



ACTION REQUEST – Recreation and Culture	
To:	Mayor and Members of Council
Date of Meeting:	May 25, 2021
Subject:	Replacement of the Winchester Arena Chiller

RECOMMENDATION:

THAT the Council of the Township of North Dundas approve budget amendment #2021-05; AND THAT Council authorize the Director of Recreation & Culture to award the replacement of the Winchester Arena chiller to AC Mechanical Refrigeration Ltd. for the stipulated price of \$72,450.00 + HST.

BACKGROUND:

On Monday, March 29th, contractor AC Mechanical Refrigeration Ltd. (AC), was at the Winchester Arena, performing annual end of ice season shutdown maintenance to the refrigeration system. During that service, our Facilities Lead Hand notified AC that the brine level in the expansion tank, had been decreasing more than normal over the last month of the ice season. The alert light had not gone on to indicate to staff that there was trouble with the refrigeration plant or in the brine lines. The ice on the slab was freezing well and there were no indications of any problems.

The technician came back on April 15th. He inspected the header pipe to see if there was a leak due to a faulty or loose clamp. During the inspection, he found a length of steel pipe, just outside of the header trench, that was visibly rusted and needed to be replaced. The replacement was authorized and completed. The rest of the steel pipe was in good repair.

ACM also discovered that the valve on the brine filter had split. When changing the valve, ACM smelt ammonia, indicating that there was an ammonia leak in the brine line. This meant that one or more of the tubes inside the chiller (a component of the refrigeration plant) was defective (leaking or broken). The technician then vacuumed the ammonia out of the chiller and sealed all of the valves in order to prevent any further ammonia from leaking into the brine piping under the arena slab.

The life expectancy of a chiller is 20-25 years. With our contracted regular maintenance program, which includes all required inspection, servicing, sampling and testing of the refrigeration system, at the beginning, middle, and end of each ice season, the Winchester Arena chiller lasted 17 years.

Unfortunately, there is no way to repair defective tubing inside of a steel chiller, as the unit is welded & sealed together. As such, we were advised that the chiller will need to be replaced before the upcoming ice season.

We were notified that the equipment will take 10-12 weeks for delivery once ordered and the replacement will take approximately 2.5 weeks. The total of 14.5 weeks from this Council meeting, is September 5th, barring no set-backs. The first ice booking is tentatively scheduled for September 6th, pending the slab is not being used by the EOHU at that time.

There are 3 companies that deal with arena refrigeration plants. Only 2 of the companies work with ammonia and brine plants, which is what our refrigeration plants are. The equipment used is very specialized and we were not able to find a third company to provide a bid for the project.

We requested & received bids from the 2 companies who work with our type of refrigeration plant. After thorough review and evaluation of the 2 bids, it is recommended that the project be awarded to AC Mechanical Refrigeration Ltd. for the stipulated price of \$72,450.00 + HST.

OPTIONS AND DISCUSSION:

- 1. Award the replacement of the Winchester Arena chiller to AC Mechanical Refrigeration Ltd. for the stipulated price of \$72,450 + HST AND:**

- a) **Finance \$16,500 from the surplus from the roof replacements in the Mountain Memorial Park and finance up to \$93,500 from General Working Reserves (from 2020 surplus) – recommended.**
- b) **Finance the entire project cost using General Working Reserves (from 2020 surplus) – not recommended.**
- c) **Leave the capital project unfinanced for 2021, to be financed in 2022 – not recommended.**

- 2. Request that the other Bidding company be awarded the replacement of the chiller for the stipulated price of \$97,500 + HST - not recommended.**

AND:

- a) **Finance \$16,500 from the surplus from the roof replacements in the Mountain Memorial Park and finance up to \$93,500 from General Working Reserves (from 2020 surplus) – recommended.**
- b) **Finance the entire project cost using General Working Reserves (from 2020 surplus) – not recommended.**

c) Leave the capital project unfinanced for 2021, to be financed in 2022 – not recommended.

FINANCIAL ANALYSIS:

A budgetary project price of \$110,000 includes removal and proper disposal of the old brine, replacement of the chiller, and potential repair of the impeller, as well as a contingency for any additional applicable charges.

No funds were allocated for the replacement of the Winchester Arena chiller during the 2021 budget process, as the failure of the unit was not predictable and the unit was not at the end of its anticipated serviceable life.

A budget amendment of \$110,000 has been attached for Council consideration. It is recommended that \$16,500 be funded using the surplus from the roof replacements in the Mountain Memorial Park and that the remaining balance of up to \$93,500, be funded from General Working Reserves.

OTHERS CONSULTED:

Facilities Manager

ATTACHMENTS:

Budget Amendment # 2021-05

PREPARED BY:

REVIEWED & APPROVED BY:

Recommended By

Approved By