THE REGIONAL MUNICIPALITY OF NIAGARA
PUBLIC WORKS COMMITTEE
AGENDA

PWC 5-2025
Tuesday, May 6, 2025
9:30 a.m.
Council Chamber - In Person and Electronic Meeting
Niagara Region Headquarters, Campbell West
1815 Sir Isaac Brock Way, Thorold, ON

To view live stream meeting proceedings, visit: niagararegion.ca/government/council

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Pages

1. CALL TO ORDER

2. LAND ACKNOWLEDGEMENT STATEMENT

3. DISCLOSURES OF PECUNIARY INTEREST

4. PRESENTATIONS

5. DELEGATIONS

6. ITEMS FOR CONSIDERATION

6.4 PW 19-2025 — 25 - 35
Combined Sewer Overflow Control Program – 2025 Funding Recommendations

6.5 PW 21-2025 — 36 - 45
Award of Contract 2025-T-13 Annual Strengthening and Resurfacing Program – Part 1 – Region Wide

6.6 PW 13-2025 — 46 - 51
Gross Budget Increase for Catherine Street Sewage Pumping Station Upgrades

7. CONSENT ITEMS FOR INFORMATION

7.1 PW 20-2025 — 52 - 60
2024 Reserve Water and Wastewater Treatment Capacities (and **BE CIRCULATED** to the Ministry of the Environment, Conservation and Parks and Local Area Municipalities)

8. OTHER BUSINESS

9. NEXT MEETING

The next meeting will be held on Tuesday, June 10, 2025, at 9:30 a.m. in the Council Chamber, Regional Headquarters.

10. ADJOURNMENT

If you require any accommodations for a disability in order to attend or participate in meetings or events, please contact the Accessibility Advisor at 905-980-6000 ext. 3252 (office), 289-929-8376 (cellphone) or accessibility@niagararegion.ca (email).

Subject: Contract Amendment for 2019-RFP-239 Niagara Falls Wastewater Treatment Plant Secondary Treatment and Digester Upgrades

Report to: Public Works Committee

Report date: Tuesday, May 6, 2025

Recommendations

1. That a contract amendment to increase engineering construction and design services with Environmental Infrastructure Solutions Inc. in the amount of $821,169 (including 13% HST) **BE APPROVED** for a total revised contract value of $5,106,068 (including 13% HST) for the Niagara Falls Wastewater Treatment Plant Secondary Treatment Upgrades project, in a form satisfactory to the Director of Legal and Court Services.

Key Facts

- There are sufficient funds within the capital project budget to cover this contract amendment.
- The project, originally estimated to be complete by summer of 2025, is now expected to be complete by fall 2025 owing to delays in key equipment deliveries from suppliers.
- Council approval is required pursuant to Procurement By-law 02-2016 as amended, given the cumulative value of additional work exceeds $1,000,000.
- This report seeks Council's approval to amend the Agreement with Environmental Infrastructure Solutions Inc. (EIS) for construction engineering and design services to include additional works in the amount of $528,738 (excluding HST) for additional Phase 1 construction engineering services and $197,961 (excluding HST) for Phase 2 engineering design services for a total increase of $726,699 (excluding HST).
- This complex brownfield project has faced numerous constructability challenges while maintaining operations at a live plant providing uninterrupted service and striving to meet compliance requirements. Key obstacles include asbestos abatement, difficult ground conditions affecting piling, contaminated groundwater and filtration challenges, and delays in equipment delivery.

Financial Considerations

No Additional Budget Required

There are sufficient funds within the capital project budget to cover this contact amendment.

Procurement By-law Requires Council Approval

Although the original contract was competitively bid and awarded to EIS, the required additional work is treated as a single source purchase which requires Council approval, as per Schedule B, and Section 18(a)(i) of Procurement By-law 02-2016 as amended, as the cumulative value of the contract increase is greater than $1,000,000 before taxes.

Staff recommend continuing with the current supplier, as they possess essential in-depth knowledge of the design and have been conducting site inspections since the project's inception. Their ongoing involvement has provided them with a thorough understanding of the design and key challenges, making their continued engagement crucial to ensuring consistency and project success.

The original contract award for Phase 1 design, contract administration and inspection services, and Phase 2 design services was $2,493,858 (including non-recoverable HST). Given an increase in project timelines and design complexity, the contract was increased by a total of $1,008,667 (including non-recoverable HST) between September 2020 and December 2020 by staff under delegated authority as single source purchases under the Procurement By-law 02-2016 as amended, Section 18(a)(i) and Schedule B.

A further contract increase was approved by Council in September 2022 via PW 38-2022 in the amount of $356,160 (including non-recoverable HST) for additional contract administration and inspection hours under single source Section 18(a)(i) of Procurement By-law 02-2016, as amended. The current contract increase requires Council approval given the cumulative value of the single source increases over the life of the contract are greater than $1,000,000 (excluding taxes).

Contract Amendment Required

This report seeks Council’s approval to amend the Agreement with EIS for construction engineering and design services to include additional works in the amount of $538,043 for additional Phase 1 construction engineering services and $201,445 for Phase 2

engineering design services for a total increase of $739,488 (including non-recoverable HST). The total revised value of the contract will be $4,598,173 (including non-recoverable HST).

The total approved capital budget for this project is $62,030,529. The total spent and committed on the project as of February 28, 2025, is $60,803,032 and with the contract increase of $739,488, the project costs remain within budget. A full project budget breakdown can be found in Appendix 1 to Report PW 7-2025 – Total Estimated Project Cost.

Analysis

Niagara Falls WWTP Upgrades Needed

The Niagara Falls WWTP upgrades are necessary to address the compliance challenges due to the degradation of existing treatment equipment that is beyond its useful life.

Improvements for the Niagara Falls WWTP have been ongoing since 2019 when EIS was retained through a competitive bid process 2019-RFP-239 and awarded detailed design and tendering of the Niagara Falls Wastewater Treatment Plant Secondary Treatment and Digester Upgrades-Phase 1 Design and Phase 2 Sludge Handling and Storage (Provisional) on October 22, 2019.

As noted above, the consulting assignment was extended due to increased project timelines and design complexity. Additional background on the compliance challenges and engineering consulting services can be found in Appendix 2.

This complex brownfield project has faced numerous constructability challenges while maintaining operations at a live plant and ensuring uninterrupted service. Key obstacles include asbestos abatement, difficult ground conditions affecting piling, contaminated groundwater, and filtration challenges. Additionally, long equipment lead times from suppliers have further impacted the project timeline requiring additional site inspection to ensure successful project completion.

These challenges have resulted in multiple extensions to the project completion date. The original contract completion date was June 2024 and these delays have extended project completion to the Fall of 2025.

The project requires additional project management, engineering, contract administration and inspection to ensure successful project completion.

The project website provides more details on the required WWTP upgrades.

Niagara Falls Wastewater Treatment Plant Upgrades - Niagara Region, Ontario (https://www.niagararegion.ca/projects/niagara-falls-wastewater-treatment-plant-upgrades/default.aspx).

Alternatives Reviewed

Not Recommended

Without the recommended necessary additional engineering services that include contract administration and inspection, the construction project would have to proceed without site inspection services. The absence of site inspection on a construction project can lead to significant risks and quality concerns. Without regular oversight, there is a higher chance of errors, non-compliance with design specifications, and substandard workmanship. This can result in costly rework, project delays, and potential safety hazards. Site inspections are crucial for ensuring that construction activities align with approved plans, codes, and industry standards.

Relationship to Council Strategic Priorities

This recommendation is related to the Green and Resilient Region, the Niagara Falls WWTP upgrades project is necessary to ensure sustainable investments in the infrastructure needed to provide proper treatment of wastewater which meets MECP effluent quality requirements.

Other Pertinent Reports

See Appendix 2

Prepared by:
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Manager of Capital Projects
W-WW, Public Works Department

Recommended by:
Terry Ricketts, P.Eng.
Commissioner of Public Works
Public Works Department

Submitted by:
Ron Tripp, P.Eng.
Chief Administrative Officer

This report was prepared in consultation with Tony Cimino, C.E.T., Associate Director, W-WW Engineering; Dan Ane, Senior Program Financial Specialist; Michelle Rasiulis, Manager, Purchasing Services, Jason Misner, Communication Consultant and reviewed by Phill Lambert Director W-WW and Donna Gibbs, Director of Legal and Court Services.

Appendices

Appendix 1	Total Estimated Project Cost
Appendix 2	Background for Compliance Challenges, Engineering Consulting Services, and Other Pertinent Reports

PW 7-2025 Appendix 1

Total Estimated Project Cost

Niagara Falls Wastewater Treatment Plant, Phase 1 - Secondary Treatment Upgrades and Phase 2 - Design

Total Estimated Project Cost (10SW1517)*	**Council Approved Budget Per PW 38-2022 and PW 9-2023**	**Budget Increase/ Reallocation**	**Revised Council Approved Budget**	**Expended & Committed as of 02/28/25**	**Forecast**	**Budget Remaining**
Project Element	**(A)**	**(B)**	**(C) = (A) + (B)**	**(D)**	**(E)**	**(F) = (C)-(D)-(E)**
(a) Construction (including Construction Contigency and 1.76% non-recoverable HST)	54,873,517	66,697	54,940,214	54,940,214	-	-
(b) Project Contingency	467,500	(279,491)	188,009		188,009	-
(c) Consulting Engineering Services						
i. Geotechnical Service-Quality Control	421,470	192,922	614,392	514,392	100,000	-
ii. Detailed Design / Contract Administration & Inspection	3,858,686	739,487	4,598,173	3,858,685	739,488	-
iii. Other Consulting Engineering Services	1,267,392	(184,372)	1,083,020	1,083,020	-	-
(d) Project Management (In-House) and Operations	1,141,964	(535,243)	606,721	406,721	200,000	-
Total Estimated Project Cost	**62,030,529**	**-**	**62,030,529**	**60,803,032**	**1,227,497**	**-**

Total Estimated Project Cost (10SW1517)*	**Council Approved Budget Per PW 38-2022 and PW 9-2023**	**Budget Increase/ Reallocation**	**Revised Council Approved Budget**	**Expended & Committed as of 02/28/25**	**Forecast**	**Budget Remaining**
Project Funding Sources						
Regional Reserves and Debt (includes Federal Gas Tax Funding and Federation of Canadian Municipalities Funding)	(56,145,400)		(56,145,400)	(54,920,278)	(1,225,122)	-
Capital Variance Project - Wastewater	(5,765,129)		(5,765,129)	(5,765,129)		-
Development Charges	(120,000)	-	(120,000)	(117,625)	(2,375)	-
Total Project Funding Sources	**(62,030,529)**	**-**	**(62,030,529)**	**(60,803,032)**	**(1,227,497)**	**-**

*All costs include 1.76% non-recoverable HST

Appendix 2 – Background for Compliance Challenges, Engineering Consulting Services, and Other Pertinent Reports

Compliance Challenges

The Niagara Falls WWTP has experience compliance challenges due to the degradation of existing treatment equipment which has resulted in the MECP issuing two (2) Provincial Officer Orders to the Niagara Region, two (2) written warnings from Environment and Climate Change Canada (ECCC), and a number of non-compliances/exceedances for both Provincial MECP Environmental Compliance Approvals (74 in total) and Federal Wastewater System Effluent Regulation (53 in total) from 2018 to 2024.

The poor effluent quality is a direct result of secondary treatment equipment at the plant that has passed its useful life expectancy. This results in frequent breakdowns and equipment out-of-service regularly and impacts the plant's ability to remove pollutants effectively. Despite ongoing repair and maintenance efforts, treatment efficiency was reduced by an average of 30% in 2024 due to the state of deterioration of the secondary treatment process.

Staff have been working hard to remain in compliance with all applicable regulations and work co-operatively with regulatory authorities. Degradation of existing treatment equipment has hindered staff's ability to meet regulatory requirements at the Niagara Falls WWTP. The following actions have been completed or are currently underway to address the range of exceedances at the Niagara Falls WWTP:

- A capital project is underway to replace the secondary treatment process. The new equipment is anticipated to come online by mid-2025.
- Maintenance efforts will continue to support the existing secondary treatment equipment to the extent possible.
- A polymer is being added in the primary and secondary clarifiers to optimize settling of solids and TSS removal.
- Hauled sewage receiving has been restricted to domestic sewage from sources within the City of Niagara Falls boundaries only. Specifically, barring winery waste helps to reduce CBOD and TSS loading to the facility.
- Increase sewershed monitoring activities to identify any additional pollutant loading to the facility.

Engineering Consulting Services

- Environmental Infrastructure Solutions as retained through a competitive bid process 2019-RFP-239 and awarded detailed design and tendering of the Niagara Falls Wastewater Treatment Plant Secondary Treatment and Digester Upgrades-Phase 1 Design and Phase 2 Sludge Handling and Storage (Provisional) on October 22, 2019.
- Subsequently EIS was awarded Phase 1 Secondary Treatment Construction and Inspection Services.
- The original contract competitively bid and awarded to EIS totalled $2,450,725 (excluding HST) and was subsequently increased by $991,221 (excluding HST) between September 2020 and December 2020 pursuant to the Procurement By-Law Section 18(a)(i) and Schedule B.
- Additional contract administration and inspection work by EIS of $350,000 (excluding HST) was approved by Council in September 2022 via PW 38-2022 as a single source purchase pursuant to the Procurement By-Law Section 18(a)(i) and Schedule B, which required Council approval given the cumulative value of additional work associated with the contract exceeded $1,000,000.
- Phase 1 of the upgrades involves replacing the existing Rotating Biological Contactors and other liquid treatment processes that will improve the NFWWTP performance and effluent quality with construction beginning in April 2022.
- Additional solids treatment capacity are required to support the liquid treatment upgrades; as such, Phase 2 works will increase the capacity, efficiency, and reliability of the existing solids management process. Phase 2 upgrades are currently in design.

Other Pertinent Reports

PW 9-2023 Niagara Falls Wastewater Treatment Plant Secondary Upgrades Project Green Municipal Funding Update

(https://pub-niagararegion.escribemeetings.com/Meeting.aspx?Id=4ba16d6b-1c45-4514-8372-f02f6bd2e6c5&Agenda=Merged&lang=English&Item=17&Tab=attachments)

PW 38-2022 Asbestos Remediation Associated with the Niagara Falls Wastewater Plant Secondary Treatment Upgrades

(https://pub-niagararegion.escribemeetings.com/Meeting.aspx?Id=a9972d29-13ff-4e8f-9318-aeae86a746cc&Agenda=Agenda&lang=English&Item=21&Tab=attachments)

PW 53-2021 Niagara Falls Wastewater Treatment Plant Secondary Treatment Upgrades Contract Award

(https://pub-niagararegion.escribemeetings.com/Meeting.aspx?Id=b17015c6-f064-4a98-9663-96710d69cc3c&Agenda=Merged&lang=English&Item=16&Tab=attachments)

CWCD 2024-16 Communication to Owner Niagara Falls WWTP Non-Compliance

(https://www.niagararegion.ca/council/Council%20Documents/2024/council-correspondence-dec-20-2024.pdf)

Subject: Award of Contract 2024-T-174 Welland Water Treatment Plant New Welland Canal Transmission Watermain and Merritt Street Reconstruction

Report to: Public Works Committee

Report date: May 6, 2025

Recommendations

1. That the capital budget **BE INCREASED** by $5,740,000 gross and $3,173,552 net for the Welland Water Treatment Plant New Welland Canal Transmission Watermain and Merritt Street Reconstruction and that the increase **BE FUNDED** as follows:
    - Capital Variance Project – Water: $3,173,552
    - Development Charges – Water: $2,115,701
    - Cost Sharing – City of Welland: $450,747
2. That Contract 2024-T-174 Welland Water Treatment Plant New Welland Canal Transmission Watermain and Merritt Street Reconstruction **BE AWARDED** to the lowest compliant bidder, Rankin Construction Inc. at their bid price of $14,195,540, (including 13% HST)

Key Facts

- The purpose of this report is to seek Council's approval of additional capital budget funds required to award Contract 2024-T-174 Welland Water Treatment Plant New Welland Canal Transmission Watermain and Merritt Street to Rankin Construction Inc.
- The new Welland Canal Transmission Watermain is required to replace the existing 83-year-old cast iron watermains that are past their useful life and in poor condition.
- Due to this difficult canal crossing that includes bypassing requirements, complicated geotechnical conditions and complex infrastructure challenges, the construction costs have increased from the previous design estimate and additional funds are required to award the contract.
- A public tender process resulted in two (2) bids. Rankin Construction Inc. is the lowest compliant bidder at a bid price of $12,562,425 (excluding 13% HST).
- Based on a previous design estimate, the current approved capital budget for this project is $9,420,000, including $2,200,000 in estimated cost sharing expenses with the City of Welland. The proposed capital budget adjustment of $5,740,000 is

required to complete this project resulting in the total gross capital project budget of $15,160,000.

- As set out in the Budget Control By-Law 2022-80 as amended, Council approval is required for Capital Variance requests greater than $250,000.
- Council approval is required for tender awards greater than $5,000,000, in accordance with the Purchasing By-law 02-2016, as amended.

Financial Considerations

A gross capital budget adjustment of $5,740,000 funded from the Capital Variance Project – Water $3,173,552, Development Charges – Water $2,115,701, and Cost Sharing – City of Welland $450,747, is being requested through report PW 15-2025 in order to provide sufficient funding to award the construction tender and complete the project.

- The Welland Canal Watermain Crossing (20001057) currently has an approved capital budget of $9,420,000 including $2,200,000 in cost sharing expenses with the City of Welland for design, construction, contract administration and inspection as detailed in Appendix 1 to Report PW 15-2025.
- Due to this difficult canal crossing that includes bypassing requirements, complicated geotechnical conditions and complex infrastructure challenges, the construction costs have increased from the previous design estimates and additional funds are required to complete the project.
- The total spent and committed on this capital project as of February 28, 2025, is $1,037,267. Upon approval of the proposed gross capital budget adjustment of $5,740,000, the total gross capital project budget will be $15,160,000. The total estimated project cost, after the award of Contract 2024-T-174 totalling $12,783,524 (including non-recoverable HST), is $15,160,000. A full project budget breakdown is presented in Appendix 1 to Report PW 15-2025.
- The total uncommitted balance in the Capital Variance Project – Water is approximately $13,190,000 as of February 28, 2025 which is sufficient to fund this budget increase request.
- A competitive public tender process resulted in two bids. Rankin Construction Inc.is the lowest complaint bidder at a bid price of $12,783,524 (including non-recoverable HST). Council approval is required for tender awards greater than $5,000,000, in accordance with the Purchasing By-law 02-2016, as amended.

- A cost sharing agreement with the City of Welland will be executed in advance of award and is currently with the City. No official award will be made without a signed cost sharing agreement.

Analysis

Watermain Supports Growth and Sustainability

This construction project is required to support the delivery of potable water from the Welland Water Treatment Plant (WTP) to residents and business customers in the City of Welland located west of the Welland Recreational Canal (WRC). There are three existing crossings consisting of a 750mm watermain built in 1983 and twin 400 mm cast iron mains built in 1942. The twin mains have had breaks on both sides of the WRC and have exceeded their expected service life. The new 750 mm transmission main will provide a second feed to west Welland for security of supply and support future growth, while enabling staff to decommission the 400mm cast iron mains that are beyond their useful life and in poor condition. This project will also address operational issues and maintain security of supply to the west end of Welland and the Town of Pelham.

Partnership with Welland

The Region is working in partnership with the City of Welland, and the project also includes construction of approximately 250 meters of watermain, 250 meters of sanitary sewer and 200 meters of storm sewer as well as a road reconstruction.

Additional Budget Required for Complex Project

The construction costs have increased from the previous design estimates and additional funds are required to complete the project. The current budget shortfall is due to the need for additional and complex construction methodologies, including:

- Weights to secure the watermain to the canal floor.
- Increased turbidity protection during construction for protection of the raw water intake to the Treatment Plant and turbidity monitoring.
- Inclusion of strict requirements for system bypassing; and
- Additional slope stability requirements along the canal banks.

Alternatives Reviewed

Do Nothing (not recommended): Council could direct staff to defer the project. However, this alternative would not address the 83-year-old cast iron watermains in poor condition with break history that represents potential risk for providing reliable potable water service to the existing residents of Welland and Pelham while supporting future growth. An emergency repair to this old infrastructure would be costly and challenging to complete.

Relationship to Council Strategic Priorities

The recommendations provided in this report align with Council's strategic priorities of a Green and Resilient Region, Objective 2.3: Build resiliency into our infrastructure to support growth and prepare for the impacts of climate change, and an Effective Region, and Objective 1.3: Deliver fiscally responsible and sustainable services. As recommended, replacing the existing 83-year-old cast iron watermains that are past their useful life and in poor condition will build resiliency into our infrastructure in a financially responsible manner and provide for sustainable services.

Other Pertinent Reports

None.

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Prepared by:
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Senior Project Manager, Engineering
Water-Wastewater Services

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Recommended by:
Terry Ricketts, P. Eng.
Commissioner of Public Works
Public Works Department

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Submitted by:
Ron Tripp, P.Eng.
Chief Administrative Officer

This report was prepared in consultation with Richard Gabel, P. Eng., Manager, WWW Capital Projects, Tony Cimino, C.E.T., Associate Director, W-WW Engineering; Dan Ane, Senior Program Financial Specialist; Michelle Rasiulis, Manager, Purchasing

Services, Jason Misner, Communication Consultant and reviewed by Phill Lambert Director W-WW and Donna Gibbs, Director of Legal and Court Services.

Appendices

Appendix 1 Total Estimated Project Cost

PW 15-2025 Appendix 1

Total Estimated Project Cost - Contract Award

Contract 2024-T-174 Welland Water Treatment Plant New Welland Canal Transmission Watermain and Merritt Street Reconstruction

Total Estimated Project Cost (20001057)*	**Council Approved Budget**	**Budget Increase/ Reallocation**	**Revised Council Approved Budget**	**Expended & Committed as of 02/28/25**	**Contract Award/Forecast**	**Budget Remaining**
Project Element	**(A)**	**(B)**	**(C) = (A) + (B)**	**(D)**	**(E)**	**(F) = (C)-(D)-(E)**
(a) Construction (including Construction Contigency and 1.76% non-recoverable HST)	-	-	-	-	-	-
i. Niagara Region	4,800,000	5,332,777	10,132,777	-	10,132,777	-
ii. City of Welland	2,200,000	450,747	2,650,747	-	2,650,747	-
(b) Project Contingency	2,000,000	-800,000	1,200,000	-	1,200,000	-
(c) Consulting Engineering Services	-	-	-	-	-	-
i. Detailed Design	-	444,852	444,852	444,852	-	-
ii. Contract Administration & Inspection	-	421,625	421,625	421,625	-	-
iii. Geotech/HydroGeotech	-	148,366	148,366	98,366	50,000	-
iv. Subsurface Utility Engineering	-	44,559	44,559	44,559	-	-
(d) Project Management (In-House) and Operations	240,000	-122,926	117,074	27,865	89,209	-
(e) Warranty	180,000	-180,000	-	-	-	-
Total Estimated Project Cost	**9,420,000**	**5,740,000**	**15,160,000**	**1,037,267**	**14,122,733**	**-**

Total Estimated Project Cost (20001057)*	Council Approved Budget	Budget Increase/ Reallocation	Revised Council Approved Budget	Expended & Committed as of 02/28/25	Contract Award/Forecast	Budget Remaining
Project Funding Sources						
Regional Reserves and Debt	-6,050,000		-6,050,000	-622,360	-5,427,640	-
Development Charges - Water***	-1,170,000	-2,115,701	-3,285,701	-414,907	-2,870,794	-
Capital Variance Project - Water		-3,173,552	-3,173,552	-	-3,173,552	-
Municipal Cost Sharing - City of Welland	-2,200,000	-450,747	-2,650,747	-	-2,650,747	-
Total Project Funding Sources	**-9,420,000**	**-5,740,000**	**-15,160,000**	**-1,037,267**	**-14,122,733**	**-**

*All costs include 1.76% non-recoverable HST

**Total Contract Award is equal to i) $12,562,425 before tax; ii) $12,783,524 including 1.76% non-recoverable HST; iii) $14,195,540 including 13% HST

***Applicable Development Charge (DC) funding of the proposed budget adjustment is 40% (net of cost sharing adjustment) as per the 2022 Development Charge Background Study

Subject: Award of Contract 2023-RFP-139 New Fort Erie Elevated Tank

Report to: Public Works Committee

Report date: Tuesday, May 6, 2025

Recommendations

1. That Contract 2023-RFP-139 Fort Erie Elevated Tank in the Town of Fort Erie **BE AWARDED** to Landmark Structures Co., at their bid price of $22,248,570 (including 13% HST).

Key Facts

- This report seeks Council's approval for the award of Contract 2023-RFP-139 Fort Erie Elevated Tank to Landmark Structures Co.
- A competitive Negotiated Request for Proposal (NRFP) process was conducted by staff, resulting in Landmark Structures Co. being the only compliant proponent, with a bid price of $19,689,000 (excluding HST).
- Council approval is required for awards greater than $5,000,000, in accordance with the Niagara Region Procurement By-law 02-2016, as amended.
- The total Capital Project approved budget is $23,755,000, which is sufficient to award the contract and proceed with construction.

Financial Considerations

Niagara Region initiated a competitive Negotiated Request for Proposal (NRFP) process (2023-RFP-139), on December 18, 2024, soliciting bids via the Bids and Tenders platform for the design-build construction of a 9 ML (9000 m^3) composite elevated tank located at 1886 Pettit Road, Fort Erie. The NRFP closed on February 3, 2025, with one (1) bid submission received.

Typically, contractors are hired through a Request for Tender process. However, because of the specialized expertise required for constructing an elevated water tank/tower, a qualitative procurement approach was used. An NRFP allows for changes and clarifications to the proposed construction through collaboration and problem-solving dialogue with the proponents. For high risk or highly specialized work, this

approach ensures the Region has full confidence in the contractor's approach and methods *before* awarding the contract.

The competitive Negotiated Request for Proposal (NRFP) process resulted in Landmark Structures Co. being the only compliant proponent, with a bid price of $20,035,526 (including non-recoverable HST).

Council approval is required for awards greater than $5,000,000, in accordance with the Procurement By-law 02-2016, as amended.

Budget of $23,755,000 is Sufficient to Award Contract

Capital Project 20000614 New Fort Erie Elevated Tank has a previously approved capital budget of $23,755,000. The total estimated project cost, after the award of Contract 2023-RFP-139 totaling $20,035,526 (including non-recoverable HST), remains unchanged at $23,755,000. The project has actual and committed expenditures of $938,318 as of February 28, 2025.

See Appendix 1 to Report PW 17-2025 – Total Estimated Project Cost for the full budget breakdown.

Analysis

Fort Erie Elevated Tank is an Essential Project

The Fort Erie Elevated Tank is essential to providing reliable drinking water storage and pressure within the Fort Erie drinking water system.

The Fort Erie drinking water system relies on the Central Avenue Elevated Tank and the Stevensville Reservoir for primary water storage, maintaining pressure and supply during peak demand and emergency situations. However, this existing infrastructure has reached the end of its design life, is scheduled for decommissioning, and no longer meets long-term capacity needs. To ensure reliable service and future growth, a new 9 ML (9000 m^3) composite elevated tank will be constructed at 1886 Pettit Road, Fort Erie. The new elevated tank will enhance system resiliency, ensure reliable service, and support future growth.

Construction mid-2025 to mid-2027, Phased to Minimize Service Disruption

The proposed 9 ML (9000 m^3) elevated tank, along with watermain connections and monitoring systems, will be completed as part of the construction works. The construction is sequenced in multiple phases to maintain service continuity and manage impacts at the project site.

Alternatives Reviewed

1. Proceed with the Contract Award – Staff recommend proceeding with the contract award to Landmark Structures Co. for the construction of the Fort Erie Elevated Tank. The project will enhance system resiliency, increase water storage capacity, and ensure Niagara Region continues to provide safe and reliable drinking water supply to Town of Fort Erie.

2. Postpone Construction and Undertake a New Procurement Process – This alternative is not recommended, as delaying the project could result in increased construction costs and potential service disruptions. Deferring critical infrastructure upgrades may also impact the system's ability to meet future water demand and emergency storage requirements.

Relationship to Council Strategic Priorities

This recommendation is related to the Effective Region, Objective 1.3: Deliver fiscally responsible and sustainable core services. Through asset management planning, the Fort Erie Elevated Tank project is identified as a necessary investment to support sustainable infrastructure, enhance system resiliency, and ensure the continued delivery of safe and reliable potable water to residents and businesses.

Other Pertinent Reports

None.

Prepared by:
Sahil Kakkar C.E.T., rcsi
Project Manager, Engineering
Water and Wastewater Services

Recommended by:
Terry Ricketts, P. Eng.
Commissioner of Public Works
Public Works Department

Submitted by:
Ron Tripp, P.Eng.
Chief Administrative Officer

This report was prepared in consultation with Dan Ane, Senior Program Financial Specialist, Michelle Rasiulis, Procurement Manager, Jason Misner, Communications Consultant, Michelle Miller, Manager Capital Projects, Water/Wastewater Engineering, Bart Menage, Director, Procurement and Strategic Acquisitions, and reviewed by Donna Gibbs, Director Legal and Court Services, Phill Lambert, Director, Water and Wastewater Services, Tony Cimino, Associate Director, Engineering Water/Wastewater.

Appendices

Appendix 1 Total Estimated Project Cost

PW 17-2025 Appendix 1
Total Estimated Project Cost
Award of Contract 2023-RFP-139 Fort Erie Elevated Tank

Total Estimated Project Cost (20000614)*	**Council Approved Budget**	**Budget Reallocation**	**Revised Council Approved Budget**	**Expended & Committed as of 02/28/25**	**Contract Award/Forecast**	**Budget Remaining**
Project Element	**(A)**	**(B)**	**(C) = (A) + (B)**	**(D)**	**(E)**	**(F) = (C)-(D)-(E)**
(a) Construction (including Construction Contigency and 1.76% non-recoverable HST)	19,160,000	875,526	20,035,526	-	20,035,526	-
(b) Project Contingency	2,422,166	(833,901)	1,588,265	-	1,588,265	-
(c) Property Acquisition	250,000	(250,000)	-	-	-	-
(d) Consulting Engineering Services	-	-	-	-	-	-
i. Detailed Design	1,006,000	(443,972)	562,028	562,028	-	-
ii. Contract Administration & Inspection	-	400,000	400,000	-	400,000	-
iii. Geotechnical Service-Quality Control	-	200,000	200,000	98,402	101,598	-
iv. Environmental Assessment	222,098	(47,653)	174,445	174,445	-	-
(e) Project Management (In-House) and Operations	254,736	-	254,736	62,137	192,599	-
(f) Subsurface investigation	-	100,000	100,000	41,306	58,694	-
(g) Warranty	440,000	-	440,000	-	440,000	-
Total Estimated Project Cost	**23,755,000**	**-**	**23,755,000**	**938,318**	**22,816,682**	**-**

*All costs include 1.76% non-recoverable HST

**Total Contract Award is equal to i) $19,689,000 before tax; ii) $20,035,526 including 1.76% non-recoverable HST; iii) $22,248,570 including 13% HST

Subject: Combined Sewer Overflow Control Program – 2025 Funding Recommendations

Report to: Public Works Committee

Report date: Tuesday, May 6, 2025

Recommendations

1. That staff **BE AUTHORIZED** to issue letters to award funding to Local Area Municipalities for qualifying projects as outlined in Appendix 1 of Report PW 19-2025 for funding options as set out in Appendix 2 of Report PW 19-2025 and subject to the terms and conditions outlined in Appendix 3 to Report PW 19-2025; and

2. That Local Area Municipalities **BE ADVISED** of the results of Regional funding support, as outlined in Appendix 1 to PW 19-2025.

Key Facts

- The purpose of this report is to provide recommendations and background information for the 2025 Local Area Municipality (LAM) projects proposed for funding pursuant to the Combined Sewer Overflow (CSO) Control Program and Public Works Policy PW4.S06.0.
- The CSO Control Cost Share Program has been in place since 2007 and shares funding with the LAMs for capital projects that help to mitigate the impacts of wet weather events on the region-wide sanitary system and the environment. The Region benefits from this program by gaining capacity at regionally owned sanitary trunk sewers, sewage pump stations, and wastewater treatment plants, which in return, could be used for growth without oversizing Regional infrastructure.
- Representatives of the CSO Working Group, including representatives from all Municipalities, developed administrative procedures and criteria to evaluate project submissions by LAMs in accordance with the guiding principles.
- The Region includes funding in annual budgets to support these projects. For 2025, $4,000,000 was budgeted in the Region’s Wastewater Operating Budget.
- Twenty-three (23) eligible applications representing a total of 28 eligible projects were submitted by LAMs for 2025; however, the total requested funding is more than the approved program budget of $4,000,000 by $3,297,081 for 2025 and

demonstrates high demand to address wet weather issues in sanitary collection systems.

- Twelve (12) municipal projects are recommended for funding in full, four (4) municipal projects are recommended for partial funding and 12 projects are declined for funding as outlined in Appendix 1 to Report PW 19-2025; however, they can be reconsidered, in accordance with the CSO Program Policy, following approval of the Region's 2026 budget.

Financial Considerations

A gross budget of $4,000,000 has been approved as part of the 2025 Wastewater Operating Budget for the CSO Control Cost Share program. Funding for this program is partially provided through Development Charges (DC) at 50%.

Twenty-eight (28) projects from LAMs are eligible for funding under the 2025 CSO Control Program at a total value of $7,297,081. As the total requested amount is more than the approved program budget of $4,000,000 by $3,297,081, 12 projects will not be able to be funded by the Region's CSO Control Program.

In summary, Appendix 1 to Report PW 19-2025 presents 12 municipal projects recommended for funding in full, four (4) municipal projects recommended for partial funding and 12 unfunded projects. Prior to awarding the 2025 budget, the Region had $6.0 million in outstanding commitments to eight (8) municipalities for approved, but unspent, CSO projects at 2024 year-end as illustrated in Appendix 4 to Report PW 19-2025.

As an update to PDS-C 1-2024 (Combined Sewer Overflow Control Program Update), staff closed 75 projects equating to $3,357,554 during 2024. This resulted in $1,707,331 of the encumbrances being returned to the wastewater reserve and $1,650,223 of the DC portion being returned to the DC reserve in accordance with reserve policy.

Analysis

The CSO Program was Oversubscribed to in 2025

The CSO Control Working Group collaboratively reviews the funding structure and evaluates eligible CSO cost share projects, adjusting if needed, based on present-day needs and funding priorities for different types of work. Appendix 2 to Report PW 19-2025 shows the Funding Options.

A number of local area municipalities (LAMs) submitted eligible applications for the CSO Program, including four (4) from Fort Erie, one (1) from Grimsby, two (2) from Lincoln, four (4) from Niagara Falls, one (1) from Niagara-on-the-Lake (NOTL), one (1) from Pelham, three (3) from Port Colborne, one (1) from St. Catharines, five (5) from Welland, and one (1) from West Lincoln.

The 23 eligible applications were separated into 28 individual projects eligible for funding, as per the program policy PW4.S06.0.

Regional staff reviewed the 28 eligible projects for cost-share funding. 12 projects were incorporated for full funding and four (4) projects for partial funding into the final recommendation list presented in Appendix 1 to Report PW 19-2025. Projects were awarded based on the program evaluation matrix following the CSO Control and Wet Weather Management Policy as approved by Council.

Wet Weather Flows Continue to Negatively Impact Infrastructure

Like other jurisdictions across Ontario, wet weather flows continue to negatively impact sanitary infrastructure resulting in potential basement flooding, overflows to the environment, and reduce capacity for future growth. The removal of wet weather flow and inflow and infiltration reduction is important work that needs on-going focus and support over the long term to be successful. Success of this program reduces the pressure on the capital program and reduce sanitary infrastructure expansions.

Alternatives Reviewed

No alternatives were reviewed as the approved budget was fully utilized.

Relationship to Council Strategic Priorities

This report and more specifically, the CSO program supports the Council Strategic Priority of Effective Region through innovative service delivery and collaboration with Municipal partners.

It also assists in establishing objectives of Green and Resilient Region to adopt to climate change impacts to help the current and future infrastructure be more resilient by reducing wet weather flow to gain capacity at regionally owned wastewater infrastructure and provide for growth.

Other Pertinent Reports

- Public Works Policy PW4.S06.0, September 2, 2014 – Combined Sewer Overflow Control & Wet Weather Management Policy (Please contact Niagara Region for copy of this document.)
- PDS-C 1-2024, January 10, 2024 – Combined Sewer Overflow Control Program Update

  (https://pub-niagararegion.escribemeetings.com/Meeting.aspx?Id=524e81b7-e788- 4788-b364-48a291e6c28b&Agenda=Merged&lang=English&Item=15&Tab=attachments)

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Submitted by:
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This report was prepared in consultation with, Susan White, Program Financial Specialist, Renee Muzzell, Manager, Program Financial Support, and reviewed by Donna Gibbs, Director, Legal and Court Services and Susan Dunsmore, Acting Director of Infrastructure Planning and Development Engineering.

Appendices

Appendix 1	Recommended 2025 CSO Control Program Funding Requests
Appendix 2	Funding Options
Appendix 3	CSO Control Policy Funding Conditions
Appendix 4	Summary of CSO Project Remaining Budget Encumbrances by Municipality at 2024 Year-End

Appendix 1: Recommended 2025 CSO Control Program Funding Requests

Eligible Recommended Projects with Funding

Municipality	Project Description	Category	% [1]	Project Cost	Regional Share	Recommended Regional Funding
Projects Receiving Full Funding:						
Fort Erie	Wastewater Trenchless Repair (WWTR25) - Sewer Separation Portion	1	50%	$ 550,000	$ 275,000	$ 275,000
Fort Erie	Wastewater Trenchless Repair (WWTR25) - Source Control Portion	3	60%	$ 250,000	$ 150,000	$ 150,000
Fort Erie	Wastewater Trenchless Repair (WWTR25) - Study Portion	2	60%	$ 200,000	$ 120,000	$ 120,000
Grimsby	Wastewater I&I Reduction - Drainage Area 5&7 2025	5	30%	$ 1,900,000	$ 570,000	$ 570,000
Lincoln	Ontario Street Study - Lateral Assessment & Rehab, Phase 1	2	50%	$ 725,000	$ 362,500	$ 362,500
Niagara Falls	Homewood Avenue Sewer Separation	1	40%	$ 449,100	$ 179,640	$ 179,600
NOTL	St. David's I&I Study	2	50%	$ 150,000	$ 75,000	$ 75,000
Pelham	Quaker Road Reconstruction	5	30%	$ 564,550	$ 169,365	$ 169,400
Port Colborne	Arena Sewershed Lateral Lining	5	30%	$ 500,000	$ 150,000	$ 150,000
St. Catharines	Gale Crescent Sewer Separation	1	50%	$ 1,487,400	$ 743,700	$ 743,700
Welland	Sanitary Sewer Lining & Spot Repair	5	30%	$ 1,000,000	$ 300,000	$ 300,000
West Lincoln	Sanitary Assessment, Repair & Capacity Management Strategy - Study Portion	2	50%	$ 399,000	$ 199,500	$ 199,500
Projects Receiving Partial Funding:						
Fort Erie	Wastewater Trenchless Repair (WWTR25) - R/R/R Portion [2]	5	30%	$ 1,500,000	$ 450,000	$ 106,400
Niagara Falls	Drummond Rd Reconstruction [2]	1	50%	$ 720,000	$ 360,000	$ 309,000
Niagara Falls	Maple Street Sewer Separation [3]	1	40%	$ 659,250	$ 250,200	$ 250,200
Port Colborne	Downtown Cross-Connection Investigation [2]	2	50%	$ 175,000	$ 87,500	$ 39,700
Recommended Eligible Projects Total				**$ 11,229,300**	**$ 4,442,405**	**$ 4,000,000**
2025 Regional CSO Control Program Budget						**$ 4,000,000**

Eligible Unfunded Projects

Municipality	Project Description	Category	% [1]	Project Cost	Regional Share	Recommended Regional Funding
Fort Erie	Flow Monitoring Program 2025 (FLOMON25)	2	60%	$ 425,000	$ 255,000	$ -
Fort Erie	Sanitary CCTV (SANCTV25)	2	50%	$ 205,000	$ 102,500	$ -
Fort Erie	Wastewater Trenchless Repair (WWTR24) - R/R/R Portion	5	30%	$ 864,640	$ 259,392	$ -
Lincoln	Ontario Street Design & Construction - Later Assessment & Rehab, Phase 1	5	30%	$ 820,000	$ 246,000	$ -
Niagara Falls	Burdette Drive Rehabilitation	5	30%	$ 1,020,000	$ 306,000	$ -
Port Colborne	Rosemount Area Lateral Lining	5	30%	$ 750,000	$ 225,000	$ -
Welland	Broadway Area Phase 2 Infrastructure Renewals	5	30%	$ 2,806,600	$ 841,980	$ -
Welland	Church Street Infrastructure Renewals - R/R/R Portion	5	30%	$ 574,600	$ 172,380	$ -
Welland	Church Street Infrastructure Renewals - Sewer Separation Portion	1	40%	$ 171,736	$ 68,694	$ -
Welland	First Street Infrastructure Renewals	5	30%	$ 675,300	$ 202,590	$ -
Welland	Young Street Infrastructure Renewals	5	30%	$ 549,800	$ 164,940	$ -
West Lincoln	Sanitary Assessment, Repair & Capcity Management Strategy - R/R/R Portion	5	30%	$ 34,000	$ 10,200	$ -
Eligible Unfunded Projects Total				**$ 8,896,676**	**$ 2,854,676**	**$ -**

	Total Project Cost	Total Regional	Total Regional Share
Total of All Eligible Projects	**$ 20,125,976**	**$ 7,297,081**	**$ 4,000,000**

Note [1]: Funding % share is dependent on specific project component and related work. Appendix 2 has project cost share split details

Note [2]: Project received partial funding up to the limit of the 2025 budget amount for that category.

Note [3]: Project received partial funding in 2024 due to the limit of the 2024 budget. Project will receive remaining requested funding through resubmission in 2025.

Appendix 2: Funding Options

CSO Control Program Funding Options

Project Category No.	Project Types	100% Funding Amount Priorities	Region %	Municipality %
1.	Sewer Separation	40%		
Work Examples	Disconnection of road drainage		40	60
	Disconnection of private		60	40
	Disconnection of road, previous disconnection of private or opposite		50	50
2.	Studies	15%		
Work Examples	PPCP as per the PPCP guide		50	50
	I&I and Extraneous Flow Investigation including CCTV/Smoke Dye Testing[1]		50	50
	Mandatory Flow Monitoring - Pre and Post		60	40
	Investigative work on municipal/private side		50	50
	Public education/water conservation and efficiency measures		50	50
	Sewer use by-law development/update and municipal activities		50	50
3.	Source Control - Private Side	20%		
Disconnection of roof leaders to be done by homeowners/municipalities as a prerequisite for other works on the private side.				
Work Examples	Disconnection of roof leaders		60	40
	Disconnection of weeping tiles from sanitary including application works		60	40
	Disconnection of private sump pumps		60	40
	Backflow preventer installation on sanitary		40	60
4.	Conveyance and Flow Control/Storage	15%		
Work Examples	Real-time control for detention		60	40
	In-line flow controllers design and construction (i.e. weirs)		60	40
	Off-line conveyance and pumping design and construction		60	40
	In-line/off-line storage		40	60
5.	Repair/ Rehabilitation/ Replacement of Sewers	10%		
Estimated ≥50% flow reduction during WW events				
Work Examples	Repair of sanitary/ manholes - gel sealing, spot repairs		30	70
	Spot repair lining		30	70
	Full length liner		30	70

Note [1]: CCTV inspection - only site/project specific. Regular city-wide inspections should be part of municipal O&M.

Appendix 3
CSO Control Program Terms and Funding Conditions

The terms and conditions under which funding will be offered to the successful applications, including the following:

Number	Terms and Funding Conditions
1	*Amount of Funding, Studies* - The Region shall contribute 50% of total study costs for the PPCP and I&I studies, and 60% for the Pre and Post Flow monitoring projects provided the Region participates on a committee overseeing the study and the study covers the entire area tributary to the Wastewater Treatment Plant(s) and includes both local and Regional infrastructure.
2	*Amount of Funding, Design & Construction projects* – The Region shall contribute defined percentage of the cost based on the Funding Options matrix, provided that; the facility or measure is supported by a recommendation from a current CSO study, life cycle cost comparisons of alternative solutions were undertaken and the Region agrees with the cost comparisons, the Region agrees with the 'best overall solution', and the Region participates on a committee overseeing the design.
3	*Third Party Funding* – The Region's funding shall be net of any third party funding approved for the project. If third party funding is obtained after Regional funding approval, the amount of Regional funding will be adjusted to be net of any third party funding. Payment of the funding to the Area Municipality shall be based on actual expenditures incurred up to the maximum amount approved by Regional Council based on the budget submitted with the application.
4	*Project Lead Studies* – Lead by either the Area Municipality or the Region based on a mutual agreement prior to initiation of study.
5	*Project Lead Design & Construction* – A project located in the Area Municipal wastewater system shall be managed by the Area Municipality while a project in the Regional wastewater system shall be managed by the Region. On a case-by-case basis the Region may consider managing a project in the local system, if requested by the Area Municipality.
6	*Ownership and Operation of Assets* – The ownership and operation of all new and existing assets shall remain the responsibility of the current owner. The Area Municipality, on a case by case basis, may request the Region to operate and maintain an existing or new CSO control facility on behalf of the Area Municipality on a direct charge back basis.

Number	Terms and Funding Conditions
7	*Follow up Flow Monitoring* – On a case-by-case basis, the Region may include a condition or approval of funding that requires follow up flow monitoring to assess project's effectiveness.
8	*Expiry of Funding* – Funding of a project by the Region may expire if the local Area Municipality does not invoice the Region within three (3) years of the date of funding approval by Regional Council. Also, if an Area Municipality decides not to proceed with a project, the Region may revoke funding. The Region may also withdraw funding for future phases if a project does not proceed on a continuous basis toward completion.
9	*Indemnity* – The Region, or its directors, officers, employees, agents or consultants will not be held liable as a result of providing funding for any project.
10	*Regional Recognition* – The Area Municipality is to ensure that the Region is to be acknowledged in all advertising and publicity related to the project for which funding was provided.
11	*Project Deliverables* – The Region shall receive copies of all project deliverables, including, but not limited to, reports, flow monitoring data, hydraulic modelling files, GIS layers/data, and technical memorandums.
12	*Funding Agreement* - A letter formalizing the funding in accordance with the Region's CSO Funding Policy will be issued to the Area Municipality for signature and used as the agreement to the terms and conditions of the funding.

Appendix 4: Summary of CSO Project Remaining Budget Encumbrances by Municipality at 2024 Year-End

Municipality	**2021**	**2022**	**2023**	**2024**	**Total**
Fort Erie	61,141	65,000	218,736	328,500	673,377
Grimsby	43,393	31,837	162,500	-	237,730
Lincoln	344,639	-	78,525	465,500	888,664
Niagara Falls	298,730	687,500	867,235	378,348	2,231,813
Niagara-on-the-Lake	26,550	84,452	60,000	-	171,002
Pelham	-	-	-	-	-
Port Colborne	14,636	101,607	145,000	25,000	286,242
St. Catharines	204,194	58,150	445,486	480,000	1,187,831
Thorold	-	-	-	-	-
Welland	105,313	74,532	47,508	69,678	297,031
West Lincoln	-	-	-	-	-
Total	1,098,595	1,103,078	2,024,990	1,747,025	5,973,689

Subject: Award of Contract 2025-T-13 Annual Strengthening and Resurfacing Program – Part 1 – Region Wide

Report to: Public Works Committee

Report date: Tuesday, May 6, 2025

Recommendations

1. That Contract 2025-T-13 Annual Strengthening and Resurfacing Program – Part 1 – Region Wide, **BE AWARDED** to the lowest compliant bidder, Brennan Paving – Niagara, a division of Brennan Paving & Construction Ltd., at their bid price of $6,123,647.41 (including 13% HST).

Key Facts

- The purpose of this report is to seek Council approval to award Contract 2025-T-13 Annual Strengthening and Resurfacing Program – Part 1 – Region Wide, to the lowest compliant bidder, Brennan Paving – Niagara, a division of Brennan Paving & Construction Ltd.
- The Region issued a public tender for this project and received three (3) bids. The lowest compliant bid was received from Brennan Paving – Niagara, a division of Brennan Paving & Construction Ltd., at a bid price of $5,419,157 (excluding HST).
- This project includes two main bodies of work, annual resurfacing of road segments noted in Appendix 3 to Report PW 21-2025 and safety improvements on Regional Road 83 (Carlton Street) resulting from an In-Service Road Safety Review.
- There are sufficient funds available to award this contract. $13,000,000 has been approved under capital Project 20002146 (25-Annual Roads Resurfacing Program), and a total of $1,750,000 has been approved under capital Project 20001939 (24-Road Safety Strategic Plan).
- The Purchasing By-law 02-2016, as amended, in accordance with Schedule B, requires that Council approve tender awards greater than $5,000,000.

Financial Considerations

Sufficient Funds Available to Award Tender

The purpose of this report is to seek Council approval to award Contract 2025-T-13 Annual Strengthening and Resurfacing Program – Part 1 – Region Wide, to the lowest compliant bidder, Brennan Paving – Niagara, a division of Brennan Paving & Construction Ltd., at a value of $5,514,545 (including non-recoverable HST).

- Council has approved $13,000,000 as part of the 2025 capital budget for Transportation Services under Project 20002146 (25-Annual Roads Resurfacing Program). No expenses have been made against this project to date. The anticipated funds required from Project 20002146 are $5,132,232 (including non-recoverable HST).

- Council has further approved $1,750,000 under Project 20001939 (24-Road Safety Strategic Plan) of which $750,000 was approved as part of the 2024 capital budget and $1,000,000 was approved as part of the 2025 capital budget. To date, approximately $14,000 has been expensed against this project. The anticipated funds required from Project 20001939 are $382,313 (including non-recoverable HST).

Analysis

Staff Recommend Award

The Region issued a public tender process on January 31, 2025, to obtain bids for Contract 2025-T-13 Annual Strengthening and Resurfacing Program – Part 1 – Region Wide. Niagara Region received three (3) electronic bids on February 28, 2025. All bids were compliant.

Staff recommend award of Contract 2025-T-13 Annual Strengthening and Resurfacing Program – Part 1 – Region Wide to Brennan Paving – Niagara, a division of Brennan Paving & Construction Ltd., at their bid price $5,419,157 (excluding HST) as noted in Appendix 2 to Report PW 21-2025.

Two Components of the Project: Resurfacing Works and Safety Improvements

Contract 2025-T-13 Annual Strengthening and Resurfacing Program – Part 1 – Region Wide involves two components of work:

- Resurfacing the road segments shown in Appendix 3 to Report PW 21-2025. Resurfacing increases the service life of roads by improving their structural integrity. This allows the Region to defer the larger capital investment needed to rebuild the road until a later date and realize the full-service life of Road assets.

- Safety improvements on Regional Road 83 Carlton Street between Ontario Street and Lake Street, in the City of St. Catharines, including curb bump outs, pedestrian crossovers and line marking. These improvements are a recommendation of a previously completed In-Service Road Safety Review.

Alternatives Reviewed

Do Not Award the Contract (Not Recommended), this would see the existing roadways deteriorate beyond repair, prompting the need for premature capital replacement.

Relationship to Council Strategic Priorities

The recommendation relates to the Effective Region Strategic Priority. The strategic investment in the assets in this program maximize the asset service life and value through properly timed improvements throughout the transportation network in the Niagara Region.

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Recommended by:
Terry Ricketts, P. Eng.
Commissioner Public Works
Public Works Department

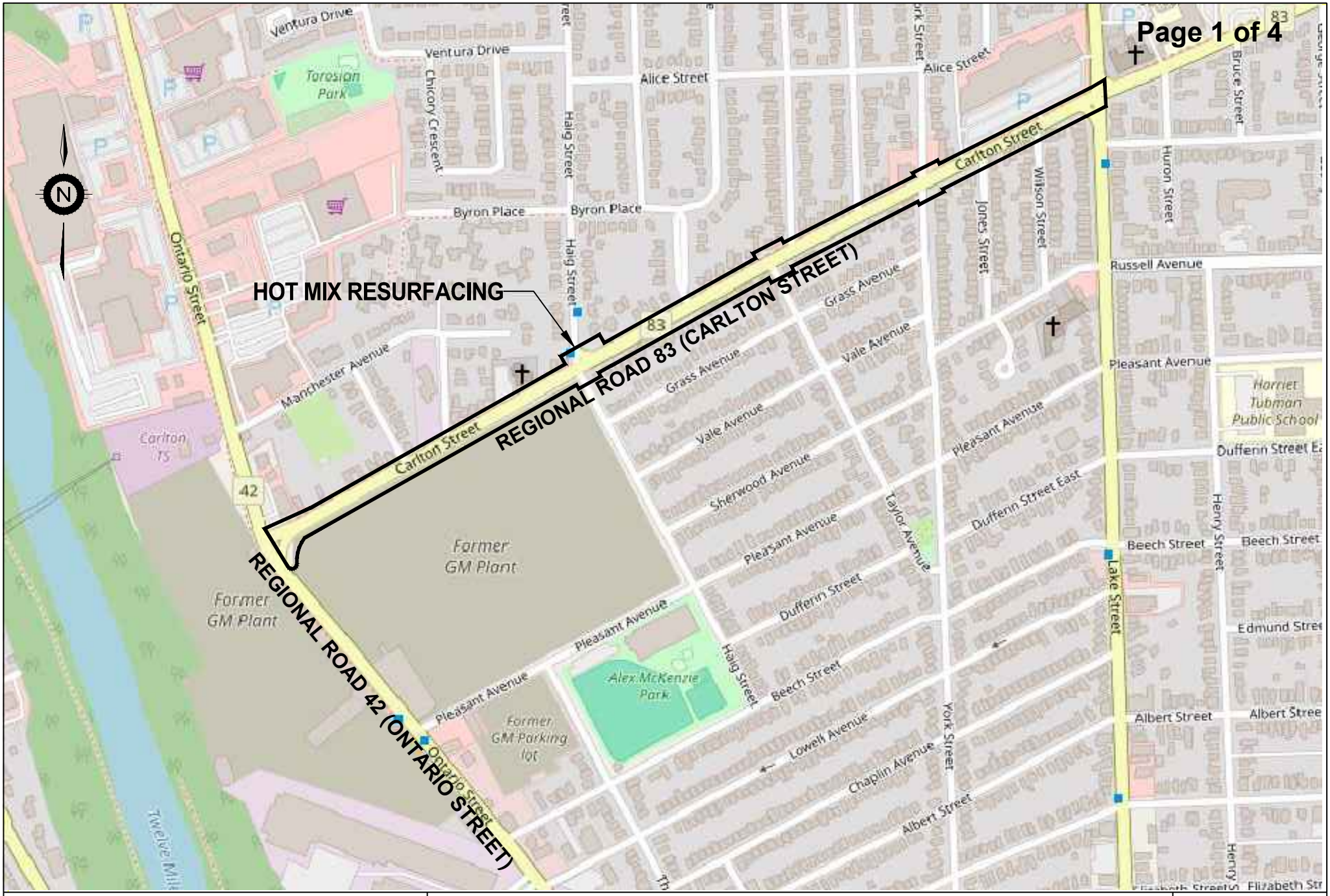
_____

Submitted by:
Ron Tripp, P. Eng.
Chief Administrative Officer

This report was prepared in consultation with Graeme Guthrie, Associate Director – Transportation Engineering, Brian McMahon, Program Financial Specialist, Michelle Rasiulis, Procurement Manager and reviewed by Frank Tassone, Director, Transportation Services.

Appendices

Appendix 1	Key Plan
Appendix 2	Summary of Bids Received
Appendix 3	Road Segments



Niagara Region

Appendix 1 PW 21-2025 HOT MIX PROGRAM 2025
REGIONAL ROAD 83 (CARLTON STREET)

From Ontario St. (RR 42) To Lake St.

IN THE CITY OF ST CATHARINES

DATE	MAR 2025
SCALE	NOT TO SCALE
REF. No.	***APPENDIX D***
DWG No.	***KEYPLAN***

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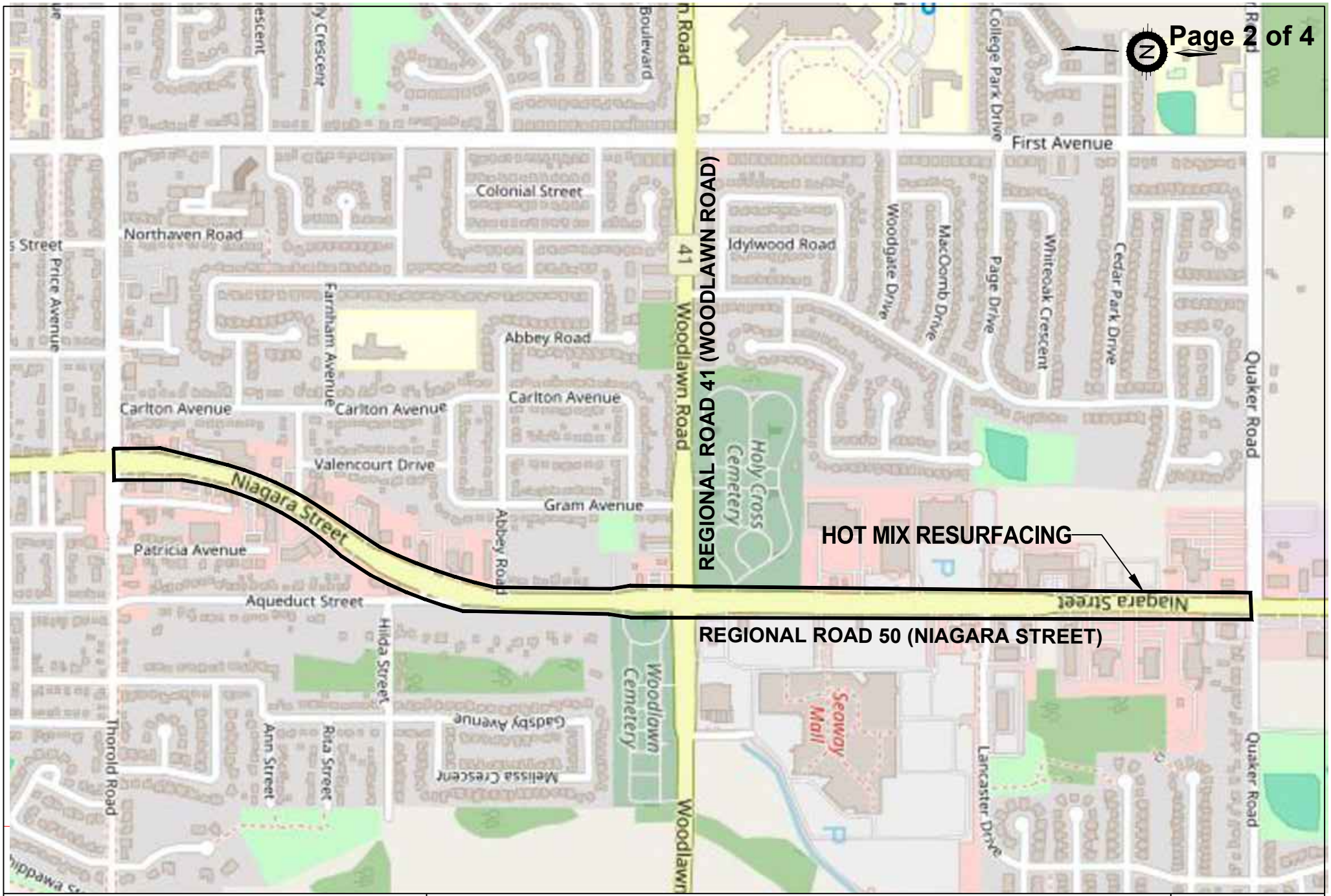

Niagara Region

Appendix 1 PW 21-2025 HOT MIX PROGRAM 2025
REGIONAL ROAD 50 (NIAGARA STREET)

From Thorold Rd. To Quaker Rd.

41 *IN THE CITY OF WELLAND*

DATE	MAR 2025
SCALE	NOT TO SCALE
REF. No.	***APPENDIX D***
DWG No.	***KEYPLAN***

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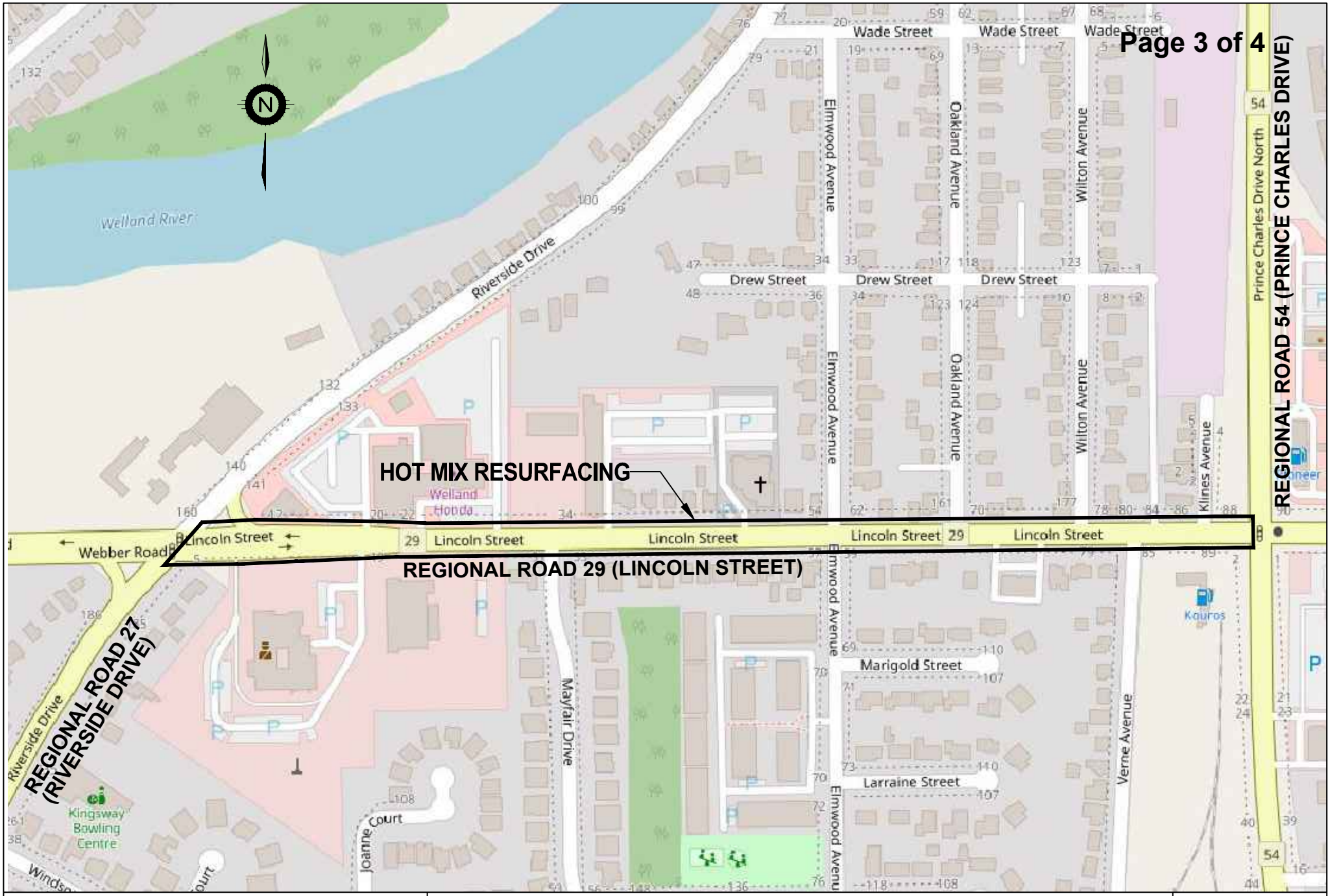

Niagara Region

Appendix 1 PW 21-2025 HOT MIX PROGRAM 2025
REGIONAL ROAD 29 (LINCOLN STREET)

From Riverside Dr. (RR 27) To Prince Charles Dr. N (RR 54)

IN THE CITY OF WELLAND

DATE	MAR 2025
SCALE	NOT TO SCALE
REF. No.	***APPENDIX D***
DWG No.	***KEYPLAN***

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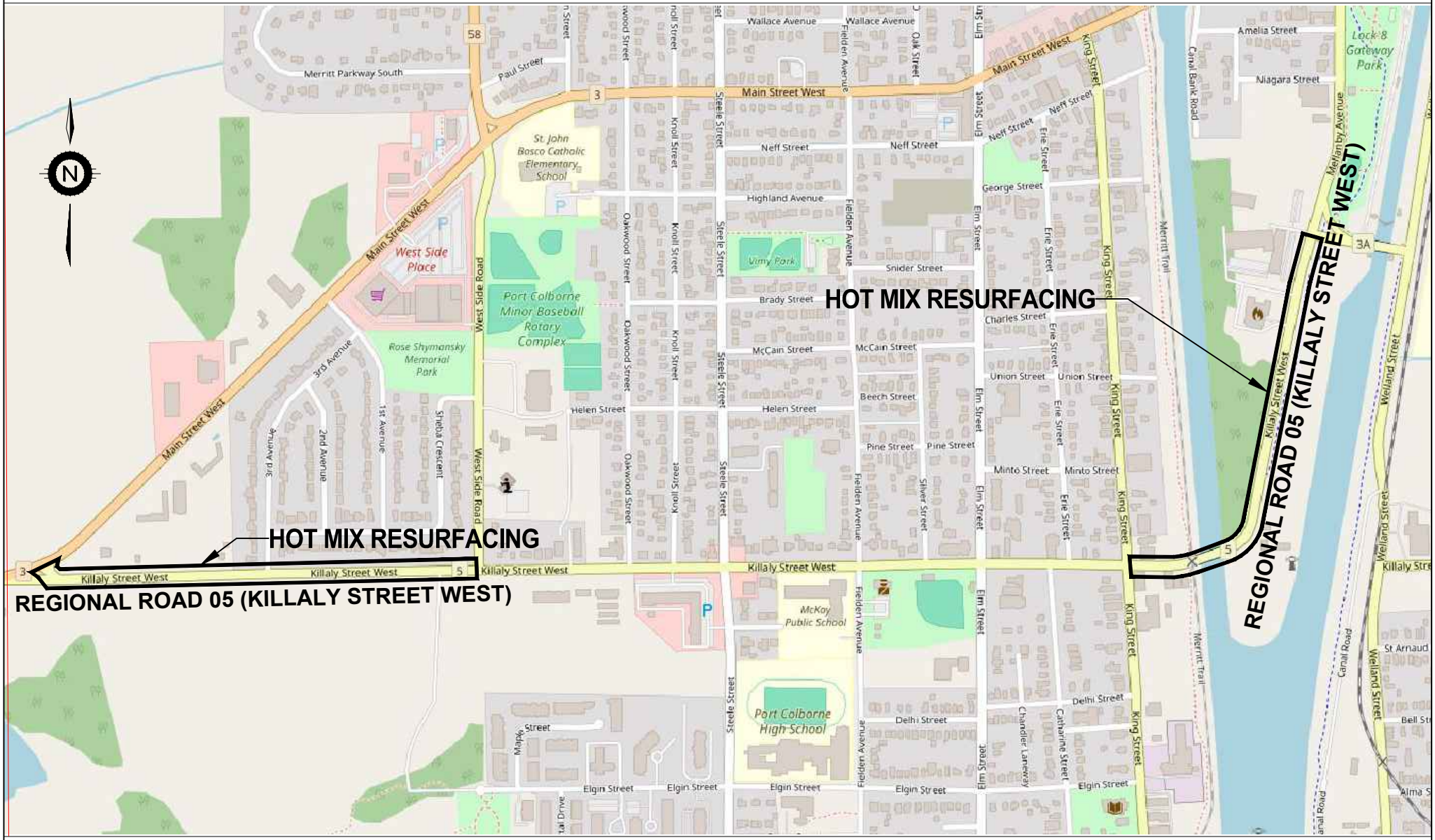

Niagara Region

Appendix 1 PW 21-2025 HOT MIX PROGRAM 2025
REGIONAL ROAD 05 (KILLALY STREET WEST)

From Main St W (RR 03) To West Side Rd and From King St To Mellanby Ave (RR 03A)

IN THE CITY OF PORT COLBORNE

DATE	MAR 2025
SCALE	NOT TO SCALE
REF. No.	***APPENDIX D***
DWG No.	***KEYPLAN***

DRAWING FILE: J:\Key Plans\E2500 Hot Mix 2025\05 Killaly St W\E2500 Killaly St W.dwg PLOTTED: Mar 12, 2025 - 10:49am PLOTTED BY: LECOMPTER

PW 21-2025 Appendix 2 Summary of Bids Received Contract Award

Contract 2025-T-13 - Annual Strengthening & Resurfacing Program – Part 1 – Region Wide

Bidder	**Tender Price (Excluding HST)**
Brennan Paving – Niagara, a division of Brennan Paving & Construction Ltd.	$5,419,157
Rankin Construction Inc.	$5,487,425
Walker Construction Limited	$7,066,212

PW 21-2025 Appendix 3

The program roads being completed as part of the 2025-T-13 Annual Strengthening and Resurfacing Program - Part 1 - Region Wide are:

Street	From	To	Municipality
050 Niagara St.	Thorold Rd.	Quaker Rd.	Welland
029 Lincoln St.	027 Riverside Dr.	054 Prince Charles Dr. N	Welland
083 Carlton St.	042 Ontario St.	Lake St.	St. Catharines
005 Killaly St. W	003 Main St. W	West Side Rd.	Port Colborne
005 Killaly St. W	King St.	03A Mellanby Ave.	Port Colborne

Subject: Gross Budget Increase for Catherine Street Sewage Pumping Station Upgrades

Report to: Public Works Committee

Report date: Tuesday, May 6, 2025

Recommendations

1. That the gross capital budget for Catherine Street Sewage Pumping Station Upgrades **BE INCREASED** by $1,140,000 and that the increase **BE FUNDED** as follows: Capital Variance Project – Wastewater - $684,000, Development Charges – Wastewater - $456,000.
2. That an increase to archaeological assessment contract with WSP Canada Inc. in the amount of $992,255 (including 13% HST) **BE APPROVED** for a total revised contract value of $1,919,021 (including 13% HST) for the Catherine Street Sewage Pumping Station project.
3. That the Commissioner of Public Works **BE AUTHORIZED** to execute the amendment to the Agreement between The Regional Municipality of Niagara and WSP Canada Inc., in a form satisfactory to the Director of Legal and Court Services.

Key Facts

- The purpose of this report is to seek Council's approval to increase the gross capital project budget for the Catherine Street Sewage Pumping Station (SPS) Upgrades by $1,140,000, and the archaeological assessment contract with WSP Canada Inc. by $992,255 (including 13% HST).
- The Catherine Street SPS in Fort Erie is in poor condition and faces increasing maintenance demands. The ongoing capital project involves building a new SPS with greater capacity on an adjacent property. The work is essential to planned development projects in the area.
- Recent findings discovered during the Stage 4 Archaeological Assessment require additional archaeological investigations, which the Region is legislatively required to complete.
- The current approved capital budget for this project is $2,688,000. Upon approval of this proposed capital budget adjustment of $1,140,000, the total gross capital project budget will be $3,828,000.

- The additional work required to be completed by WSP Canada Inc. is treated as a single source purchase pursuant to the Procurement By-law and requires Council approval given that cumulative value of the additional work is greater than $1,000,000. Given the critical stage and progress of this work, continuation by the existing vendor is a paramount consideration.

Financial Considerations

The Catherine Street SPS project (20000729) has an approved capital budget of $2,688,000 consisting of: $500,000 for property acquisition (2018), $200,000 for the environmental assessment (2020), $400,000 for design (2022), $988,000 for Stage 4 investigation (2024 via PW 14-2024), and $600,000 for detailed design (2025). The project has expended and committed $2,396,174 to date. Costs incurred to date have been primarily for property acquisition, environmental assessment, and Stage 1 to 4 Archaeological Assessments.

Recent findings discovered during the Stage 4 Archaeological Assessment require additional archaeological investigations at an estimated cost of $1,431,826. The available uncommitted project budget of $291,826 (prior to approval of this budget increase request) will be allocated to the additional archaeological investigations and disbursements, leaving the remaining need for a $1,140,000 gross budget increase. Should this gross capital budget increase request be approved, the total gross capital project budget will be $3,828,000. As of March 14, 2025, the Capital Variance Project – Wastewater has a balance of approximately $12,037,000 which is sufficient to fund this budget request.

As noted, the 2025 Capital Budget approved an additional $600,000 originally intended for the project’s detailed design. Given that the budget intended for detailed design is being partially reallocated to complete additional archaeological investigations, additional funds for the project’s detailed design work and construction will be requested in future budgets once the archaeological work is complete.

All figures noted in the Financial Considerations section of Report PW 13-2025 include non-recoverable HST. A full breakdown cost can be found in Appendix 1 to Report PW 13-2025 - Total Estimated Project Cost.

Analysis

Due to findings during the Stage 4 Archaeological Assessment, the Region is legislatively required to complete additional archaeological investigation work. Detailed

documentation and mapping including a comprehensive report outlining findings and compliance measures are required to be submitted to the Ministry of Citizenship and Multiculturalism (MCM) and First Nations Governments and Community Organizations later this year, following completion of the required work. Staff will provide Council with a further update once this further information is available.

The continuation of the additional Archaeological Investigations by WSP Canada Inc. is supportable as a single source in accordance with the Procurement By-Law 02-2016, under both Sections 18 (a)(i) and (iv); by reason of the fact that there is an underlying urgency to the completion of the work underway in order to meet the required timelines; and continuation of the work by WSP is critical given their familiarity with the site and the active Stage 4 Archaeological Assessment strategies in development, including the ongoing engagement with Indigenous Governments and Community Organizations and coordination with MCM, to support the Region's fulfillment of its legislative obligations.

Alternatives Reviewed

No alternatives were reviewed as the Region is legislatively required to complete the Stage 4 Archaeological Assessment and associated works.

Relationship to Council Strategic Priorities

This recommendation supports Council's strategic priorities of a Green and Resilient Region, Objective 2.3: Build resiliency into our regional infrastructure to support growth and prepare for the impacts of climate change, and an Effective Region, Objective 1.3: Deliver fiscally responsible and sustainable services.

Other Pertinent Reports

PW 14-2024 Gross Budget Increase for Catherine Street Sewage Pumping Station Upgrades – Stage 4 Archaeological Assessment

(https://pub-niagararegion.escribemeetings.com/Meeting.aspx?Id=7af9be26-6779-40cd-a63a-de5d4602fe13&Agenda=Merged&lang=English&Item=17&Tab=attachments)

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Recommended by:
Terry Ricketts, P.Eng.
Commissioner of Public Works
Public Works Department

Submitted by:
Ron Tripp, P.Eng.
Chief Administrative Officer

This report was prepared in consultation with Phill Lambert, Director, Water and Wastewater Services, Tony Cimino, Associate Director, Engineering Water-Wastewater, Dan Ane, Senior Program Financial Specialist, Michelle Rasiulis, Procurement Manager, Purchasing and Strategic Acquisitions and Donna Gibbs, Director, Legal and Court Services.

Appendices

Appendix 1	Total Estimated Project Cost
Appendix 2	Site Location Map

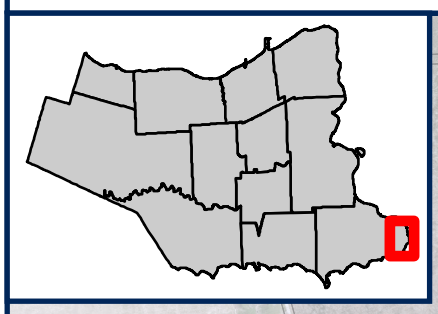
Total Estimated Project Cost (20000729)*	**Approved Council Budget per PW 14-2024**	**Approved Additional 2025 Capital Budget Funds**	**Budget Increase/ Reallocation**	**Revised Council Approved Budget**	**Expended & Committed as of 3/14/25**	**Forecast**	**Budget Remaining**
Project Element	**(A)**	**(B)**	**(C)**	**(D) = (A) + (B) + (C)**	**(E)**	**(F)**	**(G) = (D)-(E)-(F)**
(a) Project Contingency	200,000	90,000	(3,635)	286,365	-	286,365	-
(b) Property Acquisition	393,955	-	-	393,955	393,955	-	-
(c) Consulting Engineering Services	-	-	-	-	-	-	-
i. Detailed Design	-	468,000	(442,560)	25,440	-	25,440	-
ii. Environmental Assessment	172,000	-	(4,925)	167,075	167,075	-	-
(d) Project Management (In-House) and Operations	73,737	42,000	(3,901)	111,836	69,097	42,739	-
(e) Subsurface investigation	1,241,191	-	1,596,421	2,837,612	1,760,330	1,077,282	-
(f) Miscellaneous	7,117	-	(1,400)	5,717	5,717	-	-
Total Estimated Project Cost	**2,088,000**	**600,000**	**1,140,000**	**3,828,000**	**2,396,174**	**1,431,826**	**-**
Project Funding Sources							
Regional Reserves & debt	(220,000)	(360,000)	-	(580,000)	(580,000)	-	-
Capital Variance Project - Wastewater	(553,280)	-	(684,000)	(1,237,280)	(553,280)	(684,000)	-
Development Charges - Wastewater	(1,314,720)	(240,000)	(456,000)	(2,010,720)	(1,262,894)	(747,826)	-
Total Project Funding Sources	**(2,088,000)**	**(600,000)**	**(1,140,000)**	**(3,828,000)**	**(2,396,174)**	**(1,431,826)**	**-**

*All costs include 1.76% non-recoverable HST

Niagara Region

PW 14-2024 Appendix 2 - Site Location Map

Catherine St. S.P.S. & Lakeshore Rd. S.P.S. Catchment Areas



Legend

- Force Main
- Sanitary Gravity Pipe
- LAM Sanitary Gravity Main

RMoN San SPS Catchments

- Alliston Ave. S.P.S.
- Anger Avenue W.W.T.P.
- Bardol S.P.S.
- Catherine St. S.P.S.
- Dominion Rd. S.P.S.
- Lakeshore Rd. S.P.S.
- Rose Ave. S.P.S.
- Thompson Rd. S.P.S.

Anger Ave. W.W.T.P.

Thompson Road S.P.S.

Catherine St. S.P.S.

Alliston Ave S.P.S.

Lakeshore Rd. S.P.S. (Fort Erie)

Dominion Road S.P.S.

Bardol S.P.S.

Bowen Road

Highland Avenue

Phipps Street

Dufferin Street

Jarvis Street

Lewis Street

Central Avenue

Niagara Boulevard

Gilmore Road

Catherine Street

Douglas Street

North Street

Bertie Street

Queen Elizabeth Way

Concession Road

Thompson Road

Kraft Road

Helena Street

Alfred Street

Albany Street

Lakeshore Road

Dominion Road

0 250 500 1,000m

Subject: 2024 Reserve Water and Wastewater Treatment Capacities

Report to: Public Works Committee

Report date: Tuesday, May 6, 2025

Recommendations

1. That Report PW 20-2025 **BE RECEIVED** for information; and

2. That Report PW 20-2025 **BE CIRCULATED** to the Ministry of the Environment, Conservation and Parks and Local Area Municipalities.

Key Facts

- The purpose of this report is to inform Council about the reserve treatment capacities at Niagara Region's Water and Wastewater Treatment Plants. This desktop analysis is required by the Ministry of Environment, Conservation and Parks (MECP).
- The data contained in this report contributes to the review of new development proposals and related servicing, as well as long-term planning for future treatment capacity.
- The results of this capacity assessment indicate that all of Niagara Region's Water Treatment Plants (WTPs) and Wastewater Treatment Plants (WWTPs) have sufficient capacity to accommodate growth beyond the minimum 10-year planning horizon.
- This conclusion is based on the Region’s current infrastructure plan, which includes the construction of the new South Niagara Wastewater Treatment Plant to expand overall capacity.
- The assessment also assumes that existing treatment facilities will be maintained or refurbished as needed to remain fully operational.
- Additionally, the analysis is based on design capacity, and does not account for the impact of wet weather flows. Peak wet weather conditions may limit sanitary sewer capacity. As such, ongoing efforts to reduce wet weather flows are critical to supporting future development.
- The Region’s Master Servicing Plan builds upon the MECP desktop analysis by incorporating relevant local factors, including wet weather impacts, to provide a more comprehensive, real-world assessment of capacity.

Financial Considerations

There are no direct financial implications related to this report.

Analysis

Annual Wastewater Treatment Capacity Report Required by MECP

The purpose of this report is to inform Council of the reserve treatment capacities at Niagara Region's Water and Wastewater Treatment Plants. This reporting is required by the Ministry of Environment, Conservation and Parks (MECP) and is intended to highlight potential capacity constraints to help municipalities plan for infrastructure projects needed to service anticipated growth.

This desktop exercise follows a specific methodology established by the MECP, which involves comparing five-year average flows to the respective MECP Environmental Compliance Approval(s), formerly known as Certificate of Approval(s) for each facility. It then incorporates 10-year growth forecasts from the most recent MSP into the analysis.

This methodology reflects the Region’s current infrastructure plan, which includes the construction of the new South Niagara Wastewater Treatment Plant to expand overall capacity. It also assumes that existing treatment facilities will be maintained or upgraded as needed to remain fully operational. Additionally, the assessment is based on design capacity and does not account for the impact of wet weather flows.

The Region’s Master Servicing Plan builds on the MECP analysis by incorporating wet weather flow impacts, as well as phasing and staging strategy work with the Region’s local municipal partners to fully define development capacity needs.

All Plants have 10 Year+ Available Design Capacity

The results of this desktop average flow capacity assessment indicate that the design capacity of all Niagara Region Water Treatment Plants (WTPs) and Wastewater Treatment Plants (WWTPs) is sufficient to accommodate growth beyond the minimum 10-year planning horizon.

Appendices 1 and 2 provide annual average daily flows and five-year average flows from 2020 to 2024 for the water and wastewater treatment plants, respectively. Appendices 3 and 4 provide a summary of Niagara’s six (6) water treatment facilities and 11 wastewater treatment facilities presenting their respective reserve capacities.

The reserve capacity calculations are based on the Region's official long-range population and employment forecasts. It is important to note that actual growth rates in recent years have exceeded these forecasts. Because higher-than-expected growth can impact the accuracy of this desktop exercise, Regional staff will review growth trends annually and adjust the forecasted growth rates used in reserve capacity calculations as needed.

Risks that Reduce Available Treatment Capacity

It is important to note that the results of this capacity assessment, calculated according to MECP requirements, do not fully reflect real-world operating conditions. The assessment assumes dry weather flows, no constraints within the conveyance system, and that all existing equipment is properly maintained.

In practice, precipitation—particularly rainwater—can reduce the available capacity of municipal wastewater systems. Because rainwater does not require the same level of treatment as sewage, it should be directed to the stormwater system. However, when rainwater enters the sanitary collection system, it consumes capacity intended for sewage and future growth. As such, ongoing efforts to reduce wet weather flows are essential to alleviating system limitations and enabling future development.

Additionally, this assessment does not account for operational deficiencies or risks related to the condition of existing assets at treatment plants or within trunk conveyance and transmission systems. While not addressed in detail in this report, infrastructure failures could significantly impact the Region's ability to support new development or permit servicing extensions.

Alternatives Reviewed

No alternatives were reviewed as this report is a requirement of the MECP.

Relationship to Council Strategic Priorities

The report aligns directly with Council's Priority of Responsible Growth and Infrastructure Planning by forecasting the reserve capacity available for growth at all Regional Water and Wastewater Treatment Facilities. By understanding reserve capacity, the Region can better plan infrastructure needed for growth.

The report also provides MECP and local municipal partners operational summary and reserve capacity projections for Region's Water and Wastewater Treatment facilities.

Other Pertinent Reports

PDS 16-2024, May 8, 2024, 2023 Reserve Water and Wastewater Treatment Capacities (https://pub-niagararegion.escribemeetings.com/Meeting.aspx?Id=b480eb56-6bb4-466f-982d-31237205b6be&Agenda=Merged&lang=English&Item=16&Tab=attachments)

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Chief Administrative Officer

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Appendices

Appendix 1	Annual Average Daily Flow 2020 to 2024 WTP
Appendix 2	Annual Average Daily Flow 2020 to 2024 WWTP
Appendix 3	Water Reserve Capacity Calculations for 2024
Appendix 4	Wastewater Reserve Capacity Calculations for 2024

Appendix 1: Water Treatment Plant Annual Average Daily Flow 2020 - 2024

Water Treatment Plant (WTP)	Rated Capacity (m^3/d)	2020 Average Daily Flow (m3/d)	2021 Average Daily Flow (m3/d)	2022 Average Daily Flow (m3/d)	2023 Average Daily Flow (m3/d)	2024 Average Daily Flow (m3/d)	5 Year Average 2020 / 24	3 Year Average 2022 / 24
Decew Falls WTP	227,300	53,390	50,824	52,970	52,830	56,714	53,346	52,900
Grimsby WTP	44,000	15,726	14,872	14,809	14,610	14,814	14,966	14,709
Niagara Falls WTP	145,584	40,145	40,125	42,164	43,050	43,228	41,742	42,607
Port Colborne WTP	36,000	6,870	6,387	6,953	8,310	8,014	7,307	7,631
Rosehill WTP	50,026	11,024	11,710	13,025	12,710	12,540	12,202	12,868
Welland WTP	65,000	24,670	24,675	24,162	24,100	24,860	24,493	24,131

Appendix 2: Wastewater Treatment Plant Annual Average Daily Flow 2020 - 2024

Wastewater Treatment Plant (WWTP)	Rated Capacity (m^3/d)	2020 Average Daily Flow (m3/d)	2021 Average Daily Flow (m3/d)	2022 Average Daily Flow (m3/d)	2023 Average Daily Flow (m3/d)	2024 Average Daily Flow (m3/d)	5 Year Average 2020 / 24	3 Year Average 2022 / 24
Anger Avenue WWTP	24,500	15,146	13,580	13,171	12,992	12,084	13,395	12,749
Baker Road WWTP	31,280	20,910	17,952	17,081	23,700	22,100	20,348	20,960
Crystal Beach WWTP	9,100	6,276	5,688	5,256	5,423	4,865	5,501	5,181
Niagara Falls WWTP	68,300	41,360	35,242	35,197	42,902	41,748	39,290	39,949
NOTL WWTP	8,000	5,237	5,142	5,602	6,823	6,217	5,804	6,214
Port Dalhousie WWTP	61,350	36,681	34,113	31,793	29,176	27,416	31,836	29,462
Port Weller WWTP	56,180	39,211	33,751	33,176	38,024	36,429	36,118	35,876
Queenston WWTP	500	213	135	142	225	175	178	181
Seaway WWTP	19,600	13,472	11,299	10,200	11,391	9,519	11,176	10,370
Stevensville/Douglastown	2,289	1,729	1,592	1,552	1,479	1,400	1,550	1,477
Welland WWTP	54,550	37,137	33,617	34,288	39,800	34,801	35,929	36,296

Appendix 3: Water Treatment Plant Reserve Capacities for 2024

Water Treatment Plant (WTP)	Permit to Take Water [1] m^3/d	Rated Treatment Capacity m^3/d	Theoretical Ave Day Capacity m^3/d	90% of Ave Day Capacity [2] m^3/d	5-Year Ave Day Flow m^3/d	Peaking Factor	Total Capacity Used	Reserve Treatment Capacity 90% m^3/d	Design Flow Rate [3] 246 Lcd	Reserve Serviceable Population Equivalents	10-Year Forecast Population Res & Emp	Surplus Population 10-Year Projection
DeCew Falls	227,000	227,300	152,040	136,836	53,346	1.495	35%	83,491	246	339,393	30,223	309,170
Grimsby	44,000	44,000	26,699	24,029	14,966	1.648	56%	9,063	246	36,841	17,037	19,804
Niagara Falls	145,500	145,584	97,511	87,760	41,742	1.493	43%	46,018	246	187,063	28,700	158,363
Port Colborne	45,500	36,000	21,858	19,672	7,307	1.647	33%	12,365	246	50,265	2,032	48,233
Rosehill	78,000	50,026	32,089	28,879	12,202	1.559	38%	16,678	246	67,796	7,151	60,645
Welland	110,000	65,000	43,218	38,896	24,493	1.504	57%	14,403	246	58,548	18,388	40,160

Note 1: Original MOE approved quantity of raw water permitted (Permit To Take Water).

Note 2: Region's 2021 W&WW MSP requires planning process for expansion when plant capacity exceeds 80%, and expansion should be completed when capacity exceeds 90%.

Note 3: Region's 2021 W&WW MSP new design criteria calls for 240 Lcd residential consumption and 270 Led employment consumption. This is equivalent to 246 Lcd for both, using the 79% and 21% residential and employment share, respectively.

Appendix 4: Wastewater Treatment Plant Reserve Capacity for 2024

Wastewater Treatment Plant (WWTP)	MECP Rated Capacity m^3/d	90% of Plant Capacity[1] m^3/d	5-Year Average Daily Flow m^3/d	Total Capacity Used	Reserve Treatment 90% Capacity m^3/d	Design Flow Rate [2] 356 Lcd	Reserve Serviceable Population Equivalents	10-Year Forecast Population Res & Emp	Surplus Population 10-Year Projection
Anger Avenue (Fort Erie)	24,500	22,050	13,395	55%	8,655	356	24,312	4,730	19,582
Baker Road (Grimsby)	31,280	28,152	20,348	65%	7,804	356	21,920	20,442	1,478
Crystal Beach (Fort Erie)	9,100	8,190	5,501	60%	2,689	356	7,552	1,081	6,471
Niagara Falls [3]	68,300	61,470	39,290	58%	22,180	356	62,305	22,309	39,996
NOTL	8,000	7,200	5,804	73%	1,396	356	3,920	1,036	2,884
Port Dalhousie (St. Catharines)	61,350	55,215	31,836	52%	23,379	356	65,672	13,784	51,888
Port Weller (St. Catharines)	56,180	50,562	36,118	64%	14,444	356	40,572	9,392	31,180
Queenston (NOTL) [4]	500	450	178	36%	272	356	764	34	730
Seaway (Port Colborne)	19,600	17,640	11,176	57%	6,464	356	18,157	2,008	16,149
Stevensville/Douglastown	2,289	2,060	1,550	68%	510	356	1,432	994	438
Welland	54,550	49,095	35,929	66%	13,166	356	36,984	18,235	18,749

Note 1: Region's 2021 W&WW MSP requires planning process for expansion when plant capacity exceeds 80%, and expansion should be completed when capacity exceeds 90%.

Note 2: Region's 2021 W&WW MSP new design criteria calls for 255 Lcd residential and 310 Led employment generation rate including 90 Lcd of extraneous flow allowance. An equivalent of 356 Lcd is applied using 80% and 20% for residential and employment growth share, respectively.

Note 3: The Niagara Falls WWTP assessment includes the sewage flows from the St. David's area of Niagara-on-the-Lake.

Note 4: The Queenston WWTP in Niagara-on-the-Lake has a unique capacity commitment of 226 m^3/d for the following properties: Niagara Parks Commission (75 m^3/d), Niagara Falls Bridge Commission (63 m^3/d), Shalamar Campground (38 m^3/d) and Ontario Power Generation (50 m^3/d). Due to these commitments and limited UAB, limited residential growth is expected within the next 10 years within the tributary area.