

Report to Council

Department:	Infrastructure Services	
Division:	Capital Works and Asset Management	
Date:	June 17, 2024	
Prepared by:	David McBeth, C.E.T. Manager, Capital Works and Asset Management	
Report Number:	Capital Works and Asset Management-2024-08	
Subject:	Essex Centre Storm Sewers	
Number of Pages:	5 + 75 page Report + Section 22 Form	

Recommendation(s)

That Capital Works and Asset Management Report-2024-08 entitled **"Essex Centre Storm Sewers"** by David McBeth, Manager, Capital Work & Asset Management, dated June 17th, 2024, be received.

That Council receive the "Essex Town Centre Storm Drainage System Study" prepared by Stantec Consulting Ltd. dated April 29th, 2024.

That Council appoint Stantec Consulting Ltd. to provide engineering services to design the storm sewers for Phase 1 of the Rush Catchment Area Improvements, including some watermain and asphalt trail design in accordance with the completed request under Section 22 of the Town of Essex Procurement By-law 2129 for a total cost of \$427,900.80, including non-refundable HST.

Purpose

This report is being presented to provide the recommendations from the storm sewer modeling study in Essex Centre completed by Stantec Consulting Ltd. in 2023 and to proceed with the first phase of improvements to the Rush Catchment Area.

Council's approval is also required to waive the requirement for proposals, tender and quotations for consulting and professional services under Section 22.02 of the Town's Procurement and Disposal of Goods and Services By-Law.

Background and Discussion

Last year, Stantec Consulting Ltd. was hired to verify and calibrate the existing storm sewer model previously completed by this firm. This resulted in a several months long study including rainfall and flow monitoring completed in specific locations around Essex Centre.

Using this data a hydrological and hydraulic analysis was completed and capacity assessment was performed based on storm return periods ranging from a 1:2 year to 1:100 year events. Once this information was calibrated and verified, Stantec was able to determine the capacity of the existing storm sewers for each catchment area (refer to Figure 2.1 in the attached report), which are broken down in the following catchments:

- South Talbot Catchment
- Maidstone Catchment
- Rush Catchment
- Hopgood Catchment
- Arner Townline Catchment

From the report, it was identified that the majority of the catchment areas met the servicing requirements for the minor storm scenario being a 1:2 year event, however, based on their

findings, improvements are required to the South Talbot, Maidstone and Rush Catchment areas to address the risk of potential basement flooding and surface ponding during the 1:5 year to 1:100 year rain events.

However, based on the modeling information, Stantec Consulting Ltd. showed that the Rush Catchment Area, shown in brown in the figure attached, is an area of the Town that is deficient in capacity for a 1:5-year storm event. This catchment would require improvements to hydraulic capacity to address the risk of flooding on the following streets: Brock Street, Thomas Street, College Street, and Harvey Street.

Stantec assessed several alternatives for improvements to the catchment areas before coming to a recommended solutions for the Town of Essex, which included increasing hydraulic capacity of the existing storm sewers and the implementation of additional storm water management ponds.

Within the report, Stantec Consulting provided the following recommendations to the Rush Catchment Area:

Location	Description of Improvements
Bell Avenue Harvey Avenue to Maidstone Avenue	Realign (lower invert)
Maidstone Avenue Bell Avenue to 492 Maidstone Avenue	Realign (lower invert)Upgrade from 750 mm and 900 mm
Maidstone Avenue125 Maidstone Avenue to 137 Maidstone Avenue	Realign (raise invert)Upgrade from 750 mm and 1050 mm
Maidstone Avenue Under public trail	Realign (raise invert) Upgrade from 900 mm and 1050 mm
Local Sewers on Albert Street, Harvey Street, and Brock Street	Replace in the future when other supplementary infrastructure projects occur

There are many areas and recommendations within this report that need to be addressed over the future years and will be assessed in the future Servicing Masterplan approved by Council in the 2024 Capital Budget. However, Administration is recommending that plans to improve the Rush Catchment area be started now as the Town has upcoming projects in this area that will be impacted by these improvements, namely, the Maidstone-Talbot intersection improvements and CWATS trail on Maidstone Avenue from Highway 3 to Talbot Street North.

The Town is currently completing a feasibility study for the CWATS asphalt trail system, which would be utilized in this design by Stantec from Allen Avenue to the limits of the Maidstone-Talbot intersection improvements. The remaining trail from Highway 3 to Allen Avenue, is planned to be included in the engineering designed as part South Talbot Road and Maidstone Avenue intersection improvements approved by Council in the 2024 Capital Budget.

Phase 1 of the Rush Catchment areas capacity needs are highlighted in orange in the table above. The remaining future improvements to the area along Bell Avenue and the other local roads, including Thomas Street, Brock Street, Harvey Street, Albert Street and Medora Avenue will proceed in future years based on future capital budgets and capital forecasting.

Administration is recommending that the engineering design be completed for Phase 1 in 2024, with construction anticipated to occur in conjunction with the Maidstone/Talbot Street intersection project. The cost provided by Stantec Consulting for engineering design of the Phase 1 improvements is \$427,900.80 including non-refundable HST.

With Stantec's knowledge of the Town's storm sewers based on the study completed, and the historical data from hosting and operating the Town's storm sewer model, Administration is recommending sole sourcing this engineering design project to Stantec Consulting Limited.

Financial Impact

As per the 2024 approved Capital Budget, \$450,000.00 has been allocated for the Storm Sewer Rehabilitation Program (PW-24-0015), therefore, the cost from Stantec to complete the detailed engineering design is within the project budget.

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Consultations

Kate Giurissevich, CPA, CA, Director, Corporate Services/Treasurer Kevin Girard, Director, Infrastructure Services

Link to Strategic Priorities

- Embrace asset management best practices to build, maintain, and continuously improve our municipally owned infrastructure.
- Leverage our Town's competitive advantages to promote jobs and economic investment.
- Take care of our natural environment and strengthen the sense of belonging to everyone who makes Essex "home".
- Deliver friendly customer service in an efficient, effective, and transparent manner while providing an exceptional working environment for our employees.
- Build corporate-level and community-level climate resilience through community engagement and partnership and corporate objectives.

Report Approval Details

Document Title:	Essex Centre Storm Sewers - Capital Works and Asset Management-2024-08.docx
Attachments:	- Final-Essex Town Centre Storm Drainage System Study.pdf - Procurement Section 22 - 2024 Storm Sewers.pdf
Final Approval Date:	Jun 11, 2024

This report and all of its attachments were approved and signed as outlined below:



Kevin Girard, Director, Infrastructure Services - Jun 10, 2024 - 5:55 PM

Kate Giurissevich, Director, Corporate Services - Jun 11, 2024 - 10:25 AM

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Doug Sweet, Chief Administrative Officer - Jun 11, 2024 - 10:46 AM