

Report to Civic Works Committee

To: Chair and Members
Civic Works Committee

From: Kelly Scherr, P.Eng., MBA, FEC
Deputy City Manager, Environment & Infrastructure

Subject: Metamora Stormwater Outfall Replacement Contract
Amendment – Addition of Metamora Bridge Repairs

Meeting on: May 31, 2022

Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure, that the following actions be taken with respect to the extension of the Metamora Stormwater Outfall Replacement contract to include the Metamora Pedestrian Bridge Rehabilitation works:

- a) The contract amount for Blue-Con Construction **BE INCREASED** to undertake additional works required for the Metamora Pedestrian Bridge Rehabilitation as part of the existing RFT21-91 contract in accordance with the estimate on file, to an upset amount of \$255,000, including 20% contingency, excluding HST, from \$1,200,386.00 to a total of \$1,455,386, in accordance with Section 20.3e of the City of London's Procurement of Goods and Services Policy;
- b) The financing for the project **BE APPROVED** in accordance with the "Sources of Financing Report" attached, hereto, as Appendix 'A';
- c) The Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this project;
- d) The approvals given, herein, **BE CONDITIONAL** upon the Corporation amending the original contract; and,
- e) The Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

Executive Summary

Purpose

This report seeks approval to increase the scope of work for BlueCon Construction to complete the Metamora Pedestrian Bridge Rehabilitation works in sequence with the Metamora Stormwater Outfall Replacement and Slope Rehabilitation project that is currently underway.

Context

The Metamora Stormwater Outfall Replacement and Slope Rehabilitation project is located in the Medway Valley Heritage Forest Environmentally Significant Area (ESA) at 23 Metamora Crescent. Construction of the project started in 2021 and is anticipated to be completed in summer of 2022. The outfall is adjacent to a pedestrian pathway that leads into the ESA.

Rehabilitation of the pedestrian bridge is scheduled to be completed in 2022 to ensure public safety along the Medway Valley Heritage Forest trail system. The bridge has been informally closed since 2020. Access to the bridge site is challenging and limited due to tree cover and steep slopes, therefore, ecologists in Planning and Development worked with the engineers in Environment and Infrastructure to evaluate constructing the bridge works in conjunction with the slope stability project as a solution to reduce environmental impacts and leverage the benefit of the temporary site access conditions.

Linkage to the Corporate Strategic Plan

Municipal Council's 2019-2023 Strategic Plan identifies "Building a Sustainable City" as a strategic area of focus. The recommendation in this report will support strategies to a) Improve safety for all modes of transportation, and b) Improve the quality of pedestrian environments to support healthy and active lifestyles.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

Metamora Stormwater Outfall Replacement – Contract Award Increase (RFT21-91). Civic Works Committee. March 29, 2022

Metamora Stormwater Outfall Replacement Consultant Appointment. Civic Works Committee. February 9, 2021.

Conservation Master Plan for the Medway Valley Heritage Forest Environmentally Significant Area (South). Planning and Environment Committee. April 16, 2018.

1.2 Project Background

The existing Metamora Pedestrian Bridge was constructed in 2000 and is a single span steel arched girder bridge supported on a cylindrical concrete pier foundation. The bridge conveys pedestrian traffic over Bloomfield Creek along the Metamora Crescent Trail, located in the Medway Valley Heritage Forest Environmentally Significant Area (ESA). In 2020, the bridge was deemed unsafe and closed after an inspection identified

that erosion was undermining the bridge foundation. Washouts were also observed at the northwest and northeast corners of the bridge.

In 2021, staff from Planning and Development retained AECOM to assess the bridge and creek conditions and prepare a detailed design to bring the bridge up to public safety standards. Subsequently, a fluvial geomorphological assessment, geotechnical assessment, and Environmental Impact Study (EIS) were completed to support bridge repair specifications and implement avoidance and mitigation strategies. This project has been planned with minimal disturbance to the ESA being a primary objective.

1.3 Location Map

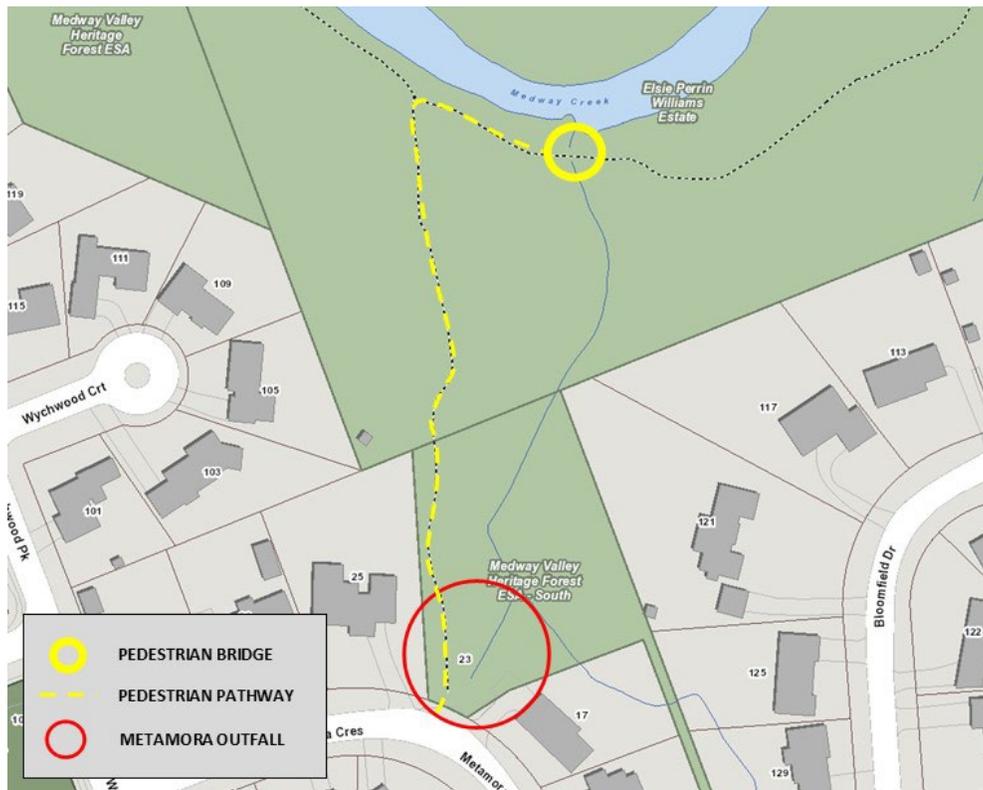


Figure 1: Location map showing Metamora outfall replacement project area

2.0 Discussion

Through detailed design, it was determined that the Metamora Pedestrian Bridge Rehabilitation would require the installation of helical piles adjacent to the existing concrete foundation, new timber decking and railings, round stone bank protection immediately adjacent to the bridge, realignment of the pathway leading to the bridge, and restoration planting. To accommodate the extent of required bridge repairs, a two-metre-wide access path for small equipment to transport aggregate and round stone to the bridge site is now required. The most viable entry point for this access path was determined to be through the temporary access road that was constructed as part of the

Stormwater Outfall and Slope Rehabilitation work site, located at the entrance to the ESA.

Work on the Metamora Stormwater Outfall and Slope Rehabilitation began in fall 2021 with remaining slope work, sewer upgrades, and restoration work planned for spring/summer 2022. Given that it is an active construction site, the existing contract with BlueCon Construction does not allow for any other contractors or work to occur on or through the site. Additionally, upon completion of the outfall replacement and slope rehabilitation works, no other contractor or work would be permitted on or through the site until after the two-year warranty is expired. To maintain the warranty, work on the Metamora Bridge could not occur until summer 2024; at which time there would be more disturbance to the ESA than if the work could be completed now under the same contract.

As part of the current Metamora slope rehabilitation project, there exists a temporary access road into the ESA that would permit the entry of small equipment to complete the necessary bridge works. Coordinating these projects ensures that the bridge work will not undermine the outfall and slope works. The bridge rehabilitation work could be completed prior to the removal of the access path. Following the bridge works, final grading and restoration work for the outfall project would occur. Using one access path for both projects will result in overall cost savings for the City as it avoids repeat work.

The construction timing window for the bridge work within Medway Creek is within the fisheries timing window between July 15 and September 15, which aligns with the timeline for completing the outfall project.

3.0 Financial Impact

In accordance with Section 20.3e of the City of London's Procurement of Goods and Services Policy, it is recommended to amend BlueCon Construction's existing contract to include the works required for the Metamora Pedestrian Bridge Rehabilitation. An additional \$255,000 including 20% contingency, excluding HST is required to complete the bridge repairs. This represents an additional 17% added to the contract awarded to BlueCon Construction for the Metamora slope rehabilitation project. Funds are available in the Environmentally Significant Area Capital Budget. The Source of Financing Report is appended to this report under Appendix A.

Blue-con Construction has demonstrated competency in natural channel creek re-construction through the completion of the Metamora Outfall Project creek bed and toe of bank protection works. Furthermore, they have the best knowledge of site conditions, including the Medway Valley ESA's sensitive natural features, species at risk protection measures, and the creek/valley flow dynamics along this tributary. AECOM reviewed the quotation from BlueCon Construction and found it to be in line with the project cost estimate.

Conclusion

The rehabilitation of the Metamora Pedestrian Bridge is necessary as the bridge has been deemed unsafe and has been closed. Given the relationship to the outfall and slope stabilization construction project, it is recommended to appoint Blue-Con Construction to implement the rehabilitation works for the Metamora Pedestrian Bridge to minimize disturbance and reduce financial and environmental impacts.

Prepared by: Shawna Chambers, P.Eng., DPA, Division Manager,
Stormwater Engineering

Submitted by: Aaron Rozentals, P. Eng., GDPA, Acting Director, Water,
Wastewater and Stormwater

Recommended by: Kelly Scherr, P. Eng., MBA, FEC
Deputy City Manager, Environment & Infrastructure

Attachments: Appendix 'A' – Sources of Financing

CC: Steve Mollon
Gary McDonald
Alan Dunbar
Jason Davies
Aimal Shinwari
Monica McVicar
Kevin Edwards
Marnie Shepley