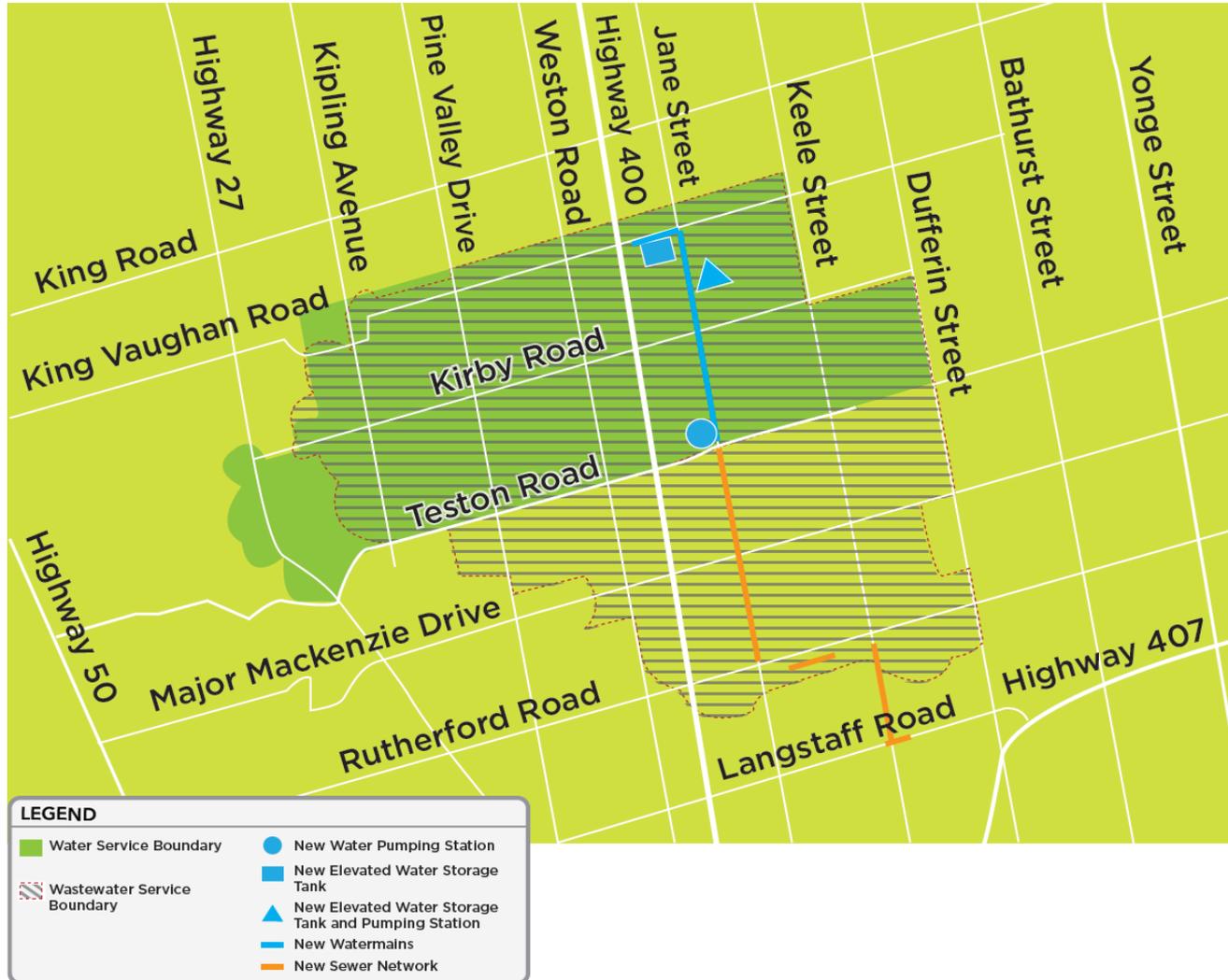


NORTHEAST VAUGHAN WATER AND WASTEWATER SERVICING PROJECT



Purpose

Meeting Purpose:

- To present the preferred water and wastewater infrastructure for servicing northeast Vaughan
- To obtain input on the proposed impact management measures/monitoring and post EA approvals/requirements
- To discuss the next steps and filing of the Project File Report



Agenda

1	Introductions and Project Update
2A	Water Pumping Stations, Elevated Tanks, and Watermains
2B	Impact Mitigation, Proposed Monitoring and Post EA Approvals
3A	Trunk Sewer and Construction Shafts
3B	Impact Mitigation, Proposed Monitoring and Post EA Approvals
4	Next Steps and Submission of the Project File Report

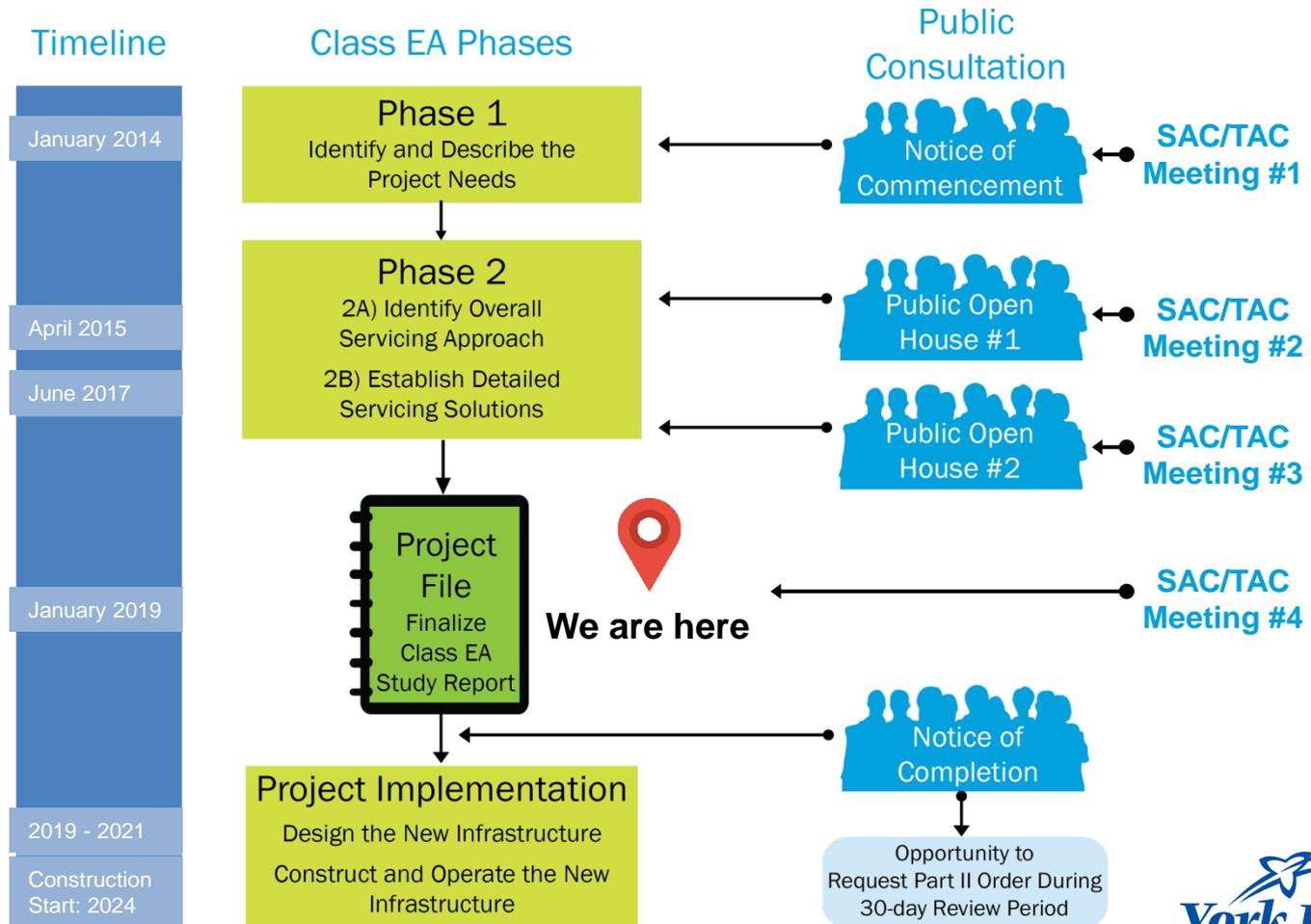


Introductions and Project Update



Project Timeline and Status

Municipal Class Environmental Assessment Process (Schedule B)



Pumping Stations, Elevated Tanks, and Watermains



Overview of Servicing Approach

Optimize



Upgrade



- Adjust water levels in existing storage tanks
- Share water from other pressure zones

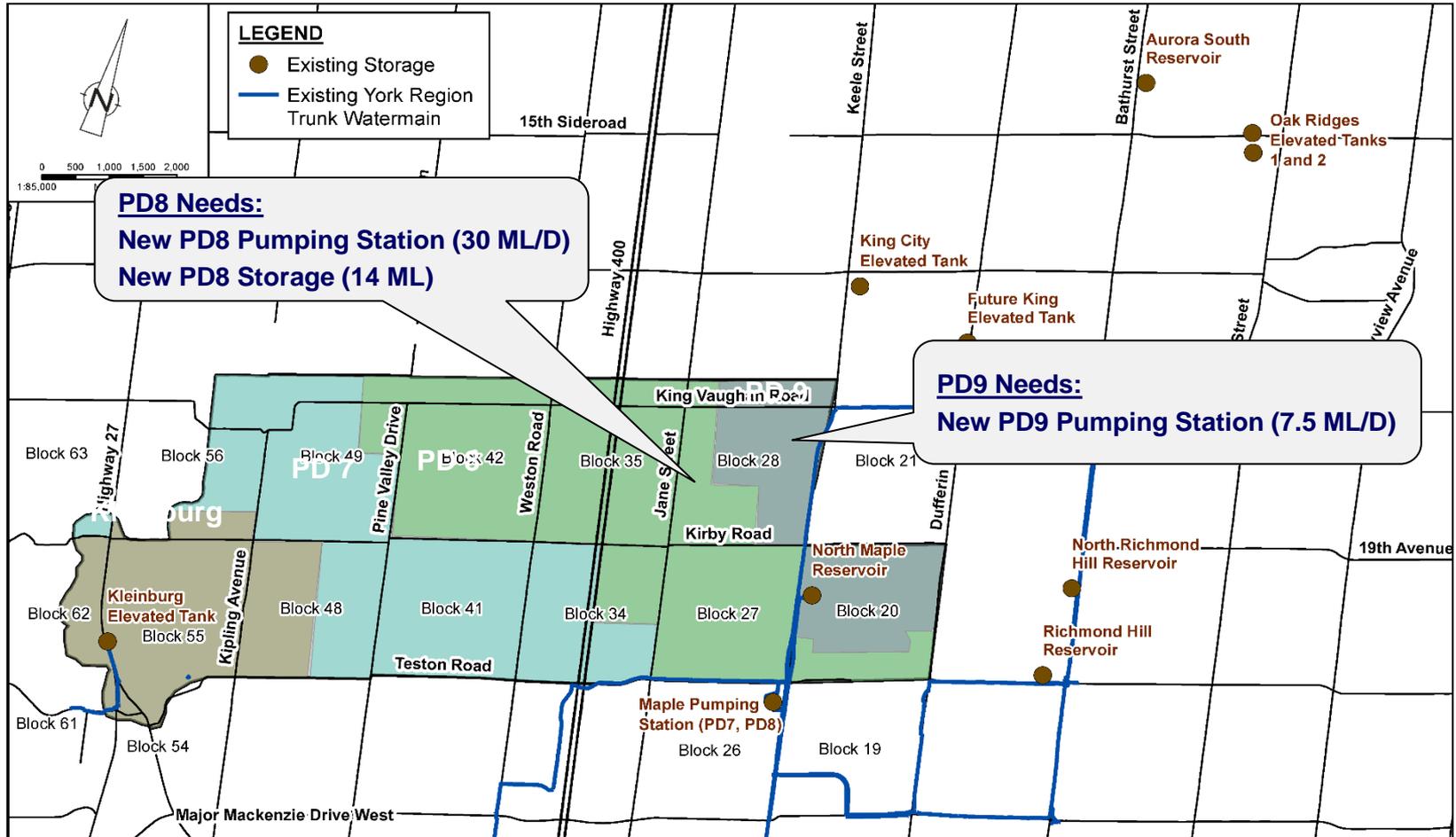
- Upgrade Maple Pumping Station
- Repair existing sewer leaks

**Construct New
Water and Wastewater
Infrastructure**



**New pumping stations, elevated
water tanks, watermains and
trunk sewer**

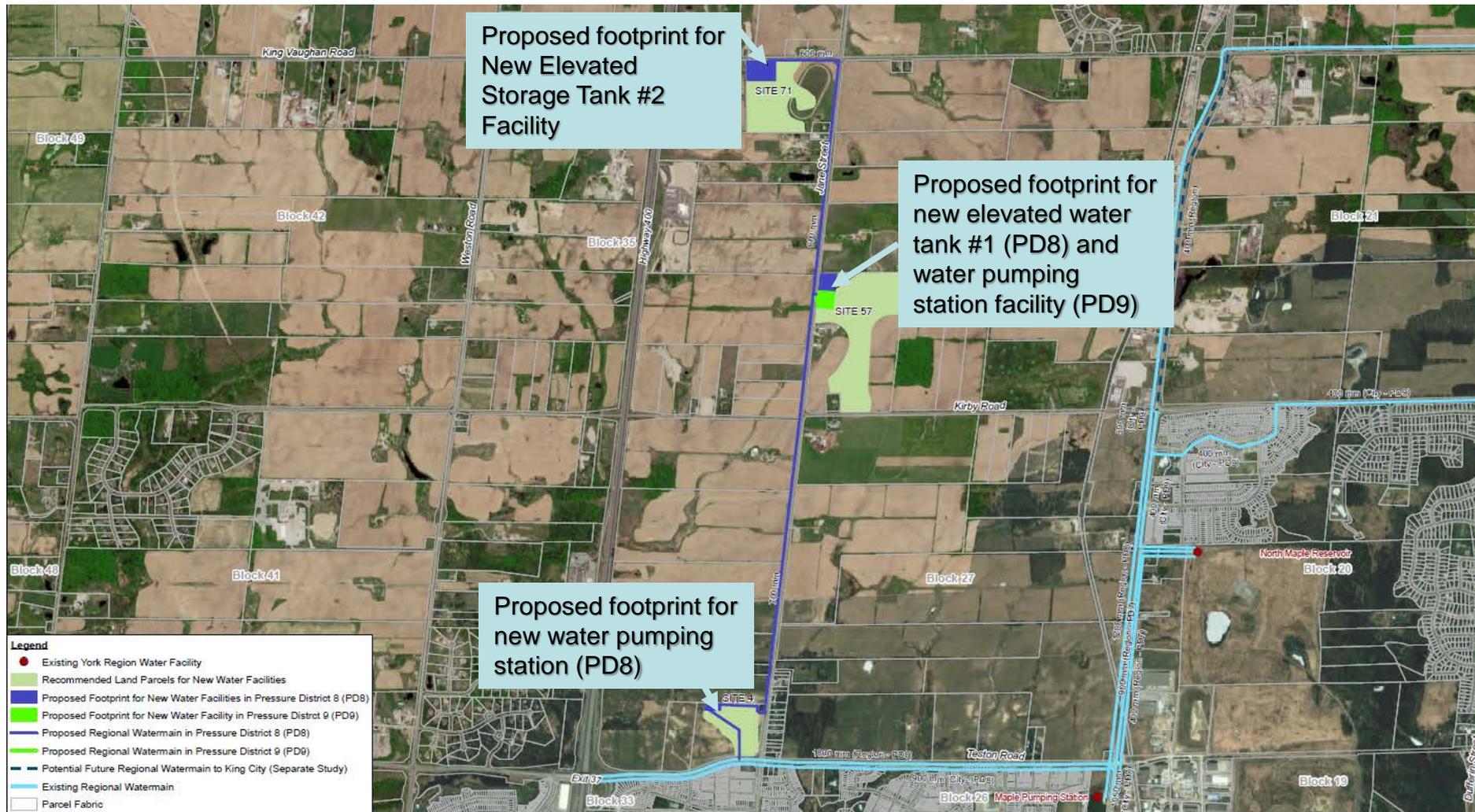
Water Service Area and Infrastructure Needs



PD = Pressure District

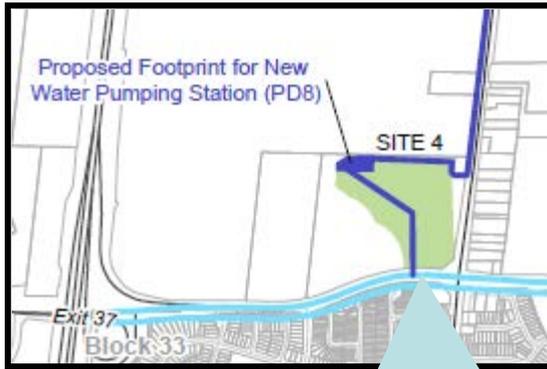


New Water Infrastructure



New Water Infrastructure (New PD8 Water Pumping Station)

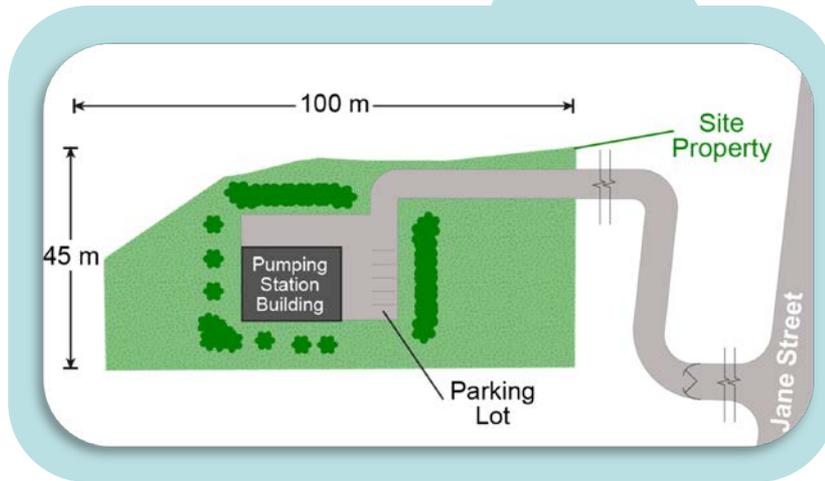
Location



Digital Rendering



Site Layout



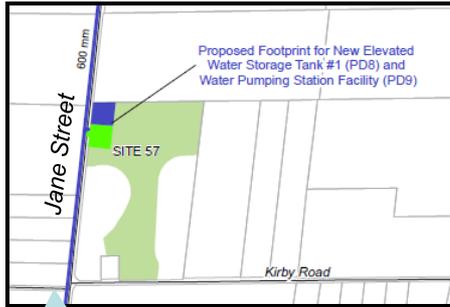
Construction to Begin as Early as 2024



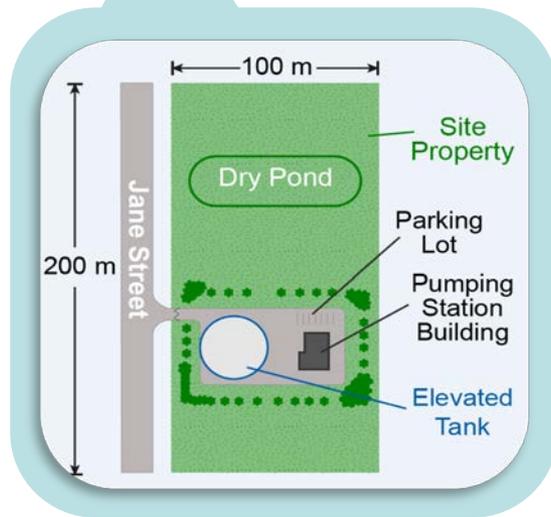
New Water Infrastructure

(New PD9 Water Pumping Station and Elevated Water Tank #1)

Location



Site Layout



Digital Rendering

Looking east from Jane Street



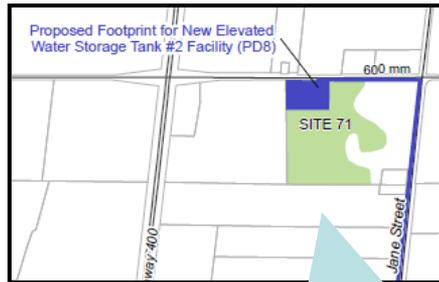
Construction to Begin as Early as 2024



New Water Infrastructure

(New Elevated Water Tank #2)

Location*



Site Layout



Digital Rendering

Looking south from King Vaughan Road



Construction to Begin as Early as 2024

*The exact location of Elevated Water Tank will be confirmed as part of detailed design.

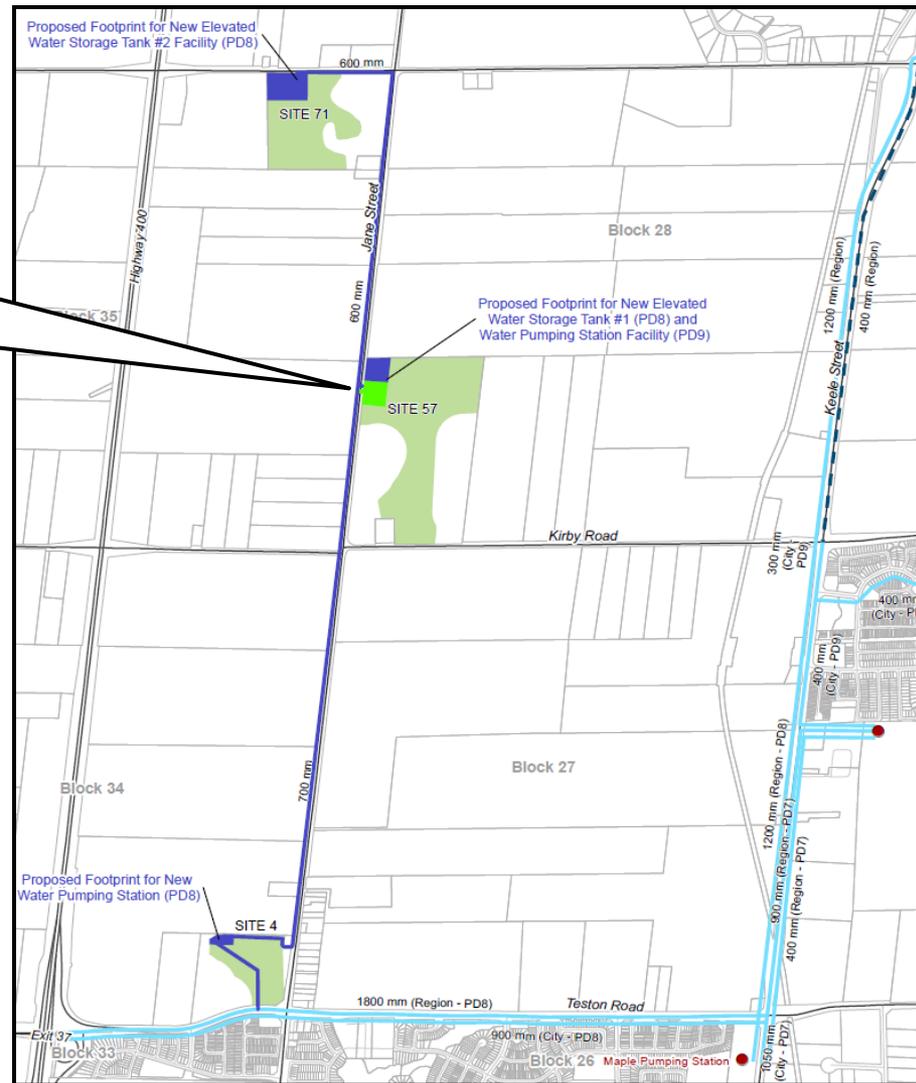


New Water Infrastructure (New Watermains)

New watermain on Jane Street from PD8 Pumping Station to PD9 Pumping Station and Elevated Tanks #1 and #2



Example of Roadside Watermain Chamber Vent



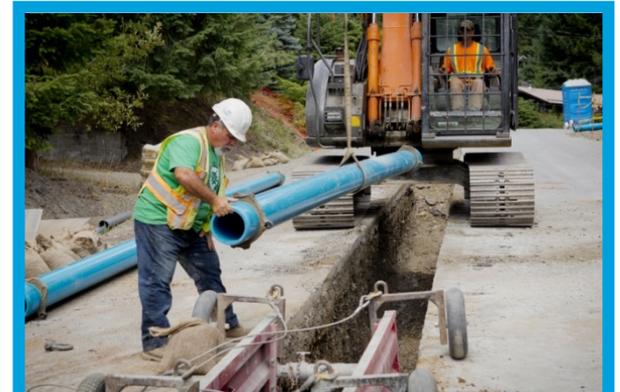
Construction to Begin as Early as 2024

What Will the Water Facilities and Watermain Construction Look Like?

Pumping Station Construction



Watermain Construction



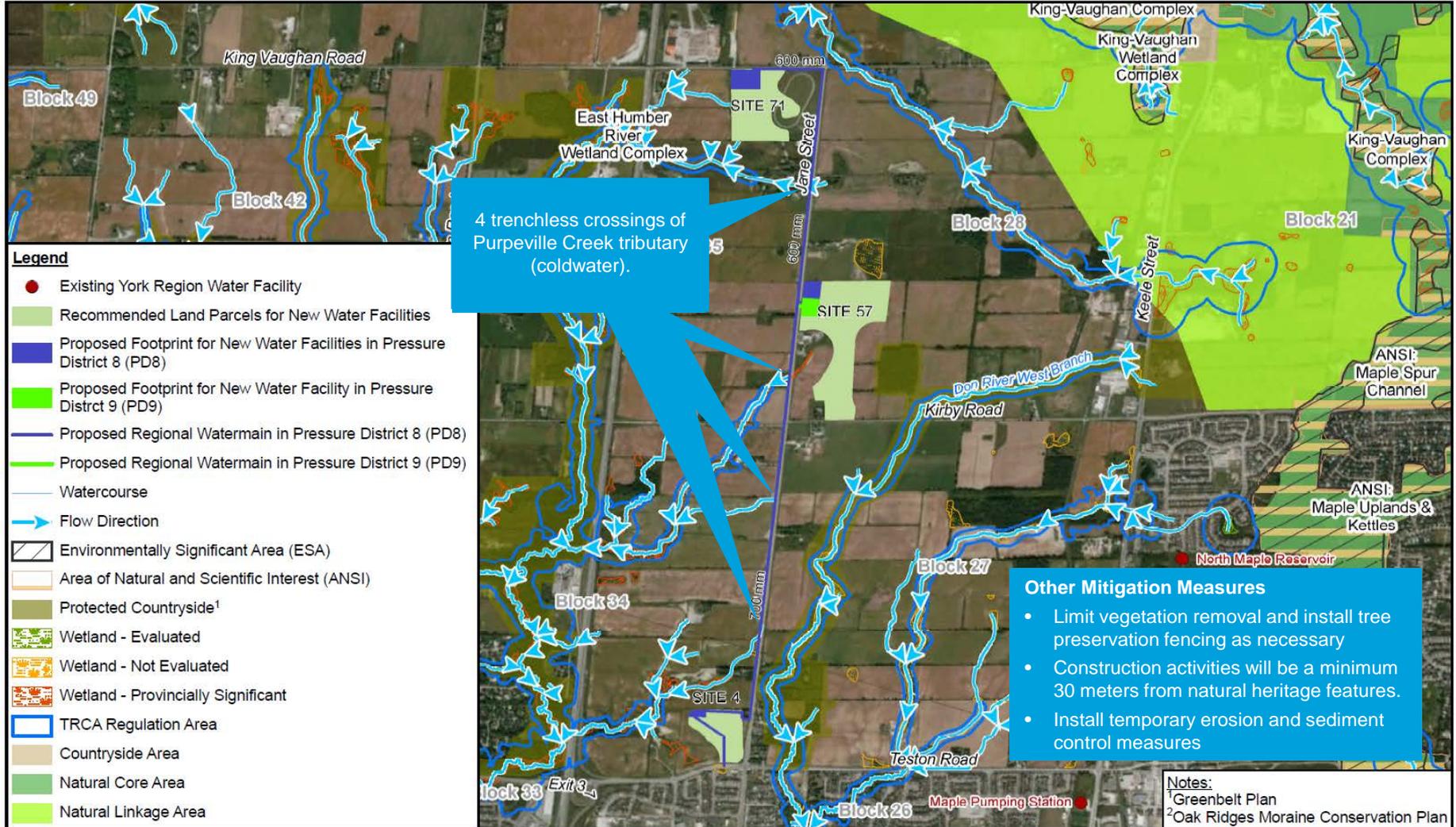
Elevated Tank Construction



Impact Mitigation, Proposed Monitoring and Post EA Approvals



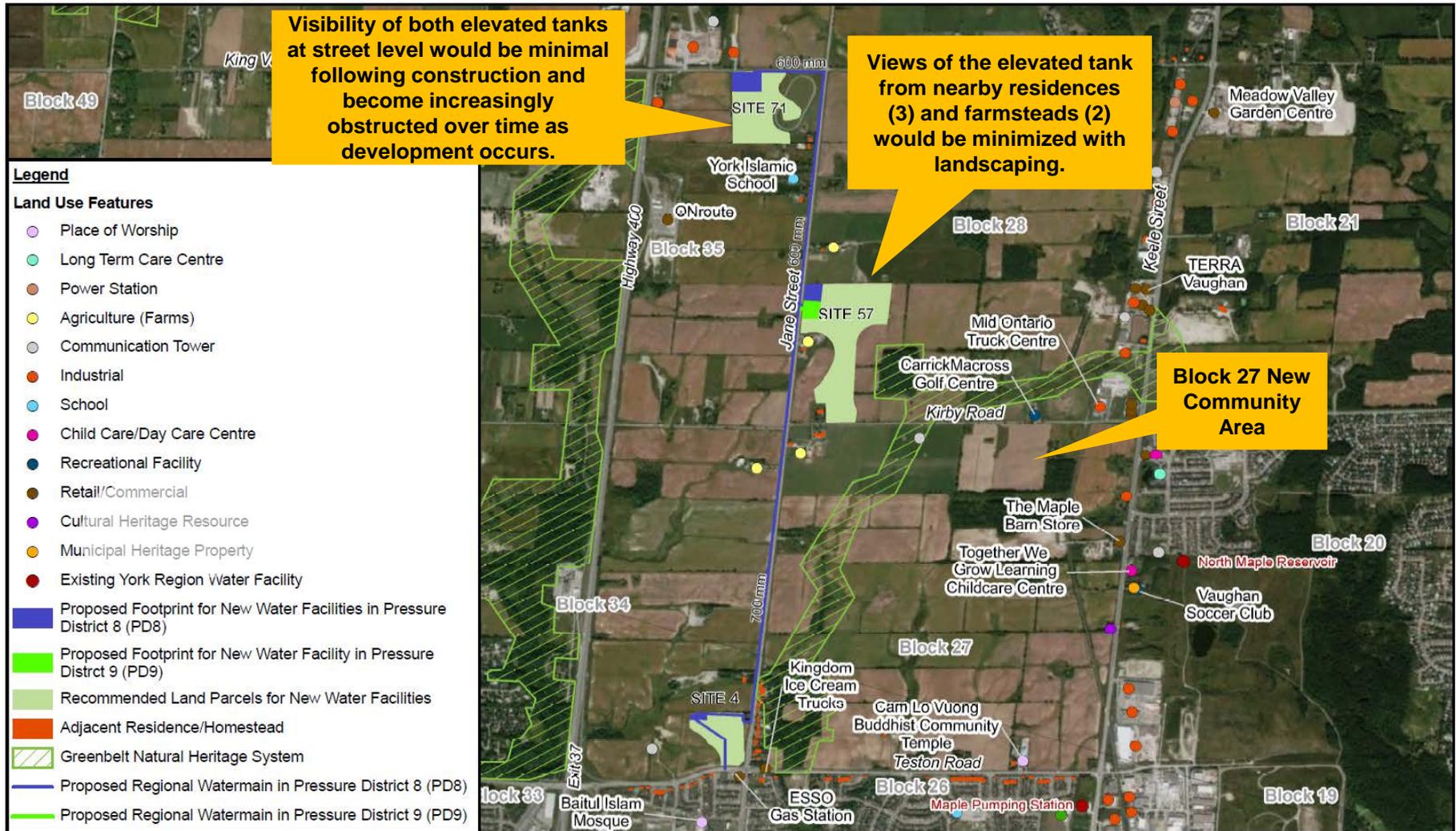
Natural Environment (Water)



Archaeology and Cultural Heritage (Water)



Existing and Future Land Uses (Water)



Water Infrastructure Construction Impact Management Measures

- Locate all work site areas a minimum of 30 m from any surface water feature
- Limit removal of vegetation, especially mature trees and shrubs
- Workspaces that are limited to road right-of-ways as much as possible
- Some need for easements, to be negotiated
- Lane closures with traffic management plans
- Best management practices for noise, vibration and dust
- On and off-hours contact information for public inquiries

Proposed Monitoring Programs

- Tree protection fencing during construction
- Ground settlement monitoring in close proximity to transportation corridors
- Pre-construction baseline soil sampling and construction phase soil management
- Vibration management program
- Surface water monitoring program during construction

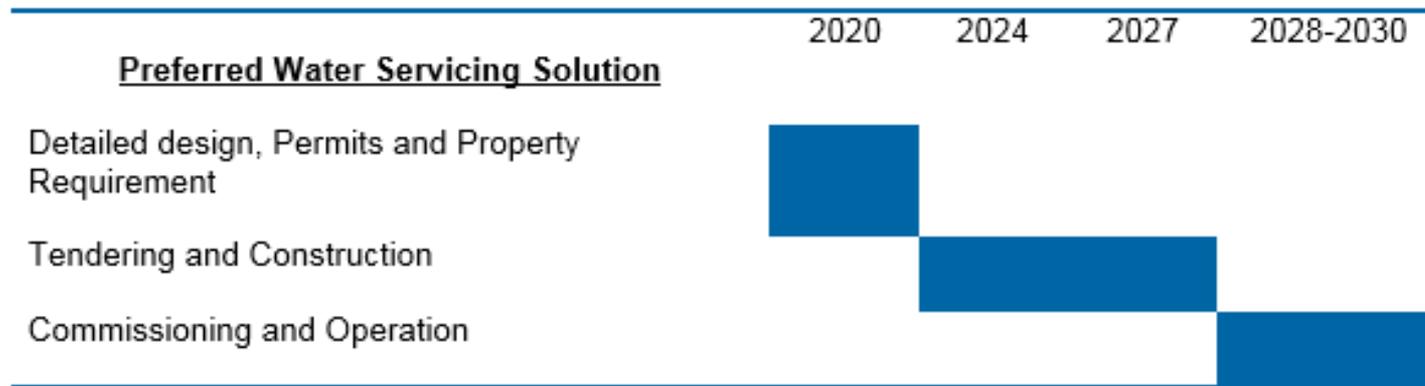


Post EA Approvals

Approval Authority	Anticipated Post-EA Permits and Approvals Required	Legislation or By-Law Reference
Municipal and Regional		
City of Vaughan	Road Cut (Road Occupancy) Permits	By-Law #294-94
	Noise Control By-Law	By-Law #96-2006
	Dewatering Discharge Permit	By-Law #087-2016
York Region	Road Occupancy Permits	Not subject to legislation/by-law
	Dewatering Activity Discharge Approval	By-Law # 2011-56 and 2012-70
Utility Authorities	<i>Consent from:</i> Hydro One Networks Inc. Telus Bell Canada Allstream Inc. Rogers PowerStream TransCanada Pipe Lines Cogeco Limited	Not subject to legislation or by-law
Toronto Region Conservation Authority	Permit for Development, Interference with Wetlands and Alterations to Shorelines and Watercourses	Ontario Regulation 166/06 under the Conservation Authorities Act
	Erosion and Sediment Control Plan and Surface Water Management Plan	Conservation Authorities Act
Provincial		
Ministry of the Environment, Conservation and Parks	Permit to Take Water (PTTW) or Environmental Activity and Sector Registry(EASR)	Ontario Water Resources Act
	Drinking Water Works Permit (DWWP)	Environmental Protection Act
	WHPA Q1/Q2 policy area, and Significant Groundwater Recharge Area	Clean Water Act
	Permit or Registry	Endangered Species Act
Ministry of Tourism, Culture and Sport	Compliance letter	Ontario Heritage Act
Federal		
Fisheries and Oceans Canada	Self-Assessment/Letter of Advice or Authorization	Fisheries Act Species at Risk Act
Property Agreements		
Property Owners	Permanent and temporary easements from affected property owners	Not subject to legislation or by-law

Implementation Schedule

York Region's current anticipates implementation of the new water infrastructure in service by 2028.



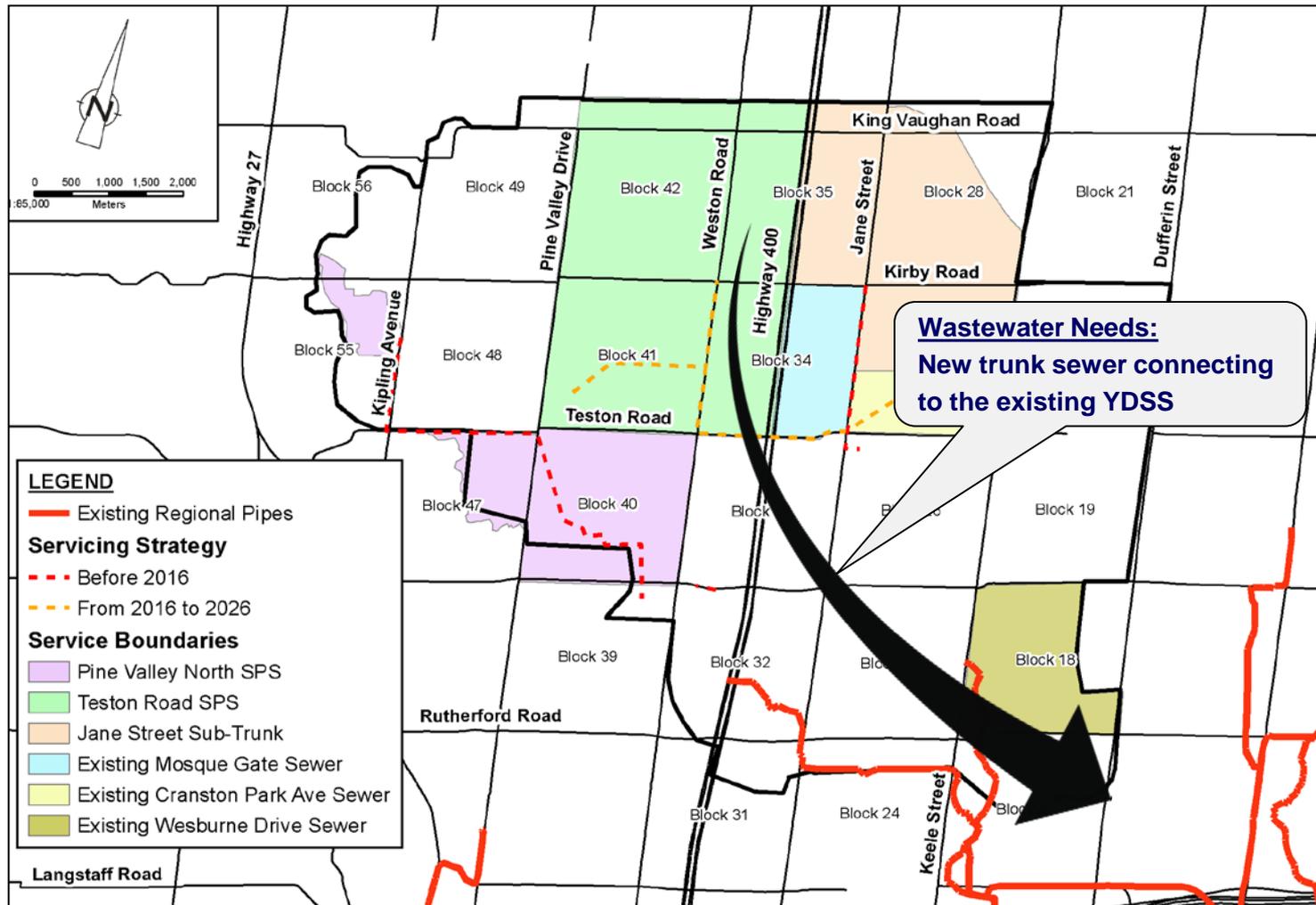
The anticipated implementation timeline is based on known information at this time and is subject to change.



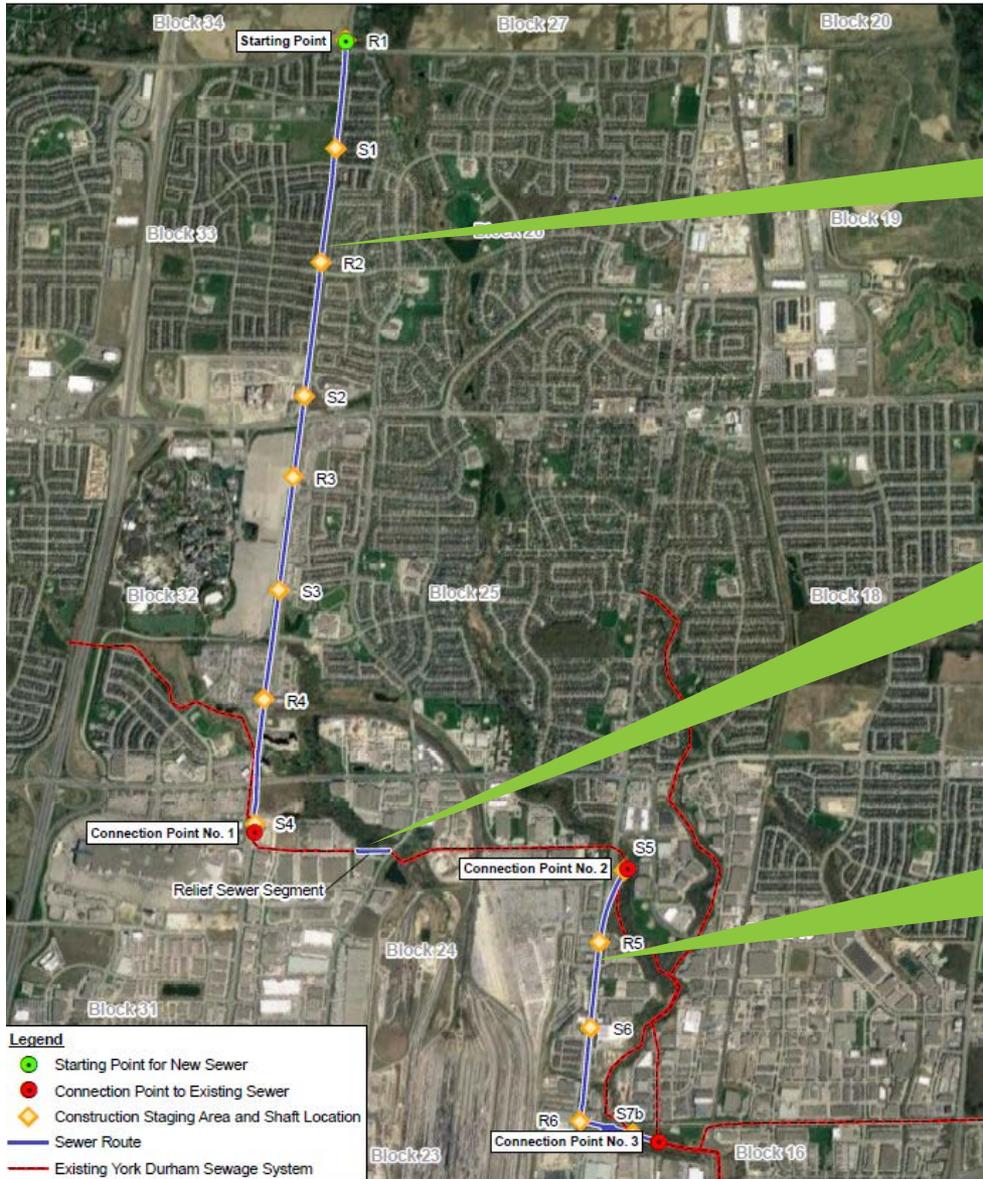
Trunk Sewer and Construction Shafts



Wastewater Service Area and Infrastructure Needs



Trunk Sewer Route and Construction Shafts



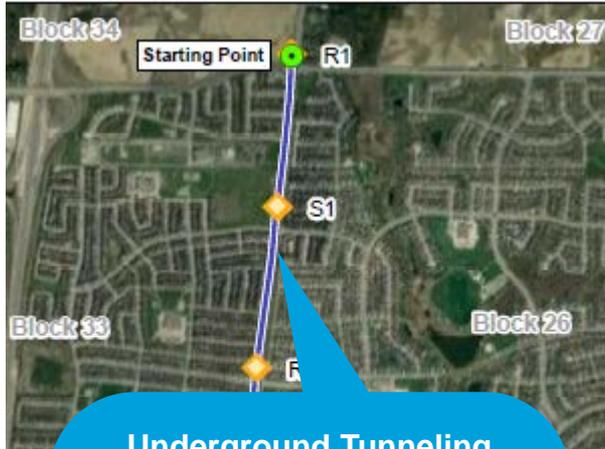
New Sewer Segment #1
(along Jane Street)

New Sewer Segment #3
(along sewer easement south of Rutherford Road)

New Sewer Segment #2
(along Keele Street and Langstaff Road)



What Will the Sewer Construction Look Like?



Underground Tunneling through Roadside Shafts
(Along Jane Street, Keele Street and Langstaff Road)

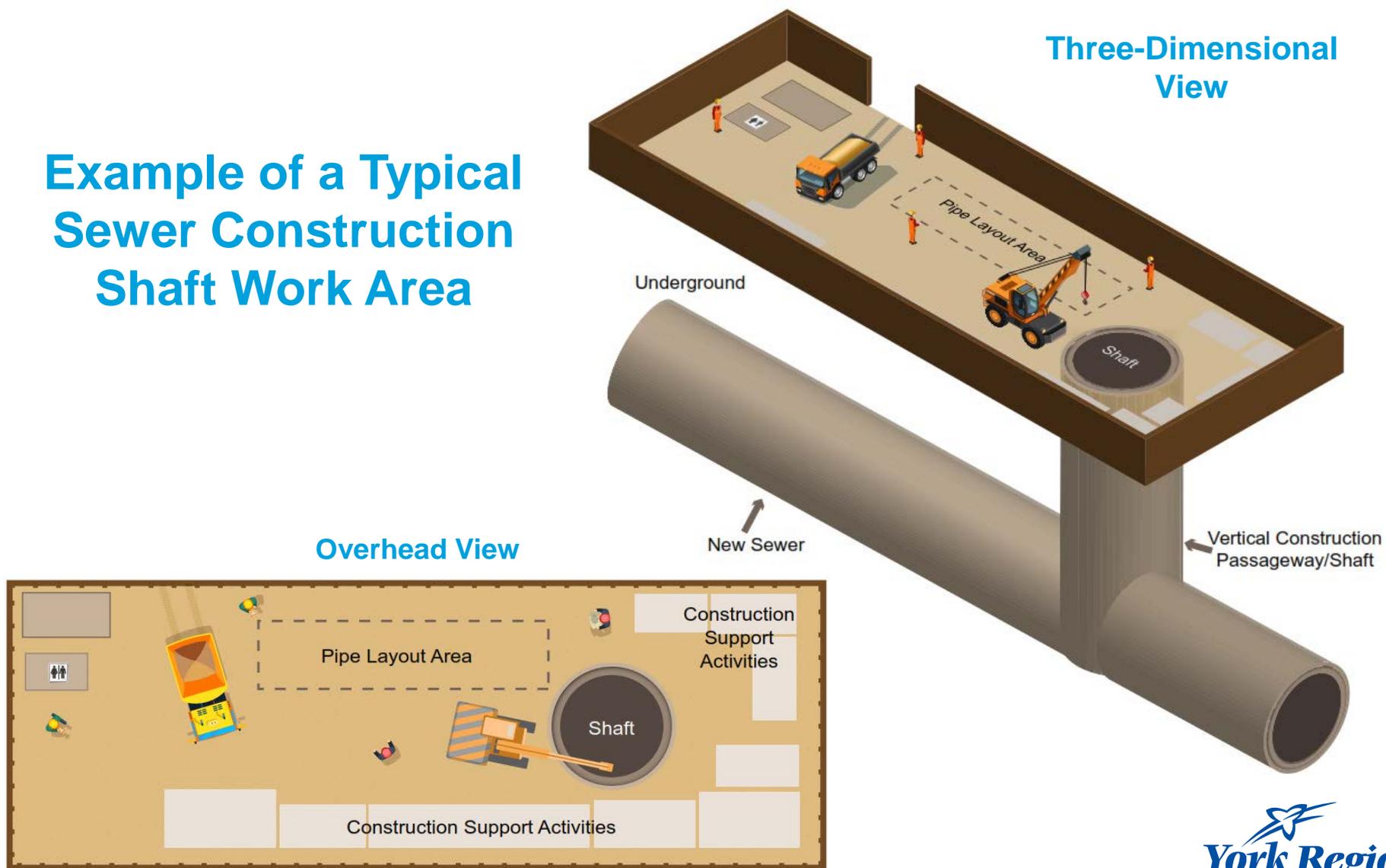


Open Excavation
(CP1, Relief Sewer Segment and from S7b to CP3)



What Will the Sewer Construction Look Like?

Example of a Typical Sewer Construction Shaft Work Area



Impact Mitigation, Proposed Monitoring and Post EA Approvals



Natural Environment (Sewer)



Street trees and landscaping to be avoided, where possible.

A temporary loss of a portion of a probable Headwater Drainage Feature through the placement of the staging area at the starting point (R1).

Don River Tributary and unevaluated wetlands and other designated features (Adjacent to trenchless sewer construction).

Don River Tributary (Above trenchless sewer construction).

Don River Tributary, unevaluated wetlands and other designated features (Adjacent to sewer construction).



- Legend**
- Starting Point for New Sewer
 - Connection Point to Existing Sewer
 - ◆ Construction Staging Area and Shaft Location
 - Sewer Route
 - Existing York Durham Sewage System
 - Watercourse
 - Flow Direction
 - ▨ Environmentally Significant Area (ESA)
 - ▨ Area of Natural and Scientific Interest (ANSI)
 - ▨ Protected Countryside¹
 - ▨ Wetland - Evaluated
 - ▨ Wetland - Not Evaluated
 - ▨ Wetland - Provincially Significant
 - ▨ TRCA Regulation Area
 - ▨ Occupied or Recovery reaches for Redside Dace
 - ▨ Countryside Area²
 - ▨ Natural Core Area²
 - ▨ Natural Linkage Area²

West Don River and unevaluated wetlands at Connection Point 2. Potential impacts to be managed by site specific mitigation measures and compensation, as required.

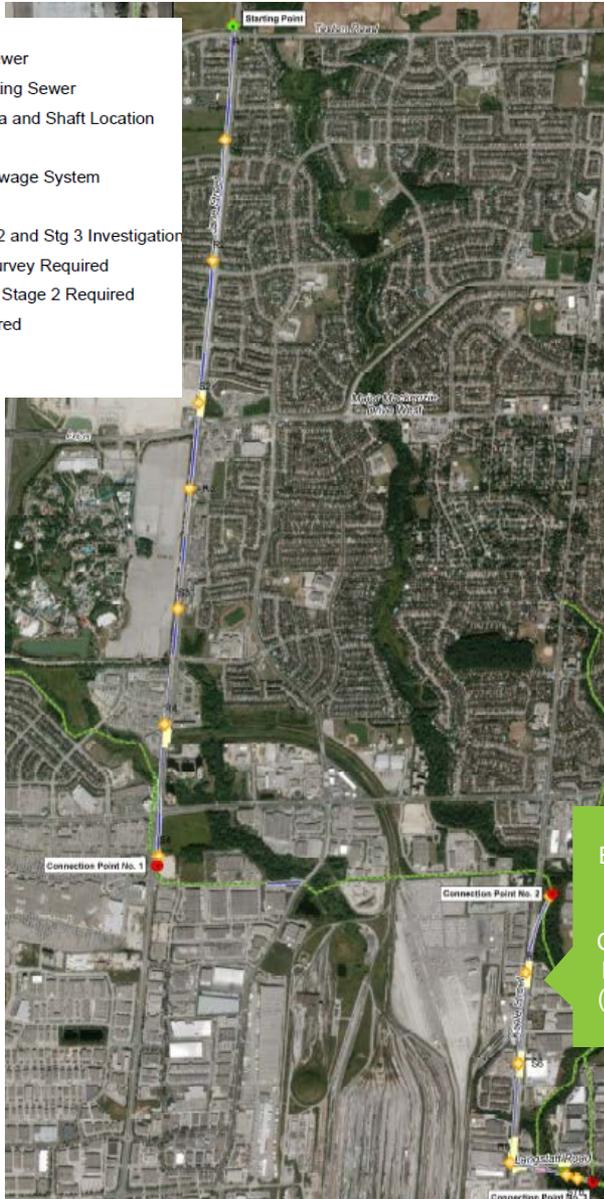
West Don River at Connection Point 3. Potential impacts to be managed by site specific mitigation measures and compensation, as required.



Archaeology and Cultural Heritage (Sewer)

Legend

- Starting Point for New Sewer
- Connection Point to Existing Sewer
- ◆ Construction Staging Area and Shaft Location
- Sewer Route
- Existing York Durham Sewage System
- Cemetery
- Cemetery: Requires Stg 2 and Stg 3 Investigation
- Disturbed: No Stage 2 Survey Required
- Previously Assessed: No Stage 2 Required
- Slope: No Stage 2 Required
- Test Pit Survey Required
- Wet



S7b and Connection Point No. 3



Complete a Stage 2 test pit survey to confirm the presence of any archaeological resources within the shaft construction compounds for S7b and CP3.

Complete Stage 3 Archaeological Assessment as required.

Stage 2 Archaeological Assessment will be completed during detailed design.

Existing and Future Land Uses (Sewer)



Sewer Construction Impact Management Measures

- Locate all work site areas a minimum of 30 m from any surface water feature
- Limit removal of vegetation, especially mature trees and shrubs
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- Best management practices for noise, vibration and dust
- On and off-hours contact information for public inquiries



Proposed Monitoring Programs

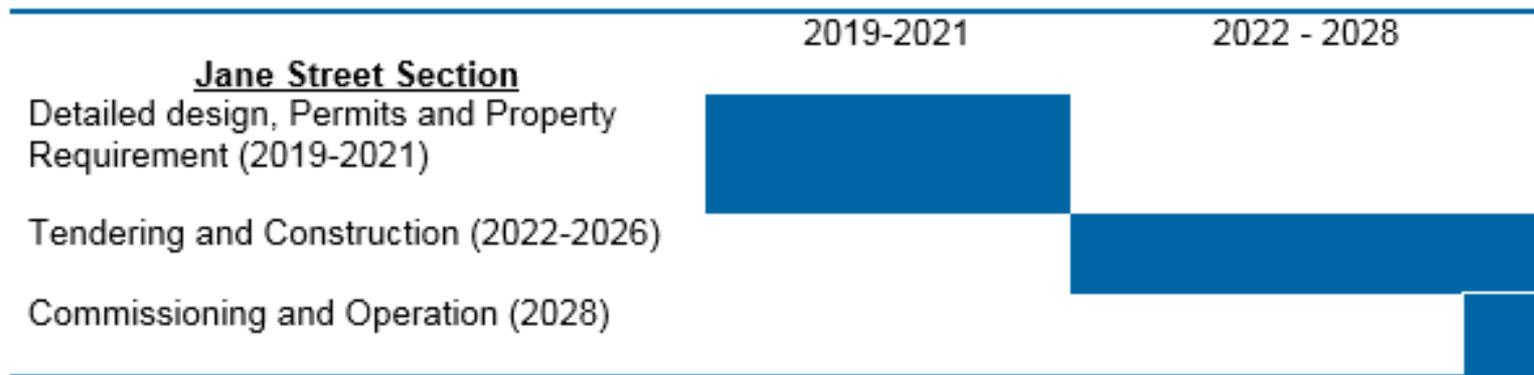
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- Ground settlement monitoring in close proximity to transportation corridors
- Pre-construction baseline soil sampling and construction phase soil management
- Vibration management program

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Federal		
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Property Agreements		
Property Owners	Permanent and temporary easements from affected property owners	Not subject to legislation or by-law

Implementation Schedule

- Presently proposed to be constructed over a longer period.
- The first section along Jane Street from Teston Road to just south of Rutherford Road is anticipated to be in service as of 2028.



- The Keele Street/Langstaff Road section is anticipated to be implemented by 2041 and the relief sewer by 2051.



Next Steps



Anticipated Project Schedule

February
2019

- Provide Draft Project File (Class EA Report) to Agencies for Review

March
2019

- Finalize Project File

March
2019

- Issue Notice of Study Completion for 30-Day Review Period

Thank You!

