

Subject: LED Streetlight Replacement Extras

BE IT RESOLVED THAT Council receive Report #2024-0037– LED Streetlight Replacement Update Extras, for information;

AND THAT Council direct staff to pursue Option # _____, for the LED Streetlight Conversion project:

- a) Option 1 – Council APPROVE a budget increase of \$60,000.00 for project RD 04-23, funded from the Road Reserve to complete the installation of the 31 Decorative Fixtures.**
- b) Option 2 - 31 Decorative fixtures be considered as a separate new project in 2025 subject to budget approval.**
- c) Option 3 - Use a portion of the remaining funds to provide a spare fixture inventory.**
- d) Option 4 - Increase the project budget by \$74,000.00 (plus HST) to complete the conversion project and create a spare parts inventory**

Background:

On February 6, 2023, Council approved Capital Project RD-04-23 for \$700,000 to undertake Phase 2 of the project. Phase 2 of the LED Streetlight Replacement contract includes the replacement of 574 cobra head lights and 426 Decorative fixtures.

At the time of project award to RealTerm Energy, the total cost of the project was an estimate based on the inventory of fixtures provided during the RFP process.

The total estimated cost to complete the LED conversion project based on the original estimates provided by RealTerm Energy was \$950,000 (plus applicable taxes). Staff included a budget amount of \$250,000 in 2022 and \$700,000 in 2023 for a total project budget of \$950,000.

Based on the information received from the initial IGA the Town is expected to realize approximately 74% in cost savings for utility operating costs (hydro) and

reduced maintenance costs. For 564 fixtures completed in Phase 1, this represents approximately \$62,526 per year resulting in a project payback of 3.8 years on the capital investment.

Concerning the Phase 2 work, the Town should realize approximately 77% in cost savings for utility operating costs (hydro) and reduced maintenance costs. For 1000 fixtures this represents approximately \$126,394 per year resulting in a project payback of 4.7 years on the capital investment.

Overall, the annual cost savings for operation and maintenance are estimated at \$188,920 with an estimated payback period of approximately 5 years.

Analysis:

The contract was originally planned to be completed by the end of 2023. However, the contractor has experienced delays due to installation difficulties and supply chain issues. RealTerm Energy has informed the Town that the contractor is experiencing a higher rate of fuse holder replacements than expected as the crew(s) are having difficulty reusing the existing FH when replacing the fuses. The handholes are smaller than what is normally experienced. The original fuse holders were forced into the poles causing them to be distorted and once removed to install the new fuse can not be reinstalled to make a proper connection. As such the fuse holders must be replaced to make proper contact. This issue with the fuse holder installation has delayed the completion of the project. Realterm has stated that the contractor should remobilize and complete the work by the middle of March.

In addition, Realterm has identified 31 decorative fixtures located in Ridgeville (Canboro Road and Effingham Street), Timmsdale Crescent, and Brondi's Lane areas which are not able to be installed on the existing poles. A Deco assessment was completed for the 31 fixtures in an attempt to use the existing poles/arms for the installation of the new Deco fixtures as a cost-saving measure. RTE's Design Team consulted with the fixture supplier and determined that it was not possible/practical to fit new fixtures to the existing infrastructure.

As such, new arms will be required to accept new Deco fixtures for these 31 streetlights. The cost of the decorative fixtures as well as the installation costs of the fixtures are included in the original estimate. However, as a result of this change, the total cost of the project will increase by approximately \$60,000 (plus applicable taxes).

Staff have provided Council with the following options moving forward with the LED Streetlight Replacement project:

Option 1 – Increase the project budget by \$60,000.00 (plus HST)

There will be 31 Deco fixtures left to install at the end of this project, the cost will be significant as they will need new arms to match the existing poles. The total estimated cost to include the new arms is approximately \$83,225 (plus applicable taxes). A detailed review of the current budget indicates that there is \$26,794.00 remaining of the \$700,000 approved budget. As a result, a budget increase of \$56,431 (plus applicable taxes) will be required to complete the LED conversion project in 2024. Staff recommends increasing the budget by 60,000 to allow a small contingency.

The delivery of these arms, if approved, by would be approximately 8-12 weeks. Installation of these fixtures would be completed within 1-2 weeks following receipt of the equipment.

Option 2 – Include the conversion of the 31 Decorative Fixtures as a separate project in 2025 subject to council approval.

Since the budget cannot withstand this expenditure, an option would be to defer the conversion of the 31 decorative fixtures to a future capital budget.

Option 3 - Use a portion of the remaining funds to provide a spare fixture inventory.

Instead of completing the full conversion staff could use the remaining budget to create a spare fixture inventory. RealTerm Energy has provided the Town with the pricing for a recommended spare inventory of \$14,000.00. Spare inventory will allow for faster replacements and more efficient maintenance in the future. In addition, it will allow the Town to address future residential expansion/additional lighting requests.

Option 4 - Increase the project budget by \$74,000.00 (plus HST) to complete the conversion project and create a spare parts inventory

Proceeding with the completion of full conversion and creating a spare parts inventory is the most expensive option, but accomplishes the work and provides inventory for future replacement and/or expansion.

Financial Considerations:

The total estimated cost to complete the LED conversion project based on the original estimates provided by RealTerm Energy was \$950,000 (plus applicable taxes). Staff included a budget amount of \$250,000 in 2022 and \$700,000 in 2023 for a total project budget of \$950,000.

Staff's recommendation is to increase the project budget by \$60,000.00 (plus HST) to complete the full project conversion plus extras. As a result, the total budget project spend will be \$1,010,000.00 for Phase 1 and 2.

Alternatively, Council may authorize an increase of \$74,000.00 (plus HST) to complete the full project conversion plus extras and create the spare parts inventory. The overall budget project spend will be \$1,024,000.00.

Alternatives Reviewed:

The alternative options have been provided in the Analysis section of this report for Council's consideration.

Strategic Plan Relationship: Infrastructure Investment and Renewal

Providing a reliable and efficient street lighting network allows for the safe and efficient transportation of vehicles and pedestrians within the Town. In addition, an LED Streetlight Conversion program is in alignment with the implementation of the Town's Climate Change Adaption Plan helping to reduce energy usage and reduce greenhouse emissions, and also provides an economic benefit to the Town through lower operation and maintenance costs.

Consultation:

Consultation was undertaken with the Manager of Engineering, Manager of Public Works, and RealTerm Energy in the preparation of this report.

Other Pertinent Reports/Attachments:

Council Report #2022-0231 – Update on the LED Streetlight Replacement Project

Council Report #2022-0036 – LED Streetlight Conversion Binding Letter of Engagement between the Town of Pelham and RealTerm Energy Corp

Council Report #2021-0206 - Options for Implementing an LED Streetlight Conversion Program in the Town of Pelham

Council Report #2023-0092 – Update on the LED Streetlight Replacement Project

Council Report #2023-0224 – LED Streetlight Replacement Update and +Smart Technology Options

Prepared by:

Gimuel Ledesma, C.E.T.,rcji
Engineering Technologist

Recommended by:

Jason Marr, P. Eng.
Director of Public Works

Prepared and Submitted by:

David Cribbs, BA, MA, JD, MPA
Chief Administrative Officer