



1945

WATERSHED CHANGES



2024

PETERSBURG DRAIN 2024

INFORMATION MEETING

AUGUST 15, 2024

7:00 p.m.



K. SMART ASSOCIATES LIMITED
CONSULTING ENGINEERS & PLANNERS

85 McIntyre Drive
Kitchener, ON N2R 1H6

Joel Miller, P. Eng.

TODAY

1. **Project Background**

- Impetus
- Township appointment under Sections 4 & 78 of the *Drainage Act*
- *Drainage Act* process overview
- Historical overview of municipal drains in Petersburg (only 1 slide!)
- Initial landowner meetings

2. **Watershed and existing conditions review**

3. **Proposed work**

4. **Estimated cost and preliminary Drainage Act assessments**

5. **Next Steps**

6. **Q&A**

BACKGROUND

- Project Impetus
 - March 2019 - Region of Waterloo petition for legal outlets following 2017 contract for improvements along Notre Dame Drive and Snyder's Road East
 - Spring 2019 and prior years- Drainage Superintendent discussions with landowners re. drainage concerns and needs
- Appointment by Council
 - June 2019 – Council appoints K. Smart Associates
 - Objective - new report for Petersburg Drain to address Section 4 petition provide improvements per Section 78

BACKGROUND- DRAINAGE ACT

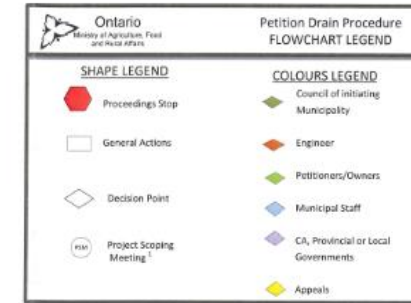
- Ontario Statute that provides a process for the construction and maintenance of communal drainage works on private lands and public roads
- Broad range of applicability (urban/rural, large/small, etc.)
- Drainage infrastructure under Drainage Act - referred to as “municipal drains”
- Public process (multiple opportunities for landowner input)
- Allocation of Costs (Assessments)

EXAMPLES OF DRAINAGE ACT PROJECTS

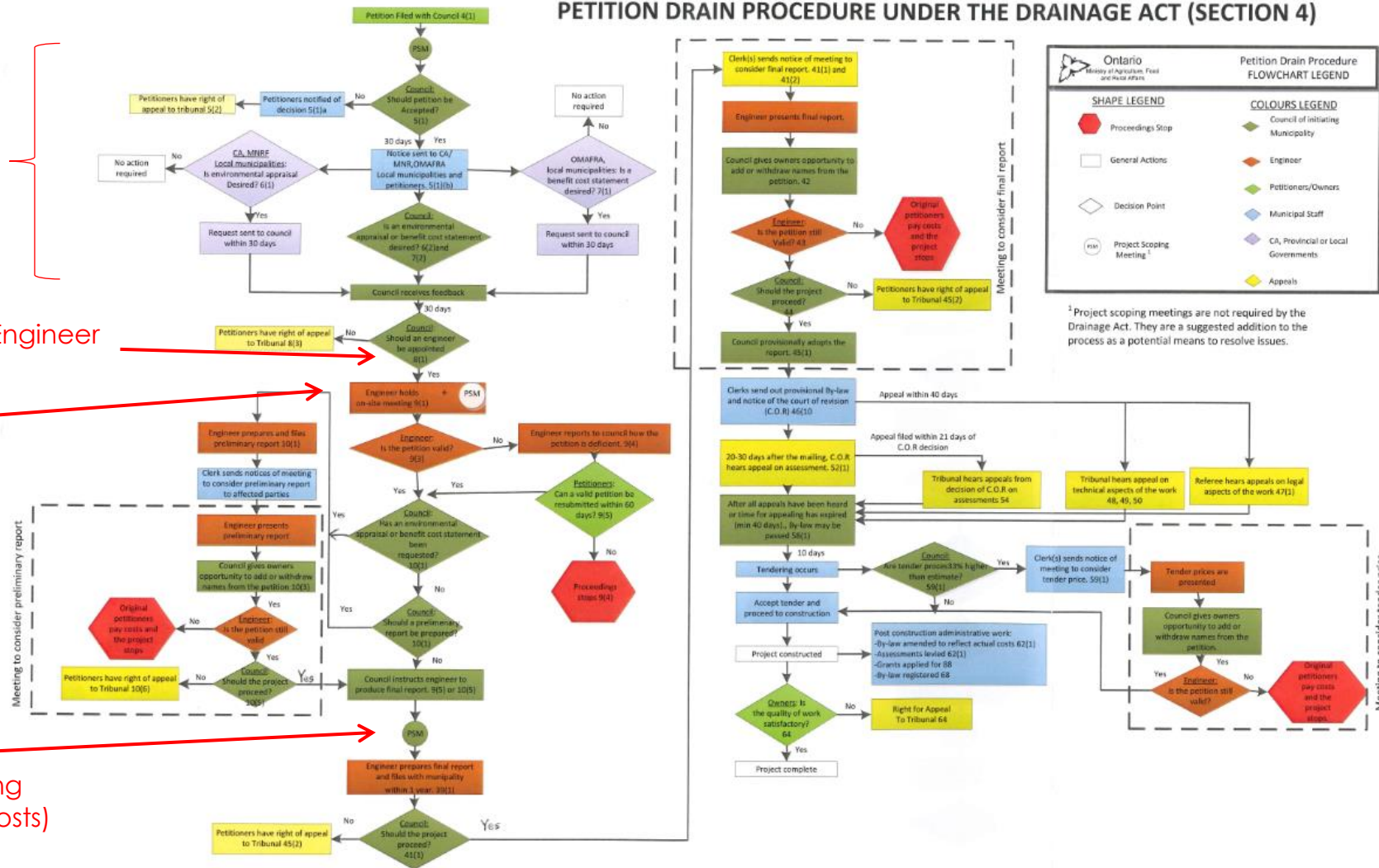


DRAINAGE ACT PROCESS

PETITION DRAIN PROCEDURE UNDER THE DRAINAGE ACT (SECTION 4)



¹ Project scoping meetings are not required by the Drainage Act. They are a suggested addition to the process as a potential means to resolve issues.



Project Initiation
(Spring 2019)

Council Appoints Engineer
(June 2019)

Initial Site Mtgs
(July & Oct 2019)

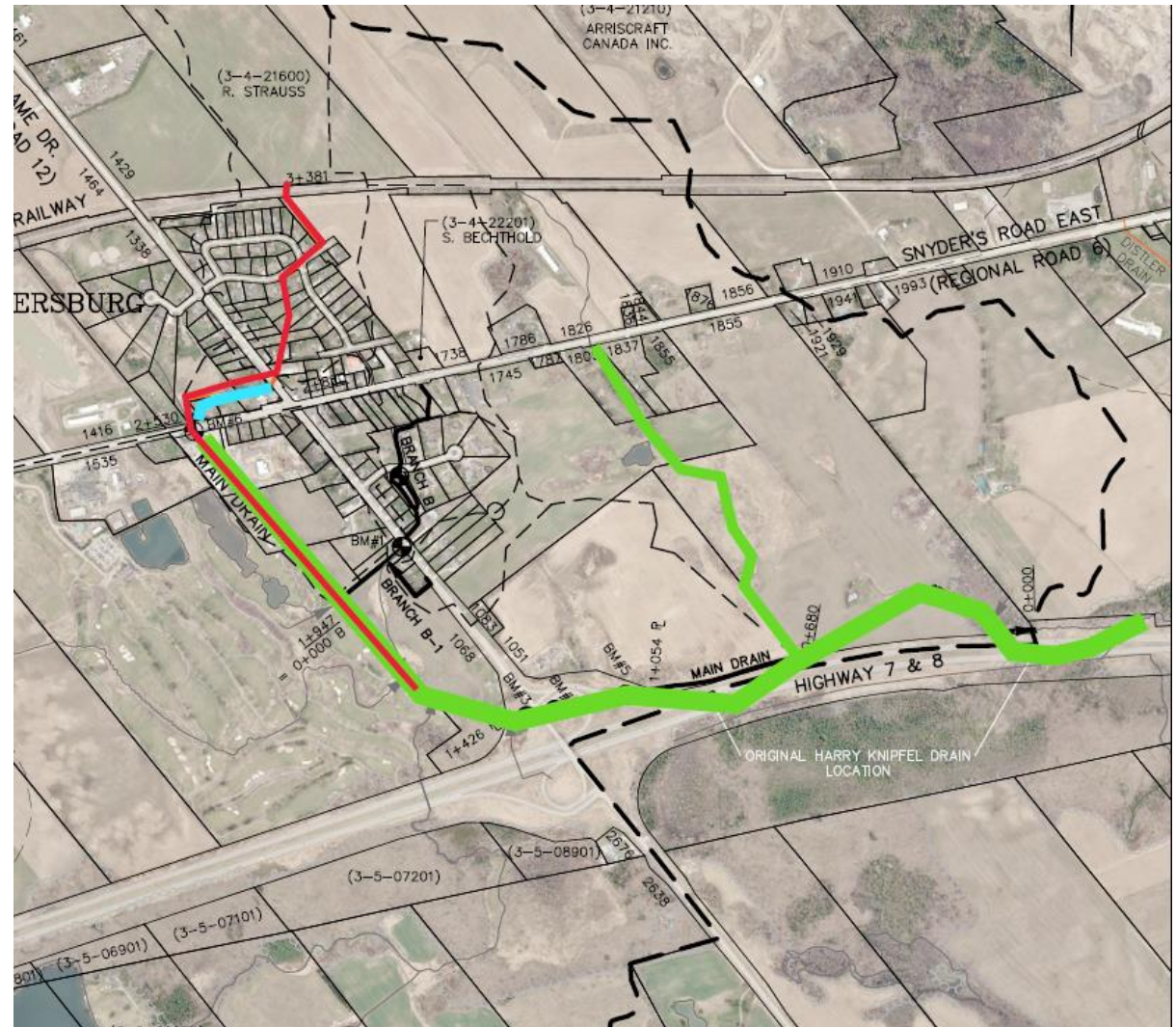
Survey, field
mtgs, design,
agency
consultation

We Are Here
Information Meeting
(Present Design, Costs)



HISTORICAL OVERVIEW

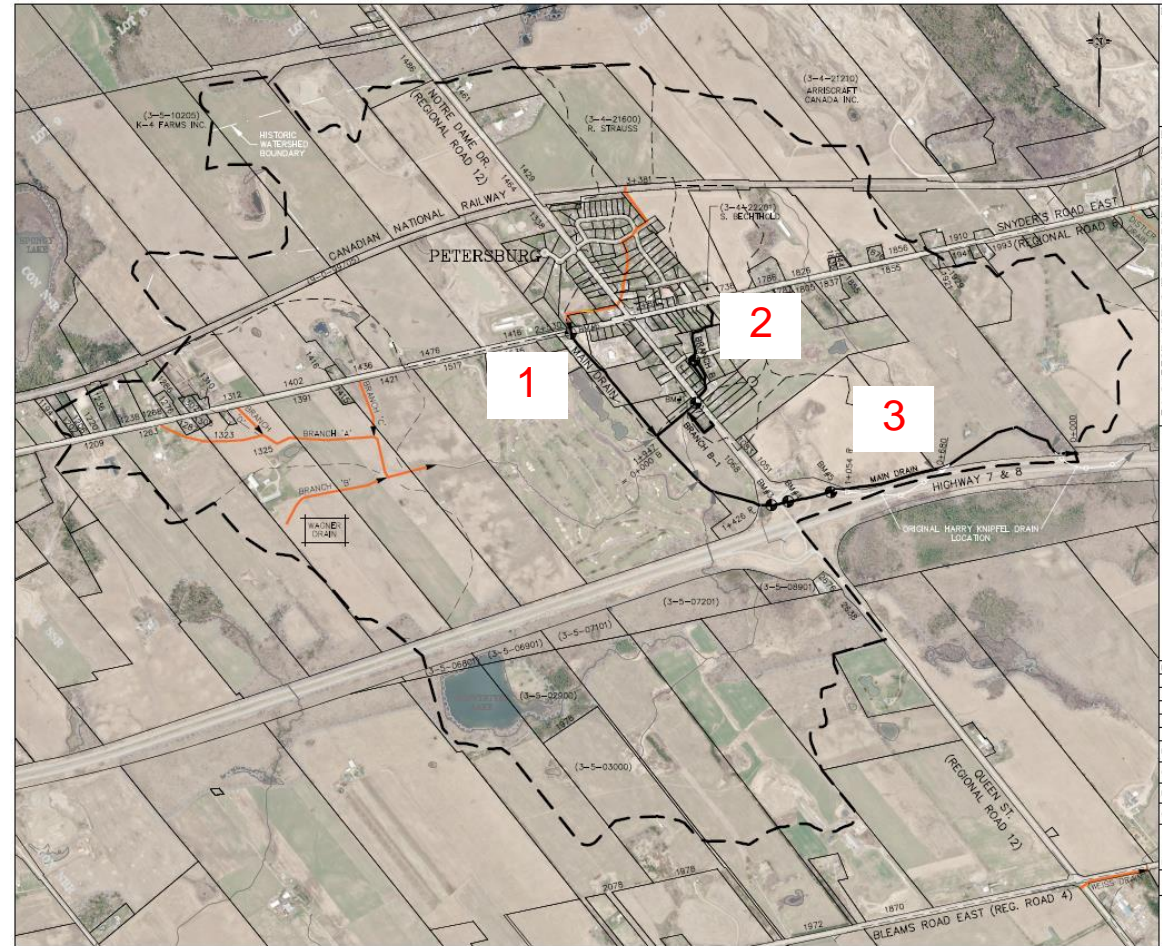
- **1944**
 - Harry Knipfel Drain by H. Johnston, P. Eng.
- **1961**
 - Petersburg Municipal Drain by C. P. Corbett, P. Eng.
- **1983**
 - Petersburg Drain 1983 by J. Kuntze, P. Eng.



INITIAL SITE MEETINGS

Initial Site Meetings

1. July 2019 – for vicinity of upstream Section 78 improvements on Main Drain
2. Oct 2019- for vicinity of Branch B per Section 4 petition
3. Aug 2021 - for vicinity of downstream Section 78 improvements on Main Drain



TAKEAWAYS

July 2019 meeting – for vicinity of upstream Section 78 improvements

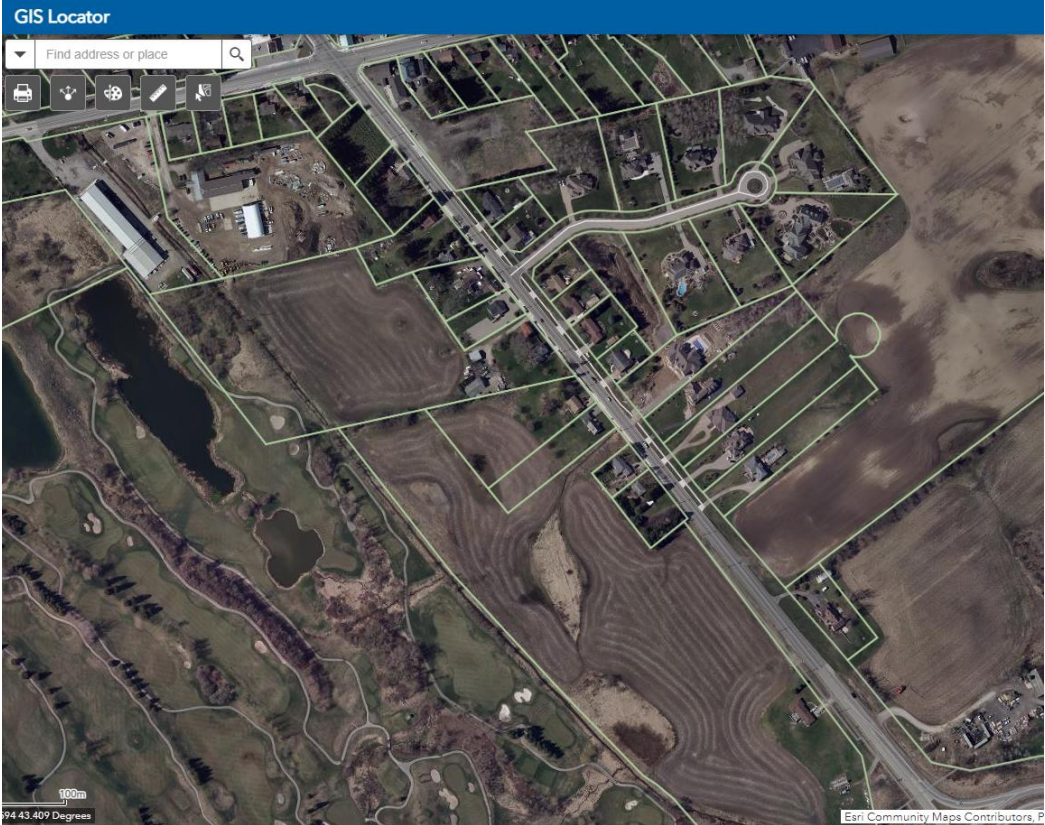


TAKEAWAYS

July 2019 meeting – for vicinity of upstream Section 78 improvements

2000

2020



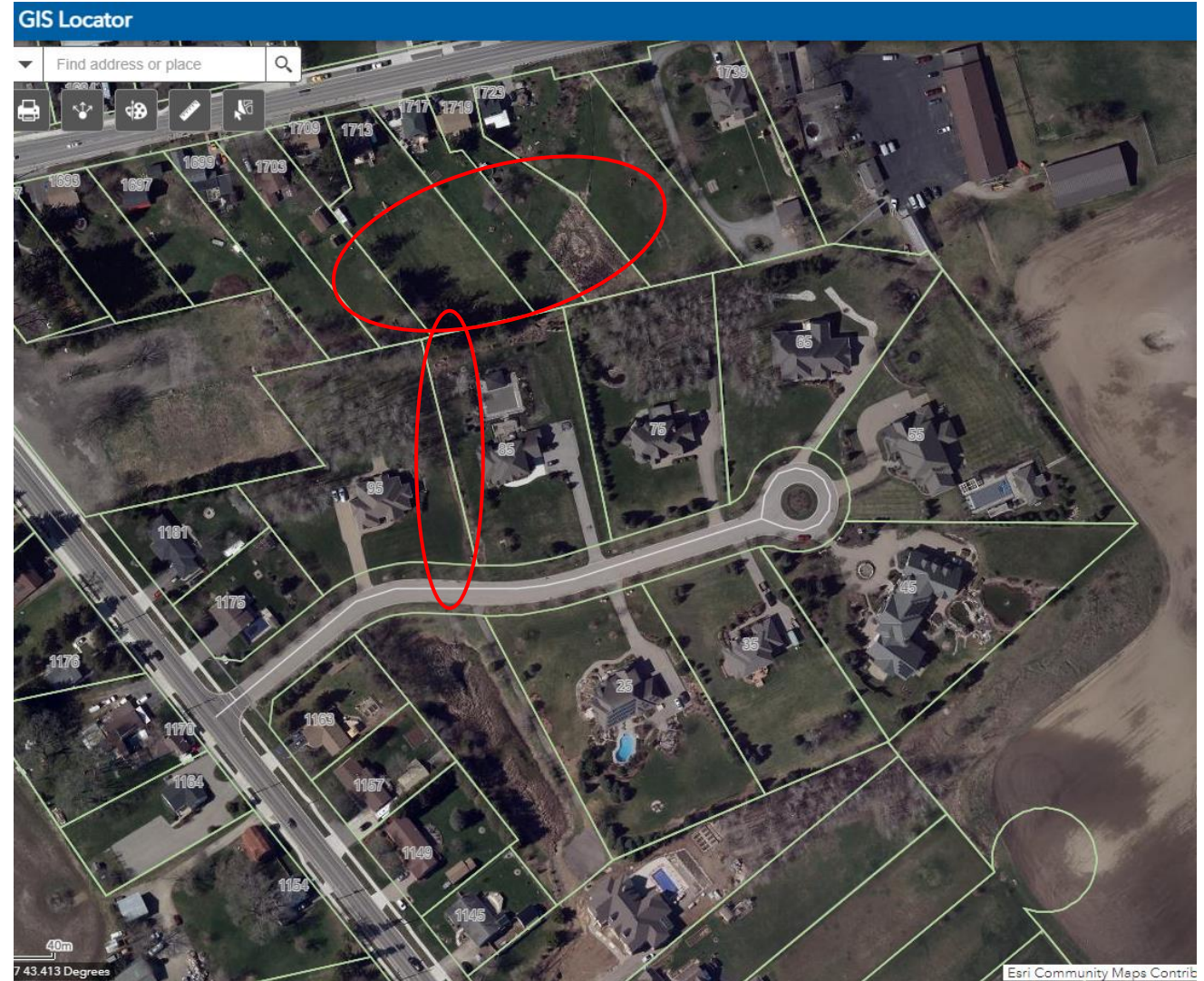
TAKEAWAYS

Oct 2019 meeting for vicinity of Branch B per Section 4 petition



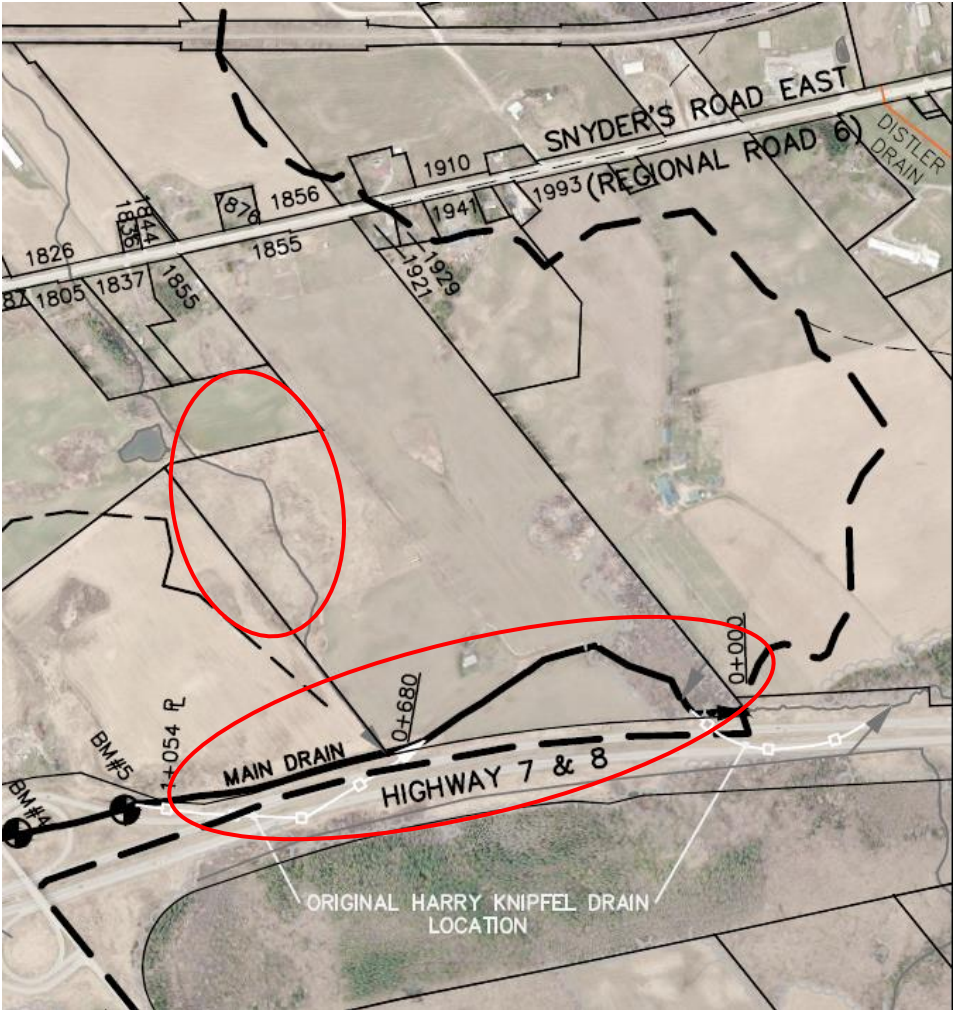
TAKEAWAYS

Oct 2019 meeting for vicinity of Branch B per Section 4 petition



TAKEAWAYS

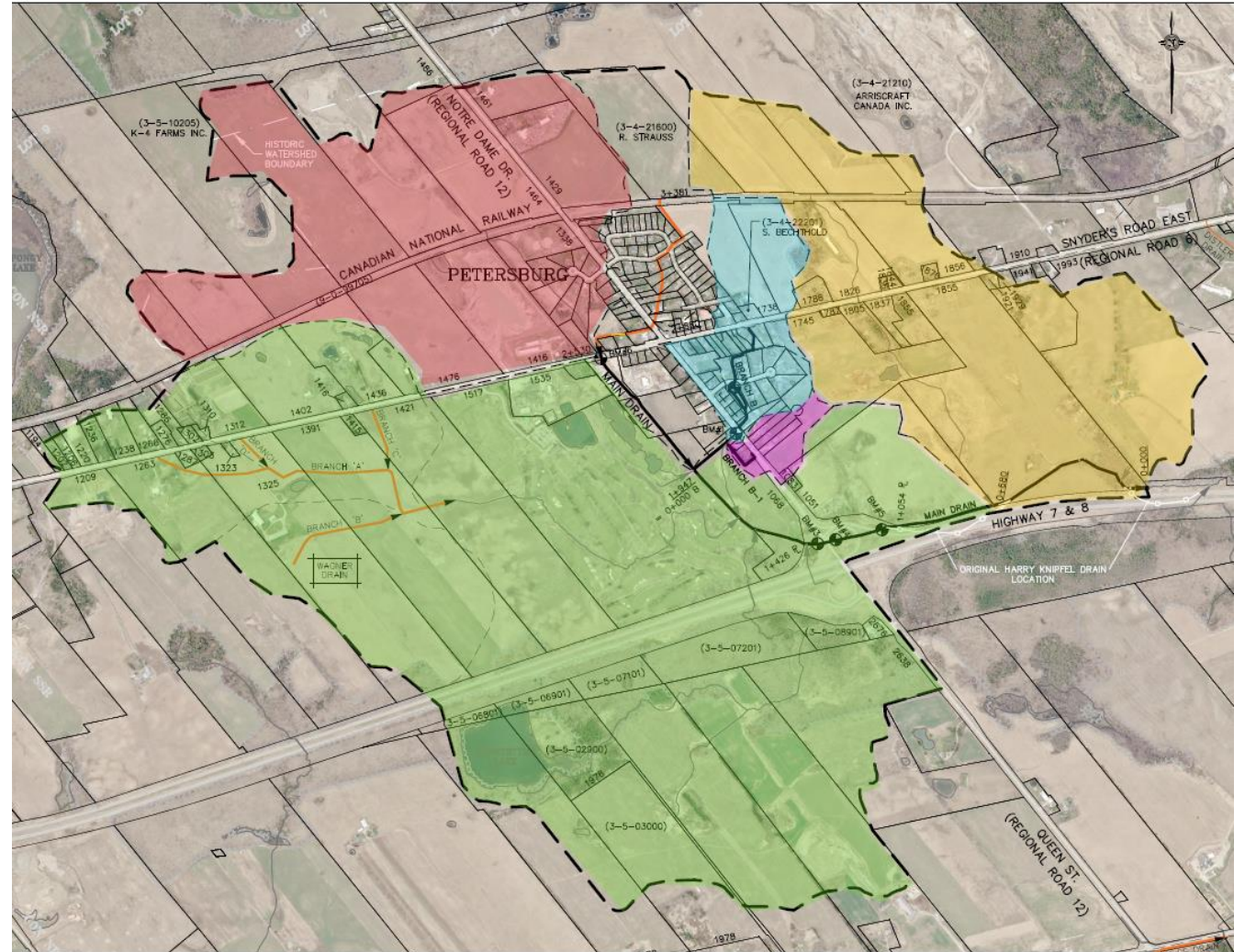
August 2021 – meeting for vicinity of downstream Section 78 improvements



SUBWATERSHED OVERVIEW

Drawings provide

- Main Drain changes
- Branch B (new)
- Branch B-1 (new)



ESTIMATED COST OF PETERSBURG DRAIN 2024

ITEM	COST
MAIN DRAIN	\$822,515
BRANCH B	\$457,115
BRANCH B-1	\$90,370
TOTAL EST.	\$1,370,000



COST SHARING per DRAINAGE ACT

- S. 21, drain cost must be assessed
- Amount of assessment generally based on 2 factors:
 - Benefit derived - ``Benefit assessment`` (S. 23)
 - Flow contribution – ``Outlet assessment`` (S. 22)
- Lands and roads assessed for the portion of the drain used.
- Increased construction cost due to road or utility is assessed to that authority per S. 26. ``Special Assessment``

ASSESSMENT CONSIDERATIONS

- Outlet assessment
 - Property size?
 - Relative runoff amount?
- Benefit assessment
 - Proximity to drainage works?
 - Does drain provide direct outlet/connection point, improved drainage or reduced erosion?
 - Does drain “cutoff” flow that would otherwise impact property?
- How much of the system does a property make use of?

ASSESSMENT CONSIDERATIONS (cont.)

- Allowances under the Drainage Act
 - Compensation to property owners for:
 - Right-of-way for construction and future maintenance (S. 29)
 - Damages to crops, fences, lawns (S. 30)
- Calculation of estimated net assessments
 - Gross Assessment – Allowances = Net Assessment
- Assessment Questions?

ASSESSMENT DISTRIBUTION

	SHARE OF COST
TOWNSHIP	12.1%
REGION	29.2%
RAILROAD	2.1%
MTO	3.7%
DITCH ENCLOSURE LANDOWNER	31.0%
ALL OTHER LANDOWNERS	21.9%

NEXT STEPS (SIMPLIFIED)

Event	Schedule Estimate
Information Meeting	Today
Follow-up landowner consultation, if required	Summer 2024
Complete design, finalize assessments, file Report	Fall 2024
Consideration of Report by Council	Late 2024
Court of Revision (ability to appeal assessments), 3 rd reading of bylaw	Early 2025
Tender and Construction	Mid/Late 2025
Township levies final cost	TBD (2026?)

Questions?

- Further information:
 - Joel Miller, P. Eng.
Project Engineer
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 - John Kuntze, P. Eng.
Drainage Superintendent
jkuntze@ksmart.ca

