



URGENCY ITEM

File #: 2020-522, Version: 1

Report to Mayor and City Council

Tuesday, July 21, 2020

Discussion

SUBJECT:

**DISCUSS PROCUREMENT OPTIONS TO ADDRESS THE INDOOR AIR QUALITY
WITHIN CITY FACILITIES**

I. SUMMARY

The City of Carson has a positive history of energy efficiency improvements, programs, policies and awards that have made the City a leader in the energy space. Over these last few years, the City Council has approved many projects that have led to long term energy and monetary savings.

With the help of consultants, staff has assessed the City's facilities and equipment to identify opportunities for improvement to our aging electrical, water, and mechanical systems.

Given the current State of Emergency at the Local and State levels due to the Covid-19 pandemic and the recent Covid-19 positive cases among several City employees, the City Manager asked staff to reevaluate these prior efforts on an emergency basis to quickly and efficiently find ways to address our mechanical systems, specifically Heating, Ventilation, and Air Conditioning (HVAC) within our facilities to improve the indoor air quality. The City's ability to address such indoor air circulation issues on an expedited basis will help protect the health and safety of both City employees and members of the public.

Short and long-term solutions have been identified to address necessary improvements to our HVAC systems and staff is seeking direction and authorization from the City Council to proceed with the next step of the process.

More specifically, staff is seeking authorization from the City Council to explore the possibility of dispensing with the normal competitive bidding process and allowing staff to utilize emergency procurement procedures. The implementation of this strategy could reduce the overall project time by several months. The emergency procurement procedures would include the following:

1. CITY HALL AND THE COMMUNITY CENTER

Consider allowing staff to pursue a contract with Trane Technologies as a design build contractor to develop a scope of work and provide a firm fixed price.

2. OTHER FACILITIES (12 SITES)

Consider allowing staff to use an informal bidding process to secure one or more qualified HVAC and Electrical contractor(s) to perform required installation, maintenance and On-Call services. The majority of the HVAC equipment at the park buildings consists of roof top package units or split systems with outdoor condensing units and heating furnaces with cooling coils located in building mechanical rooms.

If this approach is approved, Staff would come back to Council at a later date to formally seek authorization to take affirmative steps toward implementing dispensation of such normal competitive bidding processes, and to award contract(s). Approving this recommendation does not tie the hands of Council if in fact the subsequent negotiated contract(s) are deemed not acceptable by City Council. This simply provides direction to Staff to advance this approach and bring back a contract for consideration.

II. RECOMMENDATION

AUTHORIZE staff to utilize emergency procurement procedures as outlined in the California Public Contract Code Sections 22050 and 22035 to improve indoor outdoor air quality specifically, Heating, Ventilation and Air Conditioning (HVAC)..

III. ALTERNATIVES

1. DIRECT Staff to use normal procurement guidelines to pursue this project.
2. TAKE another action the City Councils deems appropriate.

IV. BACKGROUND

In 2019, during the development of the California Energy Commission (CEC) two phased grant application, titled, GFO-15-312 - The EPIC Challenge, City Staff engaged with a developer to evaluate solar energy, battery storage, electric vehicle charging stations, LED lighting retrofits, and the replacement of the City's aging HVAC systems. The grant application was not selected for the phase two award and therefore no work on the HVAC systems was completed. As part of this process, Trane Technologies was engaged by the prime contractor to provide design for some of the City's HVAC systems at City Hall and at

the Community Center.

The design plans and specifications of this project focused on energy efficiency, however much of this work can be applied to the need to improve our HVAC systems for the purpose of improving indoor air quality. In general, if the City had modern HVAC systems, air quality features could be added. However the age and condition of our systems does not accommodate these improvements. Therefore, new HVAC systems need to be installed and coordinated with improved air filtration systems in order to make long term improvements to indoor air quality. Trane Technologies has equipment that improves indoor air quality to several levels of cleanliness with their most advanced systems using a combination of HEPA filters and UV lighting systems, as recommended by the most recent guidelines by the CDC on air quality in office buildings.

The need to totally replace the HVAC system in order to gain air quality improvements is primarily in the City Hall and Community Center buildings. In addition, in order to install a new HVAC unit in the City Hall building, a new roof will need to be installed to support the system. This roof is estimated to be over 50 years old, has had numerous leak problems in the past and is beyond its useful life. These two facilities have large central air systems that are very complex and expensive to replace. Other City facilities have smaller rooftop package or split unit systems that have different needs to achieve air quality goals. Attached is a description of a preliminary scope of work for both the two primary buildings as well as other City facilities (Exhibit No. 1). By not using emergency purchasing procedures and going through our normal bidding process it is estimated that the project could take 12 months to complete. Using the emergency procurement process, together with creative scheduling, it is believed that this time line can be condensed to 8 months.

Additionally, Staff is exploring an option with Trane Technologies to bring in temporary air handling units that can be used during the design and/or construction period in order to deliver an improved indoor air quality solution on a more expedient basis. The advantage to this, and we do not have confirmation that this is possible yet, is that we could have improved air quality in place on a temporary basis within several months. Staff is also exploring the option of moving forward with City Hall first, as this design is more advanced than the Community Center, and following shortly after with the Community Center. The other City facilities would be on a separate track which would, because of the size and complexity, be less than 8 months.

While there is much still to be investigated and determined, pursuing the project with the advantage of emergency procurement provides the City with the shortest timeline in which to improve the indoor air quality in all City facilities.

EMERGENCY CONTRACTING PROCEDURES

The Public Contract Code ("PCC") permits the City to procure a public project without having to engage in the normal competitive bidding process in the event of an emergency.

Section 1102 of the PCC defines “emergency” as a sudden, unexpected occurrence that poses a clear and imminent danger, requiring immediate action to prevent or mitigate the loss or impairment of life, health, property, or essential public services. The onset of Covid-19 and the City’s resultant declaration of emergency on March 17, 2020, the abundance of scientific data suggesting that poor indoor circulation heavily contributes to the coronavirus transmission, the several positive coronavirus cases within the City’s organization, and the City Manager’s determination after Public Works staff reported the results of a study to her on July 20, 2020 that the HVAC air filtration system needs to be replaced which process will take many months to complete, all combine to create an emergency under Section 1102 warranting a streamlined procurement process for the purpose of mitigating the loss or impairment of life and health. Any time saved by not undergoing the competitive bidding process, which could delay the project by an estimated 60 days could directly result in reducing the number of positive Covid-19 transmissions.

Under Section 22035 of the PCC, in case of an emergency, the City Council is authorized to procure the project without soliciting competitive bids; however, if City elects to procure the project without soliciting competitive bids, the City must comply with Section 22050 of the PCC, which requires/permits City to follow certain procedures some of which are as follows (Exhibit No. 2):

- A 4/5 vote is needed before any action may be taken based on the emergency.
- Council must make a finding that the emergency will not permit a delay resulting from a competitive solicitation for bids and that the action is necessary to respond to the emergency.
- By a 4/5 vote, Council may delegate, by resolution or ordinance, the authority to order appropriate action (e.g. City Manager).
- If a person with delegated authority orders any action based on the emergency, that person shall report to the Council, at its next meeting required pursuant to this section, the reasons justifying why the emergency will not permit a delay resulting from a competitive solicitation for bids and why the action is necessary to respond to the emergency.
- If the Council orders any action based on the emergency, the Council shall review the emergency action at its next regularly scheduled meeting and, except as specified below, at every regularly scheduled meeting thereafter until the action is terminated, to determine, by a 4/5 vote, that there is a need to continue the action. If the Council meets weekly, it may review the emergency action in accordance with

this paragraph every 14 days.

It should be noted, however, that staff is not asking the Council to direct staff to implement the PCC's emergency procedures at this time as staff plans to come back to Council at a later date to formally seek such authorization.

V. FISCAL IMPACT

There is no fiscal impact to the recommendation presented in this report. Staff will bring back a contract(s) with specific fiscal impacts at a later City Council Meeting.

VI. EXHIBITS

1. Draft Scope of Work. (pgs. 6 - 10)
2. Public Contract Code Sections. (pg. 11)

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POTENTIAL SCOPE OF WORK

CITY HALL (provide by TRANE TECHNOLOGIES)

The central plant at City Hall consists of two constant volume 130 ton McQuay centrifugal chillers providing the chilled water cooling needs of the building. These chillers are at the end of their useful usage.

The plant naturally includes ancillary mechanical and electrical equipment, including a cooling tower, condenser pumps, chilled and hot water pumps, etc. The cooling tower was replaced in 2011 and is in good operating condition. There is an existing 1.5MMBTU (one million British Thermal units) boiler serving the heating requirements of the building. This boiler was also replaced in 2010 and is in fair to good operating condition.

There are a total of four pumps; one chilled water, one condenser water, one hot water and one combined back-up pump used for condenser and chilled water distribution. These pumps serve the building chiller, cooling tower, boiler, and hot and chilled water distribution systems. These pumps are old, with low efficiency motors and their associated strainers and valves are stuck in fixed positions and not operating properly.

There are currently five air handling units (AHU's) providing the required air heating and cooling to the various spaces of the City Hall building. All the units are at the end of their useful life and need to be replaced. City Hall also has split systems and exhaust fans that are beyond their useful life and in need of replacement.

SCOPE:

- Provide temporary cooling system with MERV-13 filters and set outside air (OSA) as high as possible.
- Provide mechanical, electrical, and structural engineering for the project
- Obtain plan check and permits for the project
- Replace the roof with a new PVC membrane roof to match the Community Center
- Use of Trane Catalytic Air cleaning system (TCACS) (Filtration MERV-13, germ-killing ultraviolet light, and a photocatalytic oxidation process)
- Provide and install 2 New Trane RTWD Chillers in the Central Plant in place of the existing chillers
- Provide and install 3 new water pumps, 1 for chilled water, 1 for condenser water, and 1 for backup
- Provide and install VFD's on all new pumps

- Provide and install a new controls system in the Central Plant for the cooling tower, pumps, and chillers
- Provide and install a new ASHRAE 15 refrigerant ventilation system to meet code
- Provide and install 5 new variable speed air handlers to replace AHU #1, #2, #3, #4 and #5
- Replace all the exterior ductwork on the roof
- Provide and install 6 new hot water reheat coils in the plenum spaces
- Replace qty. 2 5 ton split systems for the IT room
- Replace qty. 1 3 ton split system for the phone room
- Replace qty. 1 1.5 ton mini split system for the AV room
- Replace qty. 1 1.5 ton mini split system for the radio room
- Provide and install 21 new exhaust fans
- Install Siemens DDC controls for all new air handlers and existing mixing / VAV boxes (over 50 boxes)
- Provide a split or package unit for the Public Safety office in basement that is only occupied Friday through Sunday
- All air handling units need outside air/fresh air intake
- Provide for Air Balancing of the Whole Building
- Calculate and file for any applicable SCE energy incentives for the project

COMMUNITY CENTER (provide by TRANE TECHNOLOGIES)

Similar to City Hall, there is a central plant at the Community Center which consists of two constant volume 130 ton McQuay centrifugal chillers providing the chilled water cooling needs of the building. These chillers are at the end of their useful life.

The plant naturally includes ancillary mechanical and electrical equipment, including a cooling tower, condenser pumps, chilled and hot water pumps, air separators etc. The cooling tower was replaced in 2011 and is in good operating condition. There are two existing boilers providing the hot water heating needs of the building. One boiler is decommissioned and disconnected and the second boiler has required constant repair and maintenance over the years; therefore building heating requirements are difficult to meet. Additionally, maintenance for the operational boiler is difficult, as parts are hard to find and are very expensive.

Similar to City Hall, there are a total of four pumps: one chilled water, one condenser water, one hot water and one combined back-up pump used for both condenser and chilled water distribution. These pumps serve the building chiller, cooling tower, boilers and hot and chilled water distribution systems. The pumps are old, with low efficiency motors, and the associated strainers and valves are stuck in fixed positions and do not operate properly.

The controls for the system consist of a mixture of DDC and pneumatic control valves and actuators.

There are currently seven AHU's providing the required air heating and cooling to the various spaces of the Community Center building. Most of the AHU, except AHU 1, were replaced when the Community Center was renovated about 10 years ago, Trane will investigate if these units have or can accommodate an air cleaning/filtration system.

AHU 1 – Is an outdoor constant volume multi-zone unit with a cold and bypass deck serving the west wing of the building. The west wing consists of a large special event area, conference rooms and offices. The unit has 3-way DDC control valves and actuators; however, the unit is old and has exceeded its useful life.

SCOPE:

- Provide mechanical, electrical, and structural engineering for the project
- Obtain plan check and permits for the project
- Use of Trane Catalytic Air cleaning system (TCACS) (Filtration MERV-13, germ-killing ultraviolet light, and a photocatalytic oxidation process)
- Provide and install 2 New Trane RTWD Chillers in the Central Plant in place of the existing chillers
- Provide and install 3 new water pumps, 1 for chilled water, 1 for condenser water, and 1 for backup
- Provide and install VFD's on all new pumps
- Provide and install a new controls system in the Central Plant for the cooling tower, pumps, and chillers
- Provide and install a new ASHRAE 15 refrigerant ventilation system to meet code
- Provide and install 1 new variable speed air handler to replace AHU #1
- Replace all the exterior ductwork for Air Handler #1
- Provide for Air Balancing for AHU#1
- Provide and install qty. 2 new high efficiency boilers
- Calculate and file for any applicable SCE energy incentives for the project

OTHER PARK FACILITIES (12 SITES) (contractors TBD)

A majority of the HVAC equipment at the park buildings consists of roof top package units or split systems with outdoor condensing units and heating furnaces with cooling coils located in building mechanical rooms. Below is a sample list of potential work that local contractors can do.

- Investigate the on-site system and replace units that are not equipped with economizer and return air exhaust fans or are not working properly
- Remove and replace rooftop package units
- Replace split systems with new furnace, cooling coil and condensing units
- Install new room thermostats per unit
- Install new DDC controls and programming and connect to City wide energy management system
- Install condensate drains as appropriate
- Replace all existing air handler units' filters with MERV-13 high efficiency particulate filter which captures many of large biological containments and small air born particles such as mols, spores, and pollen. Filters should be replaced at every 3 months.
- Add ultraviolet (UV) light inside of supply air, this is believed to be able to kill most of the viruses possibly Coronavirus. Light should be replaced every 12-18 months.
- Set outside air (OSA) as high as possible.
- Investigate the possibility of adding strategically located exhaust and make up air could be added to the system.
- Program units to run at nights at least for a couple of hours without cooling or heating the building to purge the space as much as possible.

	Facility	Address	Approximate Area (Square feet)	HVAC Improvements planned
1	City Hall	701 E CARSON ST, Carson CA, 90745	48,058	Yes
2	Community Center	801 E CARSON ST, Carson CA, 90745	85,000	Yes
3	Veterans Park	22400 MONETA AVE, Carson CA, 90745	38,752	Yes
4	Scott Park	23410 CATSKILL AVE, Carson CA, 90745	16,153	Yes
5	Dominguez Park	21330 S SANTA FE AVE, Carson CA, 90745	5,847	Yes
6	Stevenson Park	905 E FRANKE ST, Carson CA, 90745	17,301	Yes
7	Dolphin Park	21205 WATER ST, Carson CA, 90745	6,546	Yes
8	Anderson Park	19101 S Wilmington Ave, Carson CA, 90745	4,977	Yes
9	V. Hemingway Park	16700 S AVALON BLVD, Carson CA, 90745	4,632	Yes
10	Del Amo Park	703 E DEL AMO BLVD, Carson CA, 90745	4,152	Yes
11	Calas Park	1000 E 220th St, Carson CA, 90745	4,999	Yes
12	Dr. Mills Park	1340 E DIMONDALE DR, Carson CA, 90745	3,211	Yes
13	Carriage Crest Park	23800 FIGUEROA ST, Carson CA, 90745	3,644	Yes
14	Carson Park	21436 MAIN ST, Carson CA, 90745	16,153	Yes
15	Walnut Mini-Park	440 E WALNUT ST, Carson CA, 90745	No building	No
16	Perry St Mini-Park	1205 E 215TH PL, Carson CA, 90745	No building	No
17	Reflections Mini Park	21208 SHEARER AVE, Carson CA, 90745	No building	No
18	Friendship Park	21910 WATER ST, Carson CA, 90745	No building	No
19	Corporate Yard	2400 E. Dominguez		Yes

PUBLIC CONTRACT CODE SECTIONS FOR EMERGENCY CONTRACTING

Declaration of Emergency:

California Public Contract (CPCC) 22035

(a) In cases of emergency when repair or replacements are necessary, the governing body may proceed at once to replace or repair any public facility without adopting plans, specifications, strain sheets, or working details, or giving notice for bids to let contracts. The work may be done by day labor under the direction of the governing body, by contractor, or by a combination of the two.

(b) In case of an emergency, if notice for bids to let contracts will not be given, the public agency shall comply with Chapter 2.5 (commencing with **Section 22050**)

Section 22050

CA Pub Count Code § 22050 (2017)

(a) (1) In the case of an emergency, a public agency, pursuant to a four-fifths vote of its governing body, may repair or replace a public facility, take any directly related and immediate action required by that emergency, and procure the necessary equipment, services, and supplies for those purposes, without giving notice for bids to let contracts.

(2) Before a governing body takes any action pursuant to paragraph (1), it shall make a finding, based on substantial evidence set forth in the minutes of its meeting, that the emergency will not permit a delay resulting from a competitive solicitation for bids, and that the action is necessary to respond to the emergency.

(b) (1) The governing body, by a four-fifths vote, may delegate, by resolution or ordinance, to the appropriate county administrative officer, city manager, chief engineer, or other nonelected agency officer, the authority to order any action pursuant to paragraph (1) of subdivision (a).

(2) If the public agency has no county administrative officer, city manager, chief engineer, or other nonelected agency officer, the governing body, by a four-fifths vote, may delegate to an elected officer the authority to order any action specified in paragraph (1) of subdivision (a).

(3) If a person with authority delegated pursuant to paragraph (1) or (2) orders any action specified in paragraph (1) of subdivision (a), that person shall report to the governing body, at its next meeting required pursuant to this section, the reasons justifying why the emergency will not permit a delay resulting from a competitive solicitation for bids and why the action is necessary to respond to the emergency.

(c) (1) If the governing body orders any action specified in subdivision (a), the governing body shall review the emergency action at its next regularly scheduled meeting and, except as specified below, at every regularly scheduled meeting thereafter until the action is terminated, to determine, by a four-fifths vote, that there is a need to continue the action. If the governing body meets weekly, it may review the emergency action in accordance with this paragraph every 14 days.