ITEM 20
DATE 2-23-21

COUNCIL ACTION FORM

SUBJECT: FIRE STATION #1 HVAC REPLACEMENT PROJECT PLANS & SPECIFICATIONS

BACKGROUND:

Fire Station #1 was built in 1979. The original HVAC system for the building was replaced in 2000 when the air handling units, condensing units, boilers, controls, etc. reached the end of their service life. The original HVAC system was replaced with like equipment, utilizing boilers and heat exchangers to heat the main portion of the building.

The current system has reached the end of its service life, as control of the system is no longer accessible without a complete overhaul of the existing control system. Multiple actuators have failed and need to be operated by hand to adjust station temperature. Additionally, multiple condensing units are starting to fail, and one unit is no longer operational. Only one vendor in the Des Moines metro area can provide service for the current system. This summer, when the unit stopped functioning, fire crews installed an inexpensive window air conditioning unit as a temporary solution to cool the kitchen and office spaces instead of replacing the more costly condensing unit.

City staff is proposing a replacement with an energy efficient residential-style system. This conversion will reduce the system complexity and repair costs, and will allow any HVAC vendor to perform service as needed. The new equipment would also have a substantially lower maintenance and replacement costs compared to the current system.

The project includes the removal of the existing air handling units, condensing units, boilers, controls, and all ductwork in the mechanical room. Four new energy efficient furnaces with condensing units would be installed to serve the existing HVAC distribution system, along with an Energy Recovery Unit to serve all furnace systems, and controls.

A similar conversion from a complex and inefficient HVAC system to a large residential-style HVAC system was completed at Fire Station #3 in 2015. That conversion resulted in a 40% reduction in the amount of energy needed to heat the station, which translates to an 8,000 lb. annual reduction in CO2 emissions (10% carbon footprint reduction for Fire Station #3). In addition to the energy and cost savings, that project resulted in a significant increase in occupant comfort.

Total funding budgeted for the project is $110,000, which has been allocated in the FY 2020/21 Adjusted Budget from the General Fund. The design, specification review, onsite management, and final acceptance of work for this project was previously awarded

to LMV Engineering, L.C. (LMV) for a contract amount of $9,600. LMV has provided a construction cost estimate of $120,000, which brings the **total estimated project cost to $129,600**. The engineer has indicated to City staff that COVID-19 has impacted HVAC equipment manufacturing and product availability, resulting in the potential for higher construction costs.

To ensure a more favorable bidding environment, the specifications include flexibility to complete the project in either Spring or Fall 2021 thereby requiring that either the existing system or the new system be available in the summer when cooling needs are most significant. **Should bids exceed the funds available for the project, staff will explore the option to re-allocate funds from the Fire Station #2 Restroom Addition. The Restroom Addition project has been placed on hold due to possible station relocation and the creation of a second, independent shower stall during a recent bedroom addition remodeling project.**

ALTERNATIVES:

1. Approve plans and specifications for the Fire Station #1 HVAC Replacement Project and establish March 24, 2021 as the bid due date and April 13, 2021 as the date for report of bids.

2. Direct staff to modify the project.

CITY MANAGER'S RECOMMENDED ACTION:

The HVAC system at Fire Station #1 is failing and is no longer cost effective to repair. The installation of an energy efficient residential style HVAC system will allow for local service calls, decreased equipment costs, and increased energy savings over the life of the equipment. Having a fully operational HVAC system with system control capabilities, will provide increased comfort for staff and visitors to the facility.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, as described above.