



Staff Report for Council Meeting

Date of Meeting: January 27, 2021

Report Number: SRPI.21.007

Department: Planning and Infrastructure Department

Division: Infrastructure and Engineering Services

**Subject: SRPI.21.007 - Mill Street and Altamira Road
Drainage Investigation, Capital Budget Approval**

Purpose:

To establish a 2021 capital budget for a drainage investigation of the existing Mill Street and Altamira Road residential area.

Recommendation(s):

- a) That a capital budget of \$95,000 be approved for a drainage investigation and interim drainage improvements for the existing Mill Street and Altamira Road residential area; and
- b) That the work be funded from the Water Quality Protection Reserve Fund.

Contact Person:

Jeff Walters, Manager, Development Engineering (Subdivisions and Stormwater Management), 905 -747-6380.

Report Approval:

Submitted by: Kelvin Kwan, Commissioner of Planning and Infrastructure Department

Approved by: Mary-Anne Dempster, City Manager

All reports are electronically reviewed and/or approved by the Division Director, Treasurer (as required), City Solicitor (as required), Commissioner and City Manager. Details of the reports approval are attached.

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Background:

A number of drainage complaints from the property owners along Mill Street have been received with respect to private property flooding during storm events.

The focus of these complaints to date has been the condition of an existing drainage ditch along the east side of the lot of 231 Mill Street, which also extends north through a rear property belonging to 217 Mill Street. The existing ditch carries this storm drainage and discharges it to an existing culvert pipe at the south end of 231 and 225 Mill Street, which then outlets to the existing municipal storm sewer on Mill Street. The location of this existing drainage ditch and the storm sewers are shown on Map A.

The condition and performance of the existing ditch has changed over time with the construction of a new home at 231 Mill Street as well as a lack of maintenance. Staff have historically addressed this issue through the City's site alteration by-law process by requiring the property owners to maintain and make adjustments to the ditch on this property in order to restore it to an acceptable condition to ensure it functions as intended. However, upon further investigation, it has been determined that the conveyance of storm water in this specific area is more complex because the ditch also receives drainage from the neighbourhood to the north via a municipal storm sewer outlet from Altamira Road.

Based on the investigations of contributing drainage flows, staff believe it is appropriate to undertake a municipal drainage investigation for this overall area.

Historically, Altamira Road was a rural cross-section, and the flows conveyed through these properties came from the ditches along Altamira Road. However, in 2007, Altamira Road was reconstructed and urbanized with storm sewers. These storm sewers continued to rely on this outlet, and conveyance of flows to Mill Street via the existing ditch through these properties. However, with the urbanization of Altamira Road, the flow now outletting into this ditch may have also changed. In addition, as this neighborhood has redeveloped over time, flows from these newer residential areas also appears to be relying on the Altamira Storm System and this outlet, and may be further contributing to the flows in this ditch.

During more severe rainfall events, it appears that a combination of the ditch condition as well as the storm drainage flows from the contributing areas (including Altamira Drive) result in the capacity of the existing ditch being exceeded, causing significant flooding and ponding of water within the existing rear yards of 225 and 217 Mill Street. The City has recently received a claim from 217 Mill Street for damages associated with one of these flooding events, which is currently being handled by the City's Risk Management section.

Based on the drainage complaints received and the information discovered through recent investigations of contributing drainage flows, staff believe it is appropriate to undertake a municipal drainage investigation for this overall area.

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This investigation will help to confirm the peak flows contributing to the area, and this ditch, under minor and major storm events and will evaluate the conveyance capacity of the existing ditch and downstream sewer system. If required, the investigation will also evaluate and make recommendations for alternative improvements to the existing system to safely convey storm events through this residential area.

Such recommendations may require the conveyance of easements from the property owners to allow the City to own and maintain the storm infrastructure in the future, and will identify the costs associated with any of these improvements. This will help to inform future capital budget requests and land acquisition, should the implementation of a drainage solution be identified. Should improvements be required, Staff will develop a separate business case through the capital budget process for any necessary easement acquisitions and capital budgets for the project.

The budget request to undertake a drainage investigation will address the periodic flooding in the immediate and broader area to assist the residents and mitigate exposure to the City.

The timing of these complaints and the completion of staff's detailed investigations did not align with the timing of the 2021 capital budget process, and this request could not be included as part of that process. Staff are requesting approval of a capital budget to retain a roster consultant to undertake this drainage investigation, which is anticipated to be completed within the next 4 to 6 months. Starting the drainage investigation this year would allow completion of the investigation and its findings to inform the capital budget process for 2022, if physical improvements are identified and necessary.

The drainage investigation will inform the City Wide Stormwater Network Model that is currently underway.

As part of the City's infrastructure planning, a City Wide Stormwater Network Model is underway that once operational will be used to identify similar storm water conveyance issues in these older residential areas throughout the City, minimizing the need and scope for these types of investigations in the future.

There are two main phases for this project: (1) computer model development and calibration, and (2) computer model application and capital project prioritization. In future years, as a subsequent phase, the models will be used to inform master plans for stormwater systems and will provide staff with the information needed to manage these systems over their lifespan, and specifically to identify the actions necessary to sustain these services and to invest funds in a more sustainable approach. Furthermore the network model will have the added benefit of producing a tool that will allow staff to evaluate future capacity and risk scenarios in consideration of growth and intensification.

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The budget request includes interim improvements to the existing drainage ditch to help reduce risks while the drainage investigation is underway.

In the interim, staff have also proceeded to produce a topographic survey of the existing ditch to evaluate the current drainage situation and recommend minor temporary drainage system improvements to help reduce the risk of flooding in this area. As municipal drainage contributes to this residential area, staff propose to fund these interim drainage improvements from the same capital budget until the drainage investigation can be completed. Staff are requesting approval of a capital budget in the amount of \$95,000 for the drainage investigation and to fund the interim drainage improvements in this area.

These interim ditch improvements require works to be completed on private property at 217, 225, and 231 Mill Street. City staff are currently working with the property owners to execute “permission to enter” agreements in order allow works to occur on their properties and be in a position to complete these interim improvements in the spring. However, if the property owners do not voluntarily participate in the recommended temporary improvements, staff may make use of provisions in the City’s site alteration or property standards bylaws to ensure implementation.

Financial/Staffing/Other Implications:

It is recommended that a capital budget in the amount of \$95,000.00 be approved for the works noted above, and that this budget be funded from the Water Quality Protection Reserve Fund. The reserve is considered to be in good state and has a current balance of \$6.1 million.

Should the drainage study identify the need for an alternative solution, these will also require funding in the future that will be established with a separate business case through the Capital Planning process.

Relationship to the Strategic Plan:

This proposed drainage investigation relates to the Strategic Plan objective of wise management of City resources and serving as a role model for municipal management as the resolution of this drainage issue should reduce the risk of flooding and potential damages to private property and the risk to the City in receiving claims for damages.

Conclusion:

Staff recommend that a 2021 capital budget of \$95,000.00 be approved for the drainage investigation and interim drainage improvements for the Mill Street and Altamira Road residential area as outlined in this report.

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Attachments:

The following attached documents may include scanned images of appendixes, maps and photographs. If you require an alternative format, please call the contact person listed in this document.

Map A – Location of Existing Drainage System for 231 and 217 Mill Street

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Report Approval Details

Document Title:	SRPI.21.007 Mill Street and Altamira Road Drainage Investigation, Capital Budget Approval.docx
Attachments:	- SRPI.21.007 - Map A Location Map.pdf
Final Approval Date:	Jan 8, 2021

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

Dan Terzievski - Jan 8, 2021 - 9:41 AM

Paolo Masaro - Jan 8, 2021 - 10:03 AM

Task assigned to Kelvin Kwan was completed by delegate Paolo Masaro

Paolo Masaro on behalf of Kelvin Kwan - Jan 8, 2021 - 1:08 PM

David Dexter - Jan 8, 2021 - 1:19 PM

MaryAnne Dempster - Jan 8, 2021 - 1:45 PM