



City Council Staff Report

DATE: May 20, 2015 CONSENT CALENDAR

SUBJECT: APPROVAL OF CITY INITIATED ADDITIONAL WORK ASSOCIATED WITH MUNICIPAL COGENERATION FACILITY UNDER CHANGE ORDER NO. 9 IN THE AMOUNT OF \$180,067 WITH OPTERRA ENERGY SYSTEMS INC FOR THE CITYWIDE ENERGY PROJECT

FROM: David H. Ready, City Manager

BY: Department of Maintenance & Facilities

SUMMARY

The proposed action requests City Council approval of Change Order No. 9 to Contract A6375 in the amount of \$180,067 with Opterra Energy Systems, Inc. to install by-pass valves for the proper cleaning of underground loop, replacement of four underground valves, replacement chilled water thermal storage tank supply and return lines. This additional work is expressly at the recommendation of staff and addresses deficient utility infrastructure that is a part of the municipal cogeneration system, but given reduced budgets for facilities maintenance, replacement of certain elements of the system has been deferred. Replacement and repair of these items is important to ensuring the overall efficiency of the entire system which is scheduled to start up for commissioning in July 2015.

RECOMMENDATION

1. Approve Change Order #9 to Contract A6375 with Opterra Energy Services, Inc. in the amount of \$180,067.
2. Authorize the City Manager to execute all necessary documentation.

STAFF ANALYSIS

Opterra Energy Services, Inc. (formerly Chevron Energy Systems) was hired by the City to rebuild its aging cogeneration infrastructure as well as implement a City wide energy conservation effort thru infrastructure improvements at City Facilities. On several occasions staff has brought forward change orders to the Opterra contract to implement further improvements to aging infrastructure as well as to implement efficiencies in our

systems and maintenance efforts. As staff has toured the facilities that are tied to the Municipal Cogeneration plant with Opterra, additional maintenance, safety and efficiency improvements have been identified for both the Airport Terminal building as well as other Civic Center structures. As we near completion on the Citywide Energy Project there are a number of repairs and replacements staff has identified. At staff's recommendation and request Opterra Energy Systems, Inc. has provided costs to make necessary repairs to the Municipal Cogeneration Plant; given their familiarity to the system and expediency needed for the requested repairs. This is City directed additional work not part of the original contract with Opterra for the Citywide Energy Project. This report will detail the specific concerns discovered and recommended solutions to alleviate the issues.

1. Change Order 9b: Replacement of Four (4) Underground Valves.

The chilled and hot water valves that are utilized for Fire Station #2 are non-operational and they are deteriorated beyond repair. The underground chilled and hot water loops are out of Opterra's scope of work and the Facilities Department is requesting the replacement due to prior leaks outside of the Municipal Plant. **\$31,224.00**

2. Change Order 9c: Installation of By-Pass Valves.

All Municipal Co-gen Satellite facilities need by-pass valves installed on the supply and return chilled and hot water loop lines. By-pass valves are needed to properly isolate interior building loops from underground in order to flush and clean piping. The underground chilled and hot water piping and valves are out of Opterra's scope of work; however, must be properly cleaned prior to operations in order to ensure that new equipment meets the manufacturers warrantee. **\$99,912.00**

3. Change Order 9d: Replace Piping to Underground Chilled Water Storage.

It was discovered, when renovating the Sunrise Plant that the 10" PVC piping to the underground chilled water thermal storage tank was failing to due to age. At that time it was determined that the City would replace the piping at both the Sunrise and Municipal Plants; however, the City did not issue a change order for Municipal work. Therefore, replacing the underground piping to the chilled water storage was not included in Opterra's scope of work. **\$17,224.00**

4. Change Order 9e: Fiber Cable Installation.

The City is responsible for the interconnect communications path from City Hall to the City Yard. Therefore, installation of approximately 3,000 feet of 12 strand fiber optic cable is required. The City's current communication infrastructure will not support DDC control system. **\$31,707.00**

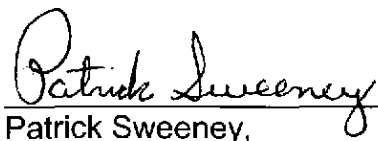
None of the above items are part of the original Opterra (Chevron) scope of work. These items are deferred mechanical and facility maintenance items that have not been programmed due to reduced or frozen facility maintenance budgets over the last several years. However, there are significant cost efficiencies in pursuing replacement of these mechanical systems given the work currently underway by Opterra, given their special expertise to install all of the above work at the same time they are in the buildings during their contract work. Staff has carried out its due diligence on proposed pricing by checking actual part prices, comparing previous pricing for control work on other buildings as well price checking with local contractors. To bid this work separately would require development of actual designs, preparation of bid documents and the bid process, all of which would add cost and run the timeline out on the completion of the work.

FISCAL IMPACT

The total cost of the additional work included in Change Order No. 9 is \$180,067, sufficient funding is available in the following accounts.

<u>Project</u>	<u>Cost</u>	<u>Funding Source</u>
Replacement of Four (4) valves	\$31,224	550-5806-42001
By-Pass Valves and cleaning of system	\$99,912	550-5806-42001
Thermal Storage Tank supply	\$17,224	550-5806-42001
Fiber Cable Installation	\$31,707	520-5641-43010
 Grand Total Change Order #9	 \$180,067	

SUBMITTED

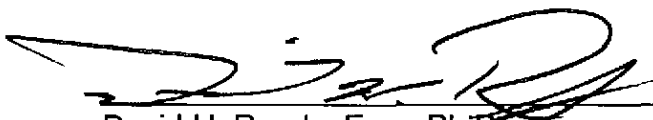


Patrick Sweeney,
Director of Maintenance & Facilities



Marcus L. Fuller, MPA, P.E., P.L.S.
Assistant City Manager/City Engineer

Approved by:



David H. Ready, Esq., Ph.D.
City Manager

Attachments:

1. Change Order 9

CHANGE ORDER NO. 9

PROJECT TITLE: City Wide Energy Conservation Measures Project
CONTRACT: Energy Services Contract (CU 1361)
CONTRACT NO.: A6375
CONTRACT DATE: July 29, 2013
CONTRACTOR: Opterra Energy Services

The following changes are hereby made to the Contract:

#	Item	Cost
1.	CO#9b: Replacement of four (4) gate valves (3" (hot water) and 4" (chilled)) serving Fire Station No. 2 from Muni Plant existing valves.	\$31,224.00
2.	CO#9c: Install by-pass valves, pressure test, flush and Clean existing piping.	\$99,912.00
3.	CO#9d: Muni TES (Thermal Energy Storage Tank PVC Pipe Replacement)	\$17,224.00
4.	CO#9e: 3000 ft. Fiber Cable Run and switches from City Yard to City Hall	<u>\$31,707.00</u>
		\$180,067.00

Justification:

Item #1: The underground chilled and hot water valves that are utilized for Fire Station #2 are non-operational and have deteriorated beyond repair. The underground chilled and hot water loops are not in the current scope of work with Opterra.

Item #2: All Municipal Co-gen Satellite facilities need by-pass valves installed on supply and returns chilled and hot water lines. Valves are needed to properly isolate interior building loops from underground in order to flush and clean piping. The underground chilled and hot water piping and valves are currently out of Opterra's scope of work: however piping must be properly cleaned prior to operations in order to ensure that new equipment meets the manufactures warrantee.

Item #3: It was discovered, when renovating the Sunrise Plant that the 10" PVC piping to the underground chilled water thermal storage tank was failing due to age. At that time it was determined that the City would replace piping at both Sunrise and Municipal Plant; However, the City did not issue a change order for Municipal work.

Item #4: The City is responsible for the interconnect communications path from City Hall to the City Yard. Therefore, installation of approximately 3,000 feet of 12 strand fiber optic cable is required. The City's current communication infrastructure will not support DDC control system

CHANGE TO CONTRACT AMOUNT

Original Contract Amount: \$17,507,842
This Change Order: \$ 180,067
Previous Change Order(s): \$ 1,527,709
Revised Contract Amount: \$19,215,618

CHANGE TO CONTRACT TIME

The Contract Time is hereby extended until August 30, 2015.

Approvals Required:

To be effective, this Change Order must be approved by both Opterra ES and City, unless otherwise permitted under the terms of the Contract.

Recommended by _____ date _____
Maintenance and Facilities Director

Ordered by _____ date _____
City Manager

ATTEST: _____ date _____
City Clerk

Accepted by _____ date _____
Opterra Energy Services

Opterra ES acknowledges and agrees, on behalf of Opterra ES, all subcontractors and all suppliers, that, except as provided above, the stipulated compensation provided for in this Change Order includes payment for all work contained in this Change Order, plus all payments for interruption of schedules, incremental extended overhead costs, acceleration costs, delay and all impact, ripple effect or cumulative impact on all other work arising out of, or related to, the work that is the subject of this Change Order. In addition, Opterra ES agrees that this Change Order comprises the total compensation due Opterra ES, and all subcontractors and all suppliers, for the work or change defined in this Change Order, including all impacts arising out of or related to this Change Order, including all impacts arising out of or related to this Change Order, except for the additional time-related issues noted above, if required.

Barry Kirschenbaum
Project Manager
150 E. Colorado Blvd, Ste. 360
Pasadena, CA 91105

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May 11, 2015

Mr. Patrick Sweeney
Facilities Operations Director
City of Palms Springs
425 N. Civic Drive
Palm Springs, CA 92262

Re: OES PROJECT ACHCN-32261 / ESC # CU-1361 / COPS Contract # A6375 / Rev -1 CO # 9b
(City of Palm Springs Muni – Replacement of four (4) gate valves (3” (hot water) and
4” (chilled)) serving fire station # 2 from Muni Plant existing valves.

Scope of Work:

1. Replace two (2) existing failed 3” gate valves and two (2) existing failed 4” gate valves with four (4) new Resilient Wedge Gate Valves (2 -3” and 2-4”) serving Fire Station # 2 at Muni Plant. Valves are located underground (8 ft deep)
2. Cut and remove existing 4"and 3" gate valves and raise piping vertical from 8 ft. deep. Install new PVC riser enclosures to replace existing riser enclosures.
3. Prep existing rusted iron piping to install new pipe adaptors to install new section of piping to allow new gate valves to be installed.
4. Labor to assist City of Palm Springs in trenching, pipe removal and initial backfill.
5. New gate valves are in stock.
6. Provide sump pump to pump out water that may drain from existing piping in trench. Pump out to ground level to perform work.
7. Work to take approximately one week to complete after receipt of gate valves and piping materials.

Exclusions:

1. Trenching, bedding, backfill. Gravel, Shoring. Permits.

Total installed cost is	\$ 31,224.00
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Respectfully,

Barry Kirschenbaum

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Project Manager

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Barry Kirschenbaum
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April 21, 2015

Mr. Patrick Sweeney
Facilities Operations Director
City of Palms Springs
425 N. Civic Drive
Palm Springs, CA 92262

Re: OES PROJECT ACHCN-32261 / ESC # CU-1361 / COPS Contract # A6375 /
CO # 9c
(City of Palm Springs Muni Satellite Bldgs – Install by-pass valves / pressure test / flush and
clean City of Palm Springs existing piping.)

Scope of Work:

1. Install full size by-pass butterfly valves and ball valves, piping, welding, fittings, manual ¼” ball valve for air bleed, ¼” automatic air vent and pressure gages on both pipes at the following locations:
 - a. City Hall: Chilled Water (2” ball valve)
 - b. City Hall Expansion: Chilled Water / Hot Water (4” butterfly / 2” ball valve)
 - c. IHUB: Chilled Water / Hot Water (3” butterfly / 2” ball valve)
 - d. Police Dept.: Chilled Water / Hot Water (4” butterfly / 3” butterfly)
 - e. Police Training: Chilled Water (2” ball valve)
 - f. Fire Station # 2: Chilled Water / Hot Water (3” butterfly / 4” butterfly)
 - g. Airport Central Pant: Chilled Water (6” Butterfly)
 - h. Airport Underground (Hot Water 4” Butterfly)
Air handler Room:
2. Insulate all chilled and hot water pipe where by-pass valves were installed with aluminum jacketing as required for outdoor piping only.
3. Pressure test existing hot and chilled water piping from Muni Plant to locations as stated above with static pressure test for 24 hours and submit report to the City of Palm Springs.
4. Provide temporary pump and filtration system to flush and clean chilled water and hot water pipes after static pressure test has been performed to determine if pipe breaks are present in existing underground or above ground pipes.

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April 21, 2015

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(City of Palm Springs Muni Satellite Bldgs – Install by-pass valves / pressure test / flush and clean City of Palm Springs existing piping.)

Exclusions:

1. Condition of existing (steel, transite or PVC piping) in the hot water and chilled water below grade and above ground outside of the Muni Plant area at all satellite buildings tied into the Muni Plant..
2. Adding of any chemicals to clean piping systems and to maintain water quality by others.
3. Diesel fueling of pump on diesel motor skid by City Of Palm Springs.
4. Overtime work
5. Permits

Total cost is	\$ 99,912.00
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Respectfully,

Barry Kirschenbaum

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Project Manager

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April 30, 2015

Mr. Patrick Sweeney
Facilities Operations Director
City of Palms Springs
425 N. Civic Drive
Palm Springs, CA 92262

Re: OES PROJECT ACHCN-32261 / ESC # CU-1361 / COPS Contract # A6375 /
Rev 1 CO # 9d
(City of Palm Springs Muni TES (Thermal Energy Storage Tank PVC Pipe
Replacement)

Scope of Work:

1. Remove and dispose of existing, old and damaged buried 10" PVC pipe at TES tank at Muni Plant.
2. Install approximately 100 feet of 10" schedule 80 PVC pipe, fittings, 90's, flanges, special fittings and adaptors as required to tie into Muni Plant piping.
3. Pressure test system as required.
4. Back fill of pipe as required.

Total installed cost is	\$ 17,224.00
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Respectfully,

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Project Manager

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April 20, 2015

Mr. Patrick Sweeney
Facilities Operations Director
City of Palms Springs
425 N. Civic Drive
Palm Springs, CA 92262

Re: OES PROJECT ACHCN-32261 / ESC # CU-1361 / COPS Contract # A6375 / CO # 9e
(City of Palm Springs 3000 ft. Fiber Cable Run and switches from City Yard to City Hall)

Scope of Work:

1. Install approximately 3000 feet of 12 strand fiber optic cable from City Hall to City yard in existing conduit and using existing vaults.
2. One (1) new HP network switch at City Hall
3. One (1) new HP network switch at the City Yard
4. Two (2) fiber optic transceivers
5. This work will allow a much faster signal from the City yard where the main DDC computer will be located for the facility manager and staff.

Total installed cost is	\$ 31,707.00
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Alt deduct:

1. Delete the installation of running 3000 feet of 12 strand fiber optic cable from City Hall to City yard in existing conduit and using existing vaults.
2. Utilize existing 2 strands of fiber that exist from City Hall to City Yard

Total deduct is	< \$ 12,143.00 >
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Respectfully,

Barry Kirschenbaum

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Project Manager