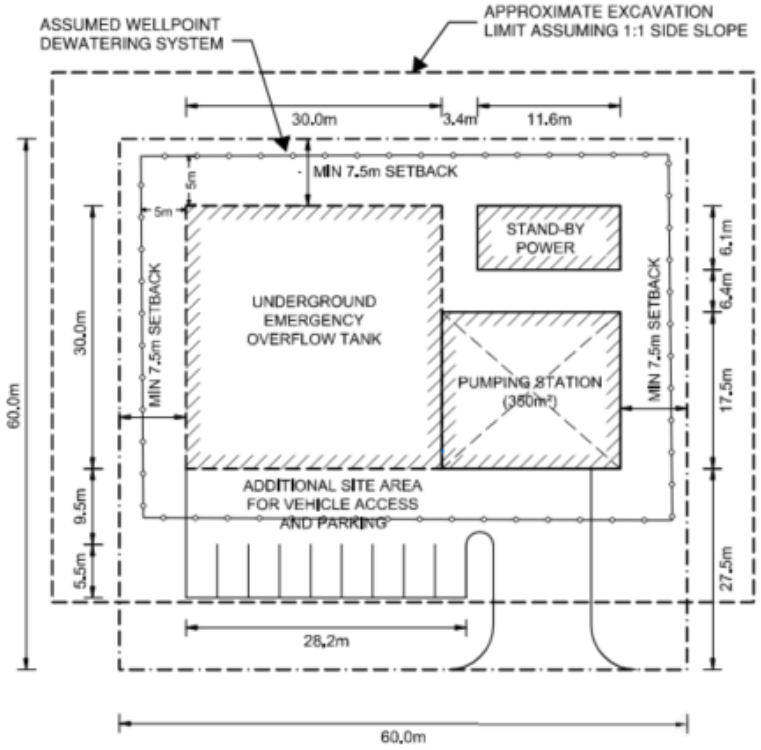
- Trunk Sewers
- Local Sewers
- Pumping (Lift) Stations

Alignment 3B

Alignment 3D

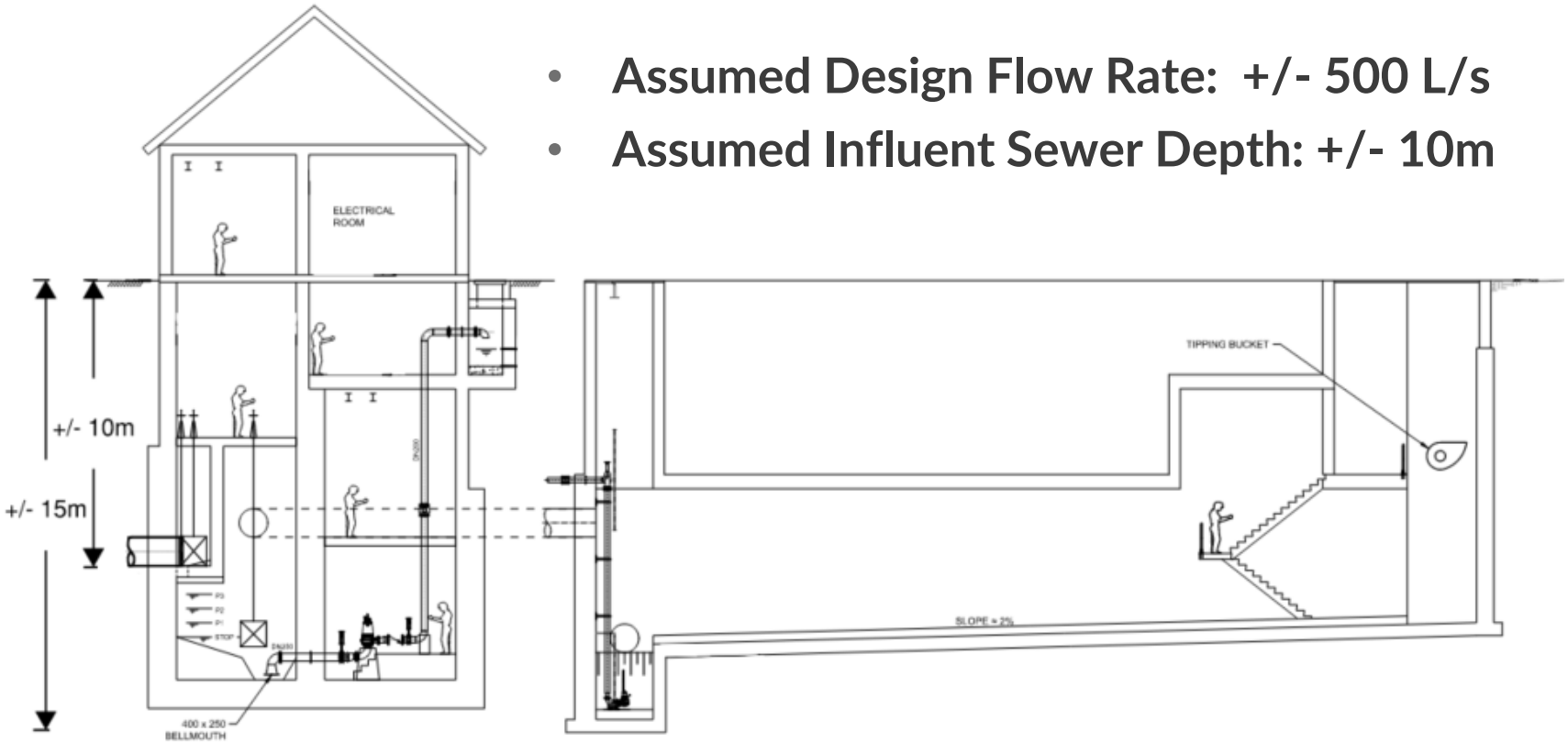


Preliminary ‘Baseline’ Pumping Station Sizing & Layout



PRELIMINARY SITE LAYOUT
PLAN VIEW
(NOT TO SCALE)

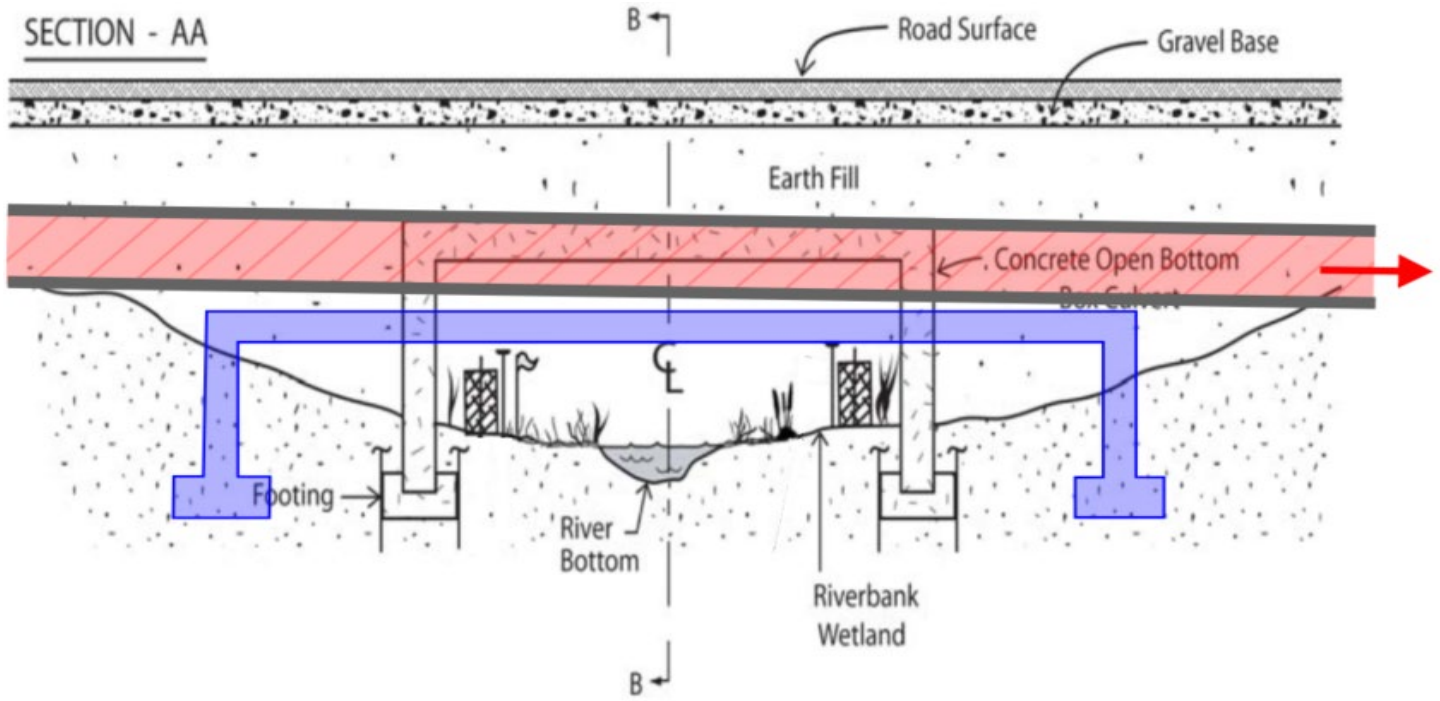
- Assumed Design Flow Rate: +/- 500 L/s
- Assumed Influent Sewer Depth: +/- 10m



PUMP STATION & STORAGE TANK
CROSS SECTION
(NOT TO SCALE)

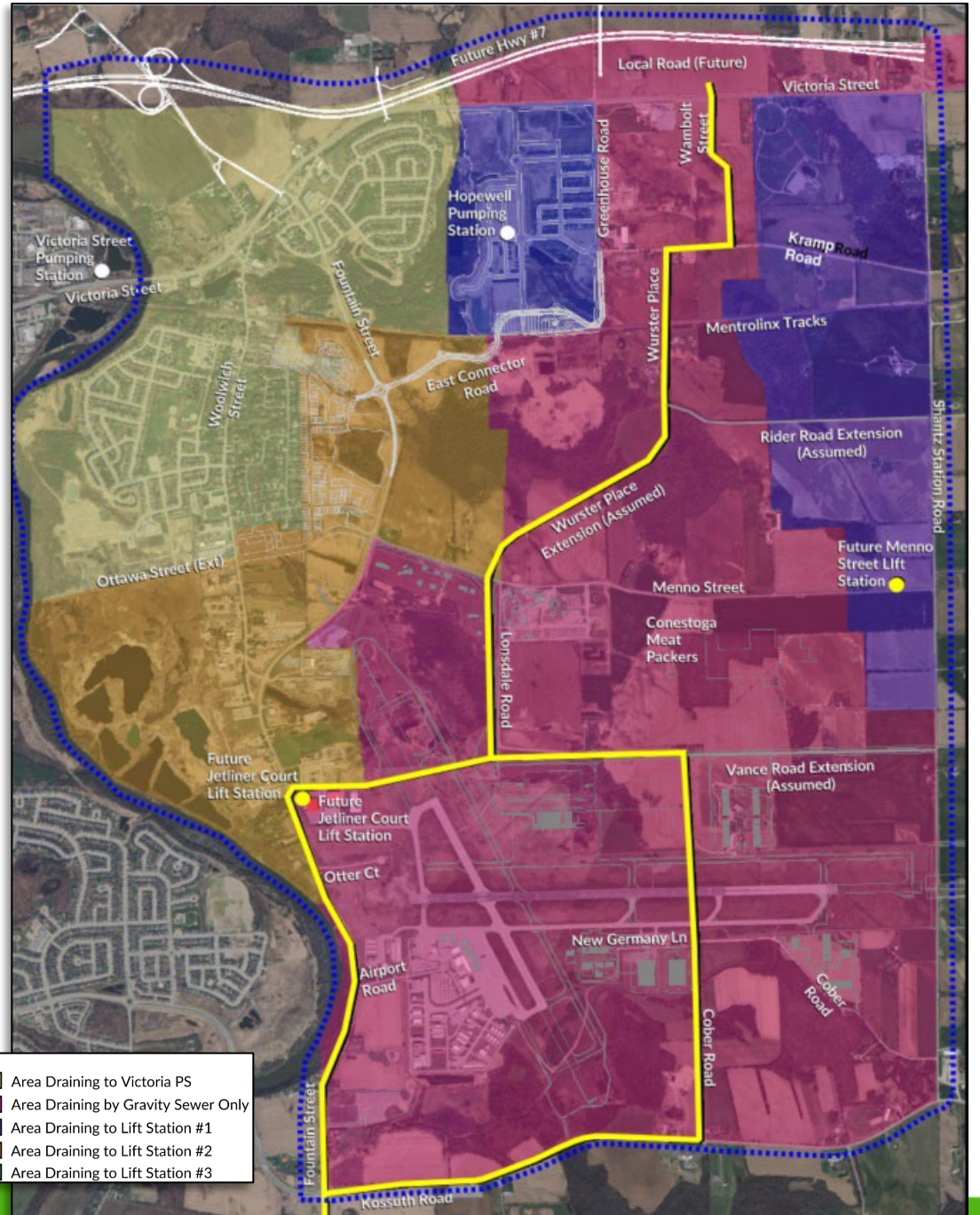
Alignment 3B – Randall Drain Crossing

Replace Existing Box Culvert – Flatter and Wider



Alternative #7

- Trunk Sewer Alignment #3 – North of Menno Street
- Split into Alignments #3B and #3D at Lonsdale Road
- Smaller Lift Stations Required:
  - Jetliner Court Lift Station: Q=163 L/s | D = 10.4m
  - Menno Street Lift Station: Q=174 L/s | D = 10.9m
- Runway Crossings:
  - #3B – Runway 14-32 (Open Cut)
  - #3D – Runway 08-26 (Trenchless)
- Randall Drain Crossing @ Fountain Street
- Servicing flexibility to match development needs



Summary of Stakeholder Consultation

- **Notice of Commencement**

  August 3, 2023

- **Public Consultation Centre #1**

  March 13, 2024

- **Public Consultation Centre #2**

  June 26, 2024

- **Council Presentation**

  October 8, 2024

- **Notice of Completion**

  TBD

TOWNSHIP OF WOOLWICH
NOTICE OF PUBLIC CONSULTATION
EAST SIDE LANDS – WOOLWICH SANITARY SERVICING
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT - SCHEDULE 'B'

The Township of Woolwich presents an opportunity for interested members of the public and affected stakeholders to participate in consultation regarding the **East Side Lands – Woolwich Sanitary Servicing Class Environmental Assessment** (Class EA).

The study area, as shown to the right, is generally bounded by the Grand River to the west, Kossuth Road (Regional Rd 31) to the south, Shantz Station Road (Regional Rd 30) to the east and south of the new (future) Highway #7 to the north.

Building on the approved 2018 East Side Lands Sanitary Servicing EA, as well as the recent Airport Master Plan and other known development plans, this Municipal Class EA will investigate and evaluate alternative solutions for the extension of sanitary servicing infrastructure that is required to support existing and future developments within the Township of Woolwich.

The study scope includes a preliminary assessment of the developable lands considering property boundaries, topography, ecological habitat constraints, archaeology, and cultural heritage. Alternative strategies for providing sanitary servicing to the development lands are being investigated, including both gravity sewers and pumping station plus forcemain solutions.

Hopewell Creek Rd

KITCHENER

The study is being undertaken in accordance with a "Schedule B" Municipal Class
Event will be conducted virtually, and will include a pre-recorded presentation of the
downloadable content for stakeholder review. The information will be available for
EngageWR site (https://www.engagewr.ca/east-side-lands) starting on Wednesday

We kindly request that comments and/or questions be submitted through the Engage
27th, or feel free to reach out to the project members listed below.

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Duane Lindner, P.Eng.
Sr. Project Manager
Associated Engineering (O
Suite 302, 508 Riverbend D
Kitchener, ON N2K 3S2
Phone: 226-214-3238
Email: lindnerd@ae.ca

Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*
information, please note all comments will become part of the public record.

WOOLWICH TOWNSHIP

Region of Waterloo

East Side Lands:
Woolwich Sanitary Servicing
Class Environmental Assessment

Welcome

Public Consultation #1
March 13, 2024

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WOOLWICH TOWNSHIP

Region of Waterloo

East Side Lands:
Woolwich Sanitary Servicing
Class Environmental Assessment

Welcome

Public Consultation #2
June 26, 2024

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Next Steps:

- Council Adoption & Issue ‘Notice of Completion’
- Detailed Design Consultant Selection – Fall 2024
- Detailed Design – Jan – Dec 2025
- Construction start – early spring 2026

East Side Lands:
Woolwich Sanitary Servicing
Class Environmental Assessment

Thank You

Presentation to Woolwich Council

October 8, 2024

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