



Meeting Date: November 2, 2022

Submitted by: Rob Cascaden, P.Eng – Director – Public Works and Engineering

Report No: PWE-42-2022

Subject: Garden Ave and Wellington St. Reconstruction Update

Recommendation:

THAT Report PWE-42-2022, re: Garden Ave and Wellington St. Reconstruction Update be received as information.

Purpose:

To present to Council an update on the construction progress and budget forecast for the remainder of the project.

Background:

The proposed reconstruction of a portion of Garden Avenue and Wellington Street in Delaware in order to construct a new storm sewer and outlet was identified in the 2016 Delaware Storm Water Management Environmental Assessment. Multiple options were reviewed for improvements to the Forsythe Drain and this was identified as the preferred alternative. The construction of this new storm sewer system reduces the load on the Forsythe Drain by redirecting stormwater from large portions of York Street, Wellington Street, Garden Avenue and Hillcrest Court to a new storm outlet to the Thames River.

The Municipality of Middlesex Centre sent a Request for Proposal to six Engineering consultants deemed to be appropriate by the Department Director in 2018. Municipal staff reviewed the proposals and awarded the contract for engineering services to the winning submission submitted by Stantec Consulting Ltd. in early 2019.

Finalization of the design was delayed due to the identification of a species at risk habitat near the originally proposed outlet location at the Thames River. Prior to finalizing the design, it was identified that there was an opportunity to coordinate a section of watermain replacement with the original scope of the project. The scope was then expanded to include the replacement of watermain within the project limits.

The approved 2022 capital budget was based on a cost estimate prepared in September 2021, just before the budget process. To facilitate the completion of the Delaware BPS, the project scope was expanded prior to tender to include the completion of outstanding restoration work at the site. The scope change would be funded by the existing Delaware Booster Pump Station capital project.

A final construction cost estimate was produced by Stantec just prior to tender with the result showing a significant cost increase from the fall estimate which had been used to establish the 2022 budget. The cost increase was a result of anticipated cost increases for labour, materials, fuel etc,

The proposed construction budget for the capital works project, as approved by Council in the 2022 Capital Budget was \$2,580,000.00. This budgetary value was based on a previous estimate provided by Stantec in fall of 2021 which was subject to the extent of the work and comparable prices at the time.

Stantec then provided an updated pre-tender opinion of probable costs in February 2022 of \$2,911,824.00 (excluding HST), and it was noted that there may be some variation to the estimate due to the increased cost of oil, which will affect all aspects of the project from cost of materials to cost of equipment operation. The industry is also experiencing an increase in the number of opportunities, which is decreasing the number of contractors bidding projects and ultimately resulting in increased costs.

The awarded tender price in April 2022 was \$3,607,132.65 which included \$103,552 of work at the Delaware BPS. After accounting for the portion of the tender attributed to the Delaware BPS and some insurance requirements which could be removed, the required construction budget for the project was identified as \$3,430,000. A request for a construction budget increase of \$850,000 was approved by Council at the April 6, 2022 meeting (Resolution 2022-096). This increased the 2022 project construction budget to \$3,430,000.

Analysis:

The majority of the construction has been completed in 2022, with primarily only the installation of surface asphalt remaining in 2023 and some other minor clean up items. Based on the cost to date and projection of cost remaining, we estimate that the final construction cost will be approximately \$3,250,000 which is about \$180,000 below the amended construction budget.

Construction Cost	
Date/Stage	Estimated Construction Cost
90% OPC – Dec./20	\$2,121,158
OPC w/ Watermain – Aug./21	\$2,480,553
Estimate for Budget - Nov./21	\$2,564,660
2022 Capital Budget Carried	\$2,580,000
Final Estimate Feb./22	\$2,911,824
Awarded Bid Price	\$3,607,132.65 + HST
Amended 2023 Construction Budget	\$3,430,000
Projected Cost at Completion in 2023	\$3,250,000

During the design of the project there were several items which impact the engineering scope of the project. This includes but is not limited to the following items:

- Archeological work in the park
- Species at Risk adjustments in the park
- Significant consultation with 2 conservation authorities
- Additional improvements to sidewalk and urbanization of the roads
- Additional storm sewer replacement on York Street
- Watermain replacement on Wellington
- Storm sewer easement legal survey through the park
- Coordination with geotechnical firm for permit to take water
- Increase in construction admin due to increase in working days and cost impact with delay of construction

Consultant Fees (Stantec)	
Date/Stage	Engineering
2019 Award	\$119,523.25
Scope Changes	\$130,608.50
Total Revised Stantec Fee	\$250,121.75

While the required engineering scope change is significant, it does reflect the project changes over the course of the project. For a project of this nature, we would typically expect the engineering fees to be in the range of 12 to 18% of the construction value (with 15% used as a typical budget value). The revised fee amount represents only 7.7% of the projected cost at completion. If we compare the fee to the original opinion of probable

cost with the inclusion of the watermain from August 2021 we see that Stantec's fee still represents only 10% of the construction value.

The 2022 capital budget for this project included \$200,000 for engineering fees. Approximately \$85,000 of Stantec's fees were paid prior to 2022 thus leaving about \$165,121 to be incurred in 2022 and 2023. Approximately \$135,000 of fees will be incurred from Stantec in 2022 with the remainder to be in 2023.

In addition to Stantec, WSP Golder was used for geotechnical services during the project. The amount for geotechnical support in 2022 is approximately \$20,000. The combined engineering expenditure in 2022 will be approximately \$155,000 with the remainder of the 2022 engineering capital budget to be carried into 2023 to cover the remaining projected costs. The remaining engineering fees will be within the allotted capital budget.

Financial Implications:

As a result of a well designed and planned project and the selection of a well qualified contractor, the construction of this project has been on schedule and below the amended capital budget. The next result is that we expect the final construction cost, once complete in 2023, to be approximately \$180,000 below the amended 2022 capital budget.

Remaining capital budget from 2022 will be carry forward into the 2023 capital budget as required to complete the remaining work in 2023 including construction and engineering oversight.

Strategic Plan:

This matter aligns with following strategic priorities:

- Balanced Growth
- Sustainable Infrastructure and Services
- Responsive Municipal Government

The project will alleviate the overburden on the existing Municipal Drain by redirecting flows into a new properly sized storm sewer. Along with the addition of catch basins in identified low areas, the project will provide flood reductions. The construction phase of the project ran smoothly, efficiently and below the amended capital budget.

Attachments:

N/A