



TOWN OF
HALTON HILLS
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REPORT

TO: Mayor Bonnette and Members of Council

FROM: Bruce Morrison, Deputy Chief - Operations

DATE: January 6, 2022

REPORT NO.: FIRE-2022-0002

SUBJECT: Award of Bids for Geothermal Heat Pumps Replacement and Roof Top Unit

RECOMMENDATION:

THAT Report No. FIRE-2022-0002, dated December 24, 2021 regarding Award of Bids for Geothermal Repairs and Roof Top Unit be received;

AND FURTHER THAT Council approve the award of the bid for South and Central Fire Hall Geothermal Heat Pumps Replacement to VCI Controls Inc., 1 Royal Gate Blvd, Suite D, Vaughan ON L4L 8Z7 in the amount of \$210,839.31 plus applicable taxes;

AND FURTHER THAT Council approve the award of the bid for the Roof Top Unit at District I – Acton be awarded to Combined Air Mechanical Services, 1670 Finfar Court, Unit 3, Mississauga ON L5J 4K1 in the amount of \$44,028.00 plus applicable taxes;

AND FURTHER THAT the scope of the Replace Heat Pumps at Headquarters Station (capital project 5500-02-2002) be expanded to include the replacement of heat pumps at the Maple Avenue Station as detailed in the Report FIRE-2022-0002;

AND FURTHER THAT the capital budget for Replace Heat Pumps at Headquarters Station (project 5500-02-2002) be increased by \$201,100 from \$50,000 to \$251,100 and that the additional funding be financed by \$100,000 of ICIP grant funding, and \$101,100 from the Capital Replacement Reserve;

AND FURTHER THAT the Replacement of HVAC Units at the Acton Station (capital project 5500-02-2801) be approved with a capital budget of \$44,800 and the additional funding be financed by \$35,000 of ICIP grant funding and \$9,800 from the Capital Replacement reserve.

KEY POINTS:

The following are key points for consideration with respect to this report:

- The Maple Avenue and Headquarters fire stations utilize ground based geothermal systems to provide heating and cooling to the facility. The heart of the systems are two heat pump units installed working in tandem, in each facility.
- These units have been identified as being prematurely at the end of their useful service life and continue to suffer repeated failures. Parts for these units are scarce which results in our HVAC contractor having to manufacture replacement parts or spend significant time sourcing the required parts. While sourcing these parts the unit remains inoperable.
- The Acton fire station utilizes three natural gas fired roof top units to provide heat and cooling to the facility. These units are also at the end of their useful service life. Issues such as obsolescence, metal fatigue, and difficulty in obtaining replacement parts require a significant amount of maintenance by contractors having to manufacture components or source replacement parts.

BACKGROUND AND DISCUSSION:

In the late fall of 2020, the province announced the Investing in Canada Infrastructure Program: COVID -19 Resilience Infrastructure Stream - Local Government Intake Projects (ICIP funding) to address the challenges faced by communities as a result of the COVID-19 pandemic. COVID Stream cost sharing is funded 80% by the federal government and 20% by the province. The Town submitted a project for consideration to replace the heat pump units at the Headquarters station and Maple Ave. station and the rooftop units at the Acton Station. Costs associated with this project were based on best estimate, provided by industry contractors, on a like for like replacement and were estimated to be \$135,000.00

\$50,000.00 Heat Pump Replacement – Headquarters station

\$50,000.00 Heat Pump Replacement – Maple Ave. station

\$35,000.00 Roof Top Unit Replacement – Acton station

In the spring of 2021, the Town was notified that we were successful in obtaining the requested funding and work began on developing a bid document with the assistance of the Town's Senior Manager of Purchasing and Risk Management.

A Transfer Payment Agreement (TPA) and enacting bylaw were established to receive funding from this grant as identified through Report -TPW-2021-0019, Transfer Payment Agreement Investing in Canada Infrastructure Program (ICIP) COVID 19 Resilience Infrastructure Stream – Local Government Intake Projects. With the approval of the TPA and bylaw, staff were able to proceed with bids for equipment replacement ahead of the budgeted timing for these projects at the Maple Avenue Station (2022) and Acton Fire Station (2028).

A technical consultant was engaged to review the geothermal equipment in place at the Maple. Ave. and Headquarters fire stations and develop technical bid documents to assist in the bidding process (see Report Fire 2021-0001 Award of Single Source – WalterFedy Heat Pumps). During this review, issues were identified with the geothermal system setup that the heat pumps alone could not be expected to cure. In addition, substantial upgrades would need to be done to the existing building automation system to accommodate the replacement heat pumps. These additional items were incorporated into the bid documents and the tender issued on October 15, 2021.

Tenders were received on November 9, 2021 and a review conducted by Fire Senior staff, Purchasing Manager and our Energy Management & Climate Change Analyst. Based on this review it was identified that the electrification of the Acton Firehall Rooftop units and optimization of the geothermal system at HQ and Maple Ave. fire stations will enable GHG reduction and assist the Town in meeting its Net Zero Target by 2030.

Bids for the high energy efficiency electrical rooftop units at Acton Firehall were as follows:

Company	Location	Bids (excluding HST)
Combined Air Mechanical Services	Mississauga	\$44,028.00
BSG Mechanical Services Inc.	Oakville	\$62,910.00
Associated Mechanical Installation LTD.	Concord	\$89,500.00

Bids for the optimization of the geothermal system were as follows:

Company	Location	Bids (excluding HST)
VCI Controls	Vaughan	\$210,839.31
Glenn Richardson Plumbing & Heating	Burlington	\$288,645.60
Ainsworth Inc.	Toronto	\$291,308.00
Superior Air Systems Ltd.	Etobicoke	\$308,730.00
AerComfort Mechanical Service	Brampton	\$311,660.00
Antrim Mechanical Ltd.	Brampton	\$312,242.00
Combined Air Mechanical Service	Mississauga	\$330,800.00
FXD Performance Contracting Inc.	Toronto	\$367,198.00
LCD Mechanical Inc.	Maple	\$499,000.00

The low bid received for the geothermal system, incorporating the additional specifications identified by WalterFedy in the bid documents was from VCI Controls Inc., 1 Royal Gate Blvd, Suite D, Vaughan ON L4L 8Z7 in the amount of \$210,839.31 (or \$214,550.08 including applicable taxes). In addition, technical consulting costs for this project totaled \$36,531.84 (including applicable taxes) bringing the total revised project budget to \$251,081.92.

The low bid received for the Acton Station roof top units was from Combined Air Mechanical Services, 1670 Finfar Court, Unit 3, Mississauga ON L5J 4K1 in the amount of \$44,028.00 (or \$44,802.89 including applicable taxes).

Additionally, a review of the Transfer Payment Agreement Investing in Canada Infrastructure Program (ICIP) COVID 19 Resilience Infrastructure Stream – Local Government Intake Projects requires that the Municipality notify the Ministry once funding is insufficient to cover the proposed project and provide a recommendation on how we plan to address the shortfall. Failure to do so may result in the project funding being cancelled. This report fulfills this requirement.

Staff will continue to pursue other grant funding sources that may be available and will report back to Council if additional funding can be secured.

STRATEGIC PLAN ALIGNMENT:

This report aligns to the Town's Strategic plan recognizing the value to foster a healthy community that provides a clean environment and range of economic and social opportunities to ensure a superior quality of life in our community.

This report also aligns with the Strategic plan in recognizing the value to provide responsive, effective municipal government and strong leadership in the effective and efficient delivery of municipal services.

This report also identifies climate change and the environment as one of the Town's Strategic priorities.

RELATIONSHIP TO CLIMATE CHANGE:

In May 2019, Town of Halton Hills Council declared a Climate Emergency and committed the Town to a goal of achieving net-zero carbon by 2030. Meeting this target for the Town's operations requires swift action to reduce the consumption of fossil fuels including the use of natural gas at Town facilities. Given the short time frame adopted in the climate emergency, the Town cannot purchase new equipment that locks in consumption of significant fossil fuels past 2030. In order to meet the target set out in the 2019 declaration, the Town will need to pursue low-carbon and alternative fuel options whenever possible as capital investments are made into facilities. The electrification of the Acton Firehall Rooftop units will directly result in GHG emission reduction by fuel switching from natural gas to electricity. This will directly contribute to reducing the town's overall GHG emissions and help it meet its 2030 net zero target. The Optimization of heat pump and geothermal systems at HQ and Maple firehalls will ensure optimized operation of the HVAC system, improved efficiency, reduction of operational costs and reduction of overall emissions at both firehalls. This will contribute to meeting the Town's Net Zero Target by 2030.

PUBLIC ENGAGEMENT:

Public Engagement was not needed as this report is administrative in nature.

INTERNAL CONSULTATION:

Staff worked together with Purchasing and Climate Change divisions. Both are in agreement with this award.

FINANCIAL IMPLICATIONS:

This report has an immediate financial impact and requires a funding source.

It is recommended, for efficiency in the project implementation, that the replacement of the heat pumps at Maple Avenue be combined with the Replacement of Heat Pumps at Headquarters Station project (capital project 5500-02-2002). For the combined projects, the total revised budget based on the bid is currently estimated at \$251,100. The approved project budget for 5500-02-2002 is \$50,000, which results in a budget shortfall of \$201,100. The required additional funding will be financed by \$100,000 of ICIP-COVID 19 Resilience Infrastructure Stream funding, and \$101,100 from the Capital Replacement Reserve.

As noted above, as a result of \$35,000 approved through the ICIP grant funding, the capital project - Replace HVAC units at Acton Station (5500-02-2801) has been brought forward from 2028. This capital project will require a project budget of \$44,800 based on the bid. This results in a funding shortfall of \$9,800 in addition to the ICIP funding of \$35,000. The additional funding required will be financed from the Capital Replacement Reserve.

Staff will continue to investigate alternative funding sources through grants as opportunities become available.

Reviewed and approved by,

Jon Rehill, Commissioner & Chief of Fire Services

Chris Mills, Chief Administrative Officer