



Staff Report

File #: 17-178

Version: 1

Date: 4/24/2017

Item #: 3.2a.

TO: Mayor and City Council

THROUGH: Steve Powers, City Manager

FROM: Kacey Duncan, Deputy City Manager

SUBJECT:

Engineering design for a replacement cooling system at the Civic Center.

Ward(s): All

Councilor(s): All

Neighborhood(s): All

ISSUE:

Shall the City Council adopt Resolution No. 2017-27 to transfer \$63,250 of appropriation authority from General Fund, Non Departmental, contingencies to General Fund, Facilities Services, materials and services, for the purpose of performing engineering design for a replacement cooling system at the Civic Center?

RECOMMENDATION:

Adopt Resolution No. 2017-27 to transfer \$63,250 of appropriation authority from General Fund, Non Departmental, contingencies to General Fund, Facilities Services, materials and services, for the purpose of performing engineering design for a replacement cooling system at the Civic Center.

SUMMARY AND BACKGROUND:

The City's budget needs to respond to unforeseen changes. State law allows the City Council to approve transfers of appropriations within the limits established by the adopted budget.

City Council is being asked to approve a transfer within the General Fund that will allow for increased appropriation authority in the Facilities Services Division budget to fund an engineering design for the replacement of the cooling system that serves the Civic Center campus, including City Hall, Salem Public Library, and the City Council Chambers.

FACTS AND FINDINGS:

The Civic Center cooling plant includes a Multistack 300 ton chiller, a water evaporating cooling tower, seven circulating fans for moving air, and seven water circulating pumps for moving chilled water to provide cooling to more than 200,000 square feet of occupied space. The cooling system has ten modules with two compressors in each module for a total of 20 compressors. Compressors 7 and 20 failed last spring and summer, resulting in a 10 percent reduction in the system's overall capacity.

Recent maintenance found that two driver boards, which modulate compressors 1 and 2 had failed and that the pressure within the system was above recommended levels. In addition, inspection of the equipment revealed a high likelihood of calcium build-up within the modules based on the evidence of build-up in the pumps, valves, and cooling lines supplying the system.

Facilities Services technicians, along with the City's mechanical engineering contractor of record, have become increasingly concerned about build-up in the heat exchangers and the potential for additional module failures. System failure would result in a complete loss of cooling in all Civic Center buildings. The engineer indicated the cooling system failure is probable within the next year or two. Due to the age and complexity of the system and scope of the problem, the engineer is recommending that the City should plan for replacement rather than wait for a system failure. Additionally, replacement would allow for installation of a more energy efficient operating system. Design, procurement, and installation of a new system would require at least six months.

Facilities Services Division recommends the City immediately begin engineering design to provide options and specifications for bidding and replacing the central cooling plant. In order for a potential replacement to occur during the winter 2017-18 maintenance shut-down of the system, the design phase must be complete by the end of June 2017.

Adoption of Resolution No. 2017-27 provides the necessary appropriation authority to perform the engineering design for the replacement of the Civic Center's cooling system.

Kelley Jacobs
Budget Officer

Attachments:

1. Resolution No. 2017-27
2. Resolution No. 2017-27, Exhibit A, Contingency Status