

Junction Creek Reconstruction and Reprofiling – Tender Award

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Recommended by:	General Manager of Growth and Infrastructure

Report Summary

This report provides a recommendation regarding the funding of the Junction Creek Improvements (DMAF) project to award the contract and proceed with construction.

Resolution

THAT the City of Greater Sudbury approve additional funding of \$7.1 million for the Junction Creek Improvements (DMAF) project by reallocating funding of \$3.5 million within this program, \$1.9 million from the Capital General Holding Reserve, and \$1.7 million from the Water Rate Holding Reserve to award Contract ENG24-42, as outlined in the report entitled “Junction Creek Reconstruction and Reprofiling – Tender Award” from the General Manager of Growth and Infrastructure, presented at City Council on March 25, 2025.

Relationship to the Strategic Plan, Health Impact Assessment and Climate Action Plans

The Junction Creek Reconstruction and Reprofiling Capital Project aligns with the strategic goals of Asset Management and Service Excellence by enhancing drainage assets and increasing stormwater conveyance to better serve the Flour Mill and Downtown areas. This project increases stormwater resiliency, reduces the risk of flooding, and lowers costs associated with flood remediation. Additionally, it helps decrease greenhouse gas emissions in accordance with the Community Energy and Emissions Plan (CEEP).

Furthermore, the project supports community infrastructure goals by maximizing value through partial funding from the Federal Government's Disaster Mitigation and Adaptation Fund (DMAF).

Financial Implications

The Junction Creek Improvements (DMAF) program's original budget was \$13.5 million and consisted of two projects; Junction Creek Reconstruction and Reprofiling and Nickeldale Stormwater Management Facility (SMF). This report outlines the total Junction Creek Reconstruction project costs of \$17.1 million to reconstruct and reprofile 1.6 km of Junction Creek in the Flour Mill.

It is recommended to pause the Nickeldale SMF project and reallocate \$3.5 million to the Junction Creek

Reconstruction and Reprofilng project. Furthermore, it is recommended to fund \$1.9 million from the Capital Holding Account Reserve and \$1.7 million from the Water Rate Holding Reserve for required linear water replacement.

Background

Junction Creek is the largest watercourse within the City of Greater Sudbury flowing through the center of the City. It has a total length of approximately 52 km. The creek drains a total watershed area of approximately 320 km² as it drops approximately 100 m in elevation from the headwaters in Garson to the outlet in McCharles Lake.

Historical flooding of Junction Creek has occurred since the settlement of Sudbury. The City of Greater Sudbury and Conservation Sudbury have historically undertaken many efforts to manage the impacts of flooding in the most impacted areas, primarily the Downtown and Flour Mill. The Junction Creek Subwatershed Study and Stormwater Master Plan dated December 2019 identified several options for the City to pursue to make improvements within the Junction Creek Watershed, including 1.6 km of Creek Reconstruction and Reprofilng.

To further the efforts of managing the impacts of flooding, Council supported the City of Greater Sudbury and Conservation Sudbury's joint application for the Federal Grant, The Disaster Mitigation and Adaptation Fund (DMAF) on February 12, 2019. The DMAF is designed to provide funding to Municipalities to improve their stormwater resiliency. The City and Conservation Sudbury applied for DMAF for four (4) projects that would see high value capital rehabilitation of critical storm event infrastructure as well as the creation of new infrastructure to enhance community resiliency to flooding. The application was successful and the DMAF agreement was executed in May 2020. The City is leading two of the four projects, while Conservation Sudbury is leading the other two projects. The summary of the four projects is listed in Table 1 below.

Table 1: Junction Creek DMAF Project Summary

Project	Description	Status	Lead
Project A: Maley Dam	Reinforcement and rehabilitation of the Maley Dam.	In Progress	Conservation Sudbury
Project B: Junction Creek Box Culvert	Reinforcement and rehabilitation of the Junction Creek box culvert system.	In Progress	Conservation Sudbury
Project C: Junction Creek Reconstruction and Reprofilng	Reconstruction and reprofiling of approximately 1.6 km reach of Junction Creek from Lloyd Street to approximately 130 m north of Perreault Street. This project will re-establish the creek invert and return full functionality of adjacent storm sewer systems, enhance capacity and reduce velocities in the reach, improve the natural habit for creek species, mitigate erosion, and reduce impacts of flooding.	In Progress	City of Greater Sudbury
Project D: Nickeldale Stormwater Management Facility	Stormwater Management Facility to provide quantity and quality control of an urban catchment that discharges to the Nickeldale reach of Junction Creek.	Temporarily Paused	City of Greater Sudbury

The overall objectives of the four projects are to reduce the impacts of flooding on critical infrastructure and essential services and to better adapt to future climate change-related impacts in the Downtown and Flour Mill areas.

The focus of this council report is Project C: Junction Creek Reconstruction and Reprofilng. The Junction Creek Reconstruction and Reprofilng project limits are shown in Figure 1 below.



Figure 1: Junction Creek Reconstruction and Reprofiling Project Limits

Junction Creek Reconstruction and Reprofiling Project Benefits

The Junction Creek Reconstruction and Reprofiling Project will re-establish the creek invert, return full functionality of the adjacent storm sewer systems on Notre Dame Avenue which discharge to the 1.6 km stretch of Junction Creek, enhance capacity, reduce velocities in the reach, improve the natural habitat for creek species, mitigate erosion and improve the resiliency to flooding for the area.

Detailed Design and Construction of the Junction Creek Reconstruction and Reprofiling

The Junction Creek Reconstruction and Reprofiling Project was tendered in November 2024 and closed in January 2025. Four (4) bids were received, and the bid prices have come in over the total allocated project budget. A summary of costs and recommended funding is shown in Table 2.

Table 2: Junction Creek Improvements Cost Summary

Item	Total
Junction Creek Reconstruction and Reprofilng Revised Budget	\$ 17,100,000
Funding Sources	
Original Project Budget (\$6.0 million DMAF)	\$ 10,000,000
Reallocated Nickeldale Project Budget (\$1.4 million DMAF)	\$ 3,500,000
Capital General Holding Reserve	\$ 1,900,000
Water Rate Holding Reserve	\$ 1,700,000
Total Funding	\$ 17,100,000

The Junction Creek Subwatershed Study and Masterplan, completed in December 2019, is a high-level document that identifies key issues and evaluates various options. It provides recommendations for Capital Projects, including the Junction Creek Reconstruction and Reprofilng project, initially estimated at \$10 million. However, costs have risen due to factors such as land acquisitions, extended multi-year construction period limited by in-water works timing windows, and changes due to comments and requirements from regulatory agencies. Additionally, inflation has significantly increased the cost of materials and labour since the project's initial budgeting, further compounded by the construction market volatility experienced after the pandemic in 2020. The original budget did not fully account for these financial pressures, leading to the current projected increase.

The proposed work also includes moving the water main from underneath Junction Creek to alongside the bridge. This water main is at end of life and recently broke in 2023. The cost of this work is \$1.7 million.

The low bid was Denis Gratton Construction Ltd. at bid of \$11,963,154.00. The Junction Creek Reconstruction and Reprofilng Revised Budget of \$17.1 million includes engineering, land acquisitions, construction and contingency. The bid results for the project (ENG24-42) reveal a price difference of \$1.6 million to \$2.3 million between the lowest and the next two bidders, reflecting varied construction methods and fluctuating supplier costs. Rising material and labour costs due to inflation have also significantly contributed to the overall budget increase. Staff have evaluated the tender and found the lowest bid fair and represents value-for-money. Delaying the project would risk higher prices, legal complications, and missing the 2025 in-water works window, further delaying improvements to flooding resiliency in the Flour Mill and Downtown areas. Staff believe additional budget is required due to the complexities of the project, which were not fully anticipated during initial budgeting, and emphasize the unique nature of this initiative as part of the City's largest watercourse reconstruction.

The \$1.9 million will be funded from surplus in other drainage capital projects, will be transferred to the Capital General Holding Reserve. This transfer does not result in the cancellation of any ongoing or planned projects.

The recommendations from the Performance Audit of the Engineering Services Division, presented to the Audit Committee on September 10, 2024, were also considered. These included delaying the release of the tender until Q4 (November 2024) to give bidders more time to mobilize resources. Additionally, due to the project's complexity, the solicitation period was extended to 57 days, exceeding the 30-day minimum recommended in the Performance Audit report. These adjustments were aimed at supporting a fair and competitive bidding process and ensuring the project's successful delivery.

Project D: Nickeldale Stormwater Management Facility

The Junction Creek Reconstruction and Reprofilng and the Nickeldale Stormwater Management Facility (SMF) are included as "Junction Creek Improvements (DMAF Funding)" in the 2025-2027 Capital Budget. Additional modeling by the retained engineering consultant revealed that the Nickeldale SMF would not provide the anticipated cost-benefit. While its goal was to reduce downstream flood impacts and improve water quality from the Lasalle Boulevard urban catchment, the Junction Creek Reconstruction and

Reprofiling Project will reduce downstream flood impacts and realize the benefits contemplated by the Nickeldale SMF. Staff are working with DMAF Federal Representatives to explore alternatives for the Nickeldale Project, including preparing a Scope Change Request to amend its scope. A report or capital budget update will also be brought to Council with updates and funding strategies for Nickeldale.

It is important to note that DMAF funds are allocated as a total of \$8.84 million shared across four projects, rather than on a per-project basis. This structure offers potential flexibility to revise the scope of the Nickeldale Project while ensuring continued eligibility for the total funding amount.

Conclusion

The Junction Creek Reconstruction and Reprofiling Project is a unique and critical initiative aimed at addressing drainage issues and enhancing flooding resiliency in the Flour Mill and Downtown areas. Despite the increased costs – driven by factors such as inflation, market volatility, land acquisitions, and changes due to regulatory requirements – this project remains a priority due to its significant long-term benefits. The tender evaluation has shown that the lowest bid represents good value-for-money, and proceeding now avoids further cost escalation and potential delays to the 2025 in-water works timing window. Advancing this project is essential to achieving the City's strategic goals related to asset management, service excellence, and climate resiliency.

Resources Cited

Disaster Mitigation and Adaptation Fund Website: <https://housing-infrastructure.canada.ca/dmaf-faac/index-eng.html>

Junction Creek Sub watershed Study and Master Plan: <https://www.greatersudbury.ca/live/environment-and-sustainability1/lake-health/watershed-study/>

Request for Decision Disaster Adaptation Mitigation Fund Application, City Council: February 12, 2019: <https://pub-greatersudbury.escribemeetings.com/FileStream.ashx?DocumentId=30596>

Performance Audit of the Engineering Services Division, Audit Committee, September 10, 2024: <https://pub-greatersudbury.escribemeetings.com/FileStream.ashx?DocumentId=54701>