Council Report

Report Number CS2020-012

Meeting Date:	November 12, 2020
Title:	City Hall Renovations Project Update
Description:	Providing Council an update and budget request to implement the HVAC Project phase of multi-year City hall renovations.
Author and Title:	Jörg Petersen, Manager, Building & Property

Recommendation(s):

That Report **CS2020-012**, **City Hall Renovations Project Update**, be received; and,

That staff be directed to proceed with Option 1 for an expedited project for a total project value of $4,250.233.79 (inclusive of HST payable) for the multi-year City Hall Renovations Project; and,

That the required increased amount of $2,760,234 be funded from the Working Capital Reserve; and,

That future year funding totaling $800,000 for Multi-Year Capital Budget project BP2015 – City Hall Building Systems, be released and redirected in the City's Long-Term Financial Plan to fund future year capital projects.

Department Head: _____

Financial/Legal/HR/Other: _____

Chief Administrative Officer: _____

Background:

City Hall was renovated in the late 1980's when it was then changed from a court facility to the County Administrative Building and underwent extensive alteration and expansion. That work re-set the life-cycle clock for the building. The building is now at the major capital renewal stage of its life cycle with major building elements being about 30 years old. Key drivers are: age and declining asset condition, performance/reliability and operating cost. Drivers also include: changing occupancy needs and standards. 'Standards' are meant to address things like: accessibility, energy management and the environment and also things like fire and life safety, indoor air quality and ventilation, etc. The latter has become more of a concern with COVID19.

The City has undertaken significant investment to renew the exterior building envelope already and has invested to renew/replace some interior elements of the building. That investment has totaled $2,938,372 between 2015 and 2020. The next major investment is needed to address the age and condition, performance and reliability of the building HVAC systems. Staff began to assess the scope and scale of work required for this project starting in 2017. Early estimates of that work and associated costs were developed to support a preliminary capital project proposal in 2018. In 2019 Council approved a contract with Ventin Group Architects to continue the work. They have completed a detailed system design and are in the process of completing contract documents (construction drawings and specifications). The contract documents will be completed in late 2020. Detailed cost analysis is part of that work, as the nature of this project is very complex, and is also affected by international trade disputes, supply-chain disruptions and COVID-19. The cost estimate has been updated from the original (preliminary) estimate provided in previous capital submissions. This report provides a comprehensive / current estimate and breakdown for all project costs.

This report addresses that need for direction on provision of the City Hall renovations, specifically the HVAC project.

Rationale:

As indicated, the City Hall facility has seen extensive renovations and repairs over the past 5 years. Significant investment to renew the exterior building envelope has already occurred and the City has invested to renew/replace some interior elements of the building.

The existing HVAC system components are reaching and/or have exceeded useful life threshold. Performance issues and associated need for repair/replacement has increased significantly. The rolling 3-year average for annual repair and maintenance costs have increased over 110% between 2008 and 2018. HVAC repair and replacement costs are a significant aspect. Equipment failures (for the smaller perimeter heat pump units) has increased

requiring unscheduled replacements with dated and less energy-efficient technology at considerable cost. Some major equipment components have failed completely and are presently not working. That includes two existing major heat pumps serving different areas of the building. The units are obsolete and obtaining replacement parts is problematic. There has been a practice of cannibalizing parts from some older equipment in order to keep other equipment operating. The useful service life of heat pumps that are at City Hall is about 15 years. The existing heat pumps are approaching 20 years old, except those we have been forced to replace. The useful life threshold of roof top units on City Hall is about 15 years. The existing roof top units are generally approaching an average of 17 years old.

Current systems struggle to be able to properly condition the indoor environment. They are not able to maintain set temperature and humidity in the building space, especially when outdoor conditions are more extreme in summer and in winter and the system is not able to properly ventilate the building. Presently, there is a deficit of about 1500 CFM (cubic feet per minute) of fresh make up air according to HVAC standards and causes indoor air quality to be diminished (refer ASHRAE 62-2001 - note ASHRAE is the principle standards setting organization for the HVAC industry). More recently, science is telling us that building ventilation is a major concern in dealing with COVID-19 (refer ASHRAE guidelines for COVID 19). Guidelines are encouraging building owners to increase ventilation beyond current standards. It is not possible to solve the ventilation deficit by making adjustments to the existing system or repairing/replacing individual components. It can only be done by replacing the system as a whole.

Any project to replace a major HVAC system for a building such as City Hall is a ‘generational’ type of investment. Depending on the equipment item it will be in place and operating for the next 15 to 30 years. For that reason, the project will affect and either enable or disable our organization’s ability to achieve strategic planning objectives such as energy management or environmental impacts. It may also relate to future changes to occupancy of the building itself.

City Hall is an important focal point for our City. The approach to implementing this project poses an opportunity to support action on the City’s Healthy Environment Plan. It can demonstrate leadership in energy and environmental design for a retrofit/replacement project. It is expected to help achieve a significant reduction in energy consumption and costs and a reduction in our carbon footprint. Estimates are that we will be able to achieve a reduction of between 25% and 40% of energy consumption and associated costs. The rolling 3-year average for energy costs for City Hall have increased over 75% between 2008 and 2018. The 2020 energy operating budget is $108,284.00. A reduction of at least 30% would translate to $ 32,485.20 in energy costs. The building’s carbon footprint related just to space conditioning is estimated to be about 96 metric tons of CO2 a year. A 30% reduction in energy consumption for electricity

and natural gas would translate a reduction of about 29 metric tons, equivalent to taking about 9 cars off the road every year.

The project will update the entire mechanical system, both equipment and performance and efficiency. It will include replacing/improving the piping and ducting that exists throughout the facility. It will also improve the existing controls and includes installation of a new building automation system. This recommendation is made to allow for the best upkeep and requirements of a City asset. It will result in a lower overall cost for the project, quicker resolution of the issues, less need for potential re-deployments or re-locations of staff and a better investment of a major City asset.

Other Alternatives Considered:

A number of alternatives to the staff recommended option have been considered. They all accept the need to replace the existing HVAC system for the rationale as stated. The alternatives considered different approaches to scheduling the work so as to spread costs over multiple years. It was also considered to change the approach to design/strategic intent. A high level summary of those alternatives are provided here.

Option		Description	Advantages	Dis-advantages
1	Expedited Timeline	• Current design • Complete in 18 mos. • Benefits start in 1 year	• Strategic • Lowest cost • Timely benefits	• Highest initial cash out-lay • Delayed benefits • Minimal inflation
2	Current Approved Timeline	• Current design • Complete in 3 years • Benefits start in 2 years	• Strategic • Cost spread over 3 years	• Delayed benefits • Inflation costs
3	Extended Timeline	• Current design • Complete in 5 years • Benefits start in 3 years •	• Strategic • Cost spread over 5 years	• Highest project cost • Delayed benefits • Significant cost inflation
4	Change Direction	• Discard design • Replace with 'like-for-like' as things break down	• Reduced cost	• Reactive - not strategic • Lose investment on design and contract documents • Very limited results • Never-ending project • Does not solve ventilation deficit • Highest operating cost

Alignment to Strategic Priorities

This report and the recommendations within address two of the four strategic priorities within the 2020-2023 Kawartha Lakes Strategic Plan:

1. Healthy Environment
2. Good Government

The recommendation will allow for the City to maintain an asset while taking both financial resources and our own Healthy Environment and Energy Plans into account. The Strategic Plan is available on SharePoint at the following link:

Kawartha Lakes Strategic Plan 2020-2023

Financial/Operation Impacts:

Over the past six years (2015-2020), the City has spent more than $2.9 million for the renewal of City Hall, as shown in the chart below.

Project (2015 – 2020)	**Total Expenditure**
Building Envelope	1,843,734
HVAC (to date)	336,906
Council Chambers and Victoria Room	658,323
Interiors	99,409
Total Expenditures (2015-2020)	**2,938,372**

Funding for the City Hall HVAC system has been approved over several budget years (2018-2020) for a total of $1,490,000. An additional $800,000 in funding was proposed as part of a multi year project with $400,000 being requested in 2021 and 2022. Including the multi year project, the total budget to complete the HVAC improvements was expected to be $2,290,000.

To date, $475,680 has been committed against this project for the purchase and installation of a new cooling tower and various consultant costs that were required to support the new HVAC system.

The table below summarizes the Current Project funding:

Year	Action	Value
2020-21	Phase 1 construction	$883,474.57
2021	Phase 2 construction	$1,712,453.20
2021-22	Phase 3 construction	$1,113.399.99
	Total construction cost	**$3,709,267.76**
	HST Payable	$65,285.71
	Current Commitments & Expenditures	$475,680.32
	Total Project Value	**$4,250,233.79**
	Total Budget (approved)	$1,490,000.00
	Current Funding Gap	**$(2,760,233.79)**

The current funding gap of $2,760,233.79 does not include the $800,000 in future-year additional funding that was committed to finance this project.

Staff are recommending that this project be funded from the Working Capital Reserve. This reserve is intended to support emergency and/or approved capital projects requiring unanticipated funding. While the City Hall HVAC project was anticipated, the increased cost and urgency for replacement were not.

Consultations:

Chief Administrative Officer
Director, Community Services
Corporate Services
Health and Safety Supervisor
Healthy Environment Project Team Lead
Manager, Asset Management

Attachments:

N/A

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Department Head: Craig Shanks, Director of Community Services