



REPORT TO CITY COUNCIL

Approved by:

Keith Helmuth, Department Director

Arnaldo Rodriguez, City Manager

Council Meeting of: February 20, 2019

Agenda Number: C-2

SUBJECT: Consideration of a Resolution Approving the Award of an Emergency Contract Change Order for the Wastewater Treatment Plant Rehabilitation Project in the Amount of \$1,363,601 for Constructing a New Primary Effluent Pump Station, Increasing Construction Contract Contingencies by \$300,000, Construction Inspection and Management Costs, and Third-Party Testing, Surveying, Biological or Consulting Services by \$100,000 as Approved by the City Engineer, and Approving a Budget Amendment to the Fiscal Year 2018/19 Capital Fund Adding \$1,763,601 to City Project WWTP 18-02

RECOMMENDATION:

Staff recommends that the City Council (Council) adopt a resolution taking the following actions in support of the Wastewater Treatment Plant Rehabilitation Project (the "Project"):

1. Awarding an emergency contract change order in the amount of \$1,363,601 to Cushman Contracting Corporation (Cushman) for construction of a new Primary Effluent Pump Station (PEPS);
2. Authorizing additional construction contingencies of up to \$300,000 as approved by the City Engineer;
3. Authorizing funding of up to \$80,000 for construction inspection and management as approved by the City Engineer;
4. Authorizing funding of up to \$20,000 for third party testing, surveying, biological or consulting services as approved by the City Engineer; and,
5. Authorizing a funding amendment to Fiscal Year (FY) 2018/19 Capital Projects Budget appropriating \$1,763,601 in additional funds for the Project.

SUMMARY:

During construction of the Project, the contractor discovered the wetwell, or containment area of incoming effluent, at the PEPS was failing and could not structurally support the pumps. The wetwell has been protected with a temporary structural support system since October 24, 2018. Following the completion of an engineered design for a replacement PEPS, Staff and the Project Engineer evaluated options for constructing the improvement through a change order with the existing contractor or conducting a public bidding process. In late January, the City received a Change Order (CO) proposal from Cushman for constructing a new PEPS. Given the critical situation at the Waste Water Treatment Plant (WWTP) and the uncertainty associated with a public bidding process, it is recommended that the Council award the change order to Cushman. The funds needed to complete the change order work are available in the Sewer Fund Reserves.

DISCUSSION:

The construction contract for the Project was awarded on April 18, 2018 in the amount of \$3,312,000 to Cushman. Work began on July 9, 2018. The Project included repairs to the existing PEPS within the original construction plans. When Cushman emptied the PEPS for cleaning, repairs, and recoating, it became evident the intended repairs called for by the original contract would not address the unforeseen structural damages. Stantec, the design consultant, based on a site visit on September 28, 2018 to assess structural damages, further determined the wetwell was unsafe and had an unacceptable risk of failure.

Council was advised of the situation at a special meeting of the Council held on October 10, 2018. Two alternatives were presented to address the unanticipated damage. The options were:

1. Rehabilitate the existing wetwell at the existing PEPS.
2. Build a new PEPS adjacent to the existing facility and abandon the original PEPS.

The Council directed staff to proceed with the construction of a new PEPS at the WWTP. During this meeting, staff reported that it would "investigate the merits of preparing a CO with the contractor currently working at the WWTP or hiring a separate contractor". As such, Stantec was directed to immediately begin design of a new PEPS as an emergency measure. Council was also informed of an informal cost estimate in the amount of \$1,250,000 provided verbally by Cushman for the wetwell, based solely on a conceptual drawing provided by Stantec for the special meeting report.

During the November 7, 2018 Council meeting, Stantec's proposal for engineering services for the new PEPS was approved. The agreement provided \$45,600 for the design and construction management of the new PEPS if awarded by CO to Cushman (Task 1). An additional \$59,000 acts as a contingency fund if the City chooses to go out for competitive bids for the construction of the new PEPS (Task 2). A competitive bid would require the preparation of a formal set of bid documents. Stantec also identified additional required construction costs for removal of the existing wetwell that were not accounted for as part of the presentation to City Council. Those items include:

- A. Excavation to form new slab and walls
- B. Installation of new pump station
- C. Connecting new piping and electrical with existing
- D. Decommissioning of the existing wetwell
- E. Credit for removing resurfacing layer and epoxy coating from scope of work

Stantec developed a Request for Proposal (RFP) with plans and specifications for a new PEPS in early January. This RFP accounted for all items needed to construct a new PEPS, versus just a wetwell as reported during the special Council meeting of October 10, 2018. The scope also included all costs associated with the removal of the existing PEPS. Stantec's estimate for the proposed work was \$1,373,000. The RFP was provided to Cushman on January 16, 2019, who responded with a proposal in the amount of \$1,363,601 on January 31, 2019. Cushman was not advised of the Engineer's estimate of construction cost.

Stantec has reviewed the proposal from Cushman and recommends awarding the change order to Cushman. The basis for this recommendation is the current bidding climate. Given the competitiveness of the current bidding climate, it is not believed the City would receive lower bids for work. See memo from Stantec attached to this report (Attachment 3).

Construction Management and Inspection and Third-party Consultants

Additional project costs of \$80,000 for Construction Management and Inspection, and \$20,000 for Third-party Consultant Services are recommended to be added for administration of the new PEPS Change Order.

Additional Project Contingencies

Staff is requesting an additional allowance of \$300,000 for construction contract contingencies as approved by the City Engineer to complete the project including the new PEPS.

The original action by Council at the time of the Project award authorized \$300,000 in contingencies for costs associated with changes to the work due to unforeseen conditions. This amount was approximately nine percent of the original contract and set by the available budget at the time. To date, the City Engineer has approved 12 Change Orders (CO) resulting in a net increase of \$254,314.04 to the contract, leaving a little more than \$45,000 in contingencies to finish the original project. The CO's to date are primarily related to the age and deteriorated condition of items uncovered during construction of the Project and the fact that the design could not account for changes to piping and system components made for maintenance purposes over the last 50 years from the original construction of the WWTP. Below is a summary of approved changes to the contract:

- Repair and retrofit failing system serving sludge centrifuge and grit chambers prior to entering headworks. This was discovered during installation of requested maintenance access points, or clean-outs, to the drain line. Pipelines were found to be corroded. Material was flowing through and around pipelines pulling surrounding soils away creating a sinkhole effect. Although expensive, these costs averted a potential collapse of the entire area entering the headworks.

Added cost to project = \$161,186.23

- Slide gates for Clarifier 3 discovered to be non-functional and non-repairable. Required replacement to complete rehabilitation of Clarifier 3 required per the contract.
Added cost to project = \$47,076.40
- Additional Potholing and Excavations required due to lines not being as depicted on plans.
Added cost to project = \$63,124.46
- Discovery of structural damage at Primary Effluent Pump Station wetwell.
 - Install Shoring System at Effluent Wetwell, a short-term fix deemed acceptable for a 10-month period, by certifying Structural Engineer. This added cost avoided \$20,000 a Week to have bypass pumping provided by Cushman for an Anticipated 5-7 Month Period.
Added cost = \$45,794.68
 - Additional bypass pumping of effluent beyond that called for by Contract and also to allow for shoring to be installed in existing wetwell.
Added cost = \$56,032.27
 - Elimination of Concrete Repairs at effluent wetwell, credit received for Cushman not coating existing wetwell per contract (Council Report 11/7/18).
Credit, or cost savings, = (\$118,900.00)

In addition to the approved change orders, there are anticipated change orders totaling \$159,000 known at this time that, if approved, would exceed the allowable contingencies. Anticipated change orders are described below:

- Heat Exchanger Rehabilitation. Contract called for an allowance of \$100,000 with amount to be added if required upon approval of Engineer. Cushman Anticipates Final Cost of \$175,000. Stantec concurs with this cost.
Potential added cost to project = \$75,000
- Slide Gates for Clarifier 1 & 2 are needed based on the fact the gates have exceeded a useful life of 50 years and are in similar condition to the slide gates at Clarifier 3.
Potential added cost to project \$84,000.

The requested addition of \$300,000 in contract contingencies is arrived at by considering the anticipated change orders of \$159,000, plus a recommended 10 percent of the new PEPS, or \$136,360. There will still be \$45,000 available for the remaining contract work. The Contractor expects the original contract work to be completed by end of March 2019.

FINANCIAL IMPACT:

There is no fiscal impact to the City's General Fund. The total cost for the construction of a new PEPS, additional project contingencies, additional construction management and inspection, and third-party consultant services is \$1,763,601.

This funding will come from the Unappropriated Fund Balance of the Sewer Fund, subject to Council's approval.

Staff is requesting an amendment in the amount of \$1,763,601 to the Fiscal Year 2018/19 Capital Project Budget as presented in Exhibit AA.

CONSISTENCY WITH THE VISION MADERA 2025 PLAN:

This proposed action is consistent with the Madera Vision Plan, specifically: Strategy 115 "Economic Resource Provision: Ensure sufficient economic resources to provide adequate City services and prepare for future growth."

ALTERNATIVES:

1. Reject Cushman Proposal.
2. Utilize Stantec to implement Task 2 of their engineering proposal at an additional cost of \$59,000 to put new PEPS out to bid plus unknown expected added construction costs for a contractor to mobilize for a new contract.

ATTACHMENTS:

1. Resolution
2. Memo from Stantec

ATTACHMENT NO. 1

RESOLUTION NO. 19-__

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MADERA APPROVING THE AWARD OF AN EMERGENCY CONTRACT CHANGE ORDER FOR THE MADERA WASTEWATER TREATMENT PLANT REHABILITATION PROJECT, CITY PROJECT WWTP 18-02, IN THE AMOUNT OF \$1,363,601 FOR CONSTRUCTING A NEW PRIMARY EFFLUENT PUMP STATION, INCREASING CONSTRUCTION CONTRACT CONTINGENCIES BY \$300,000, CONSTRUCTION INSPECTION AND MANAGEMENT COSTS, AND THIRD-PARTY TESTING, SURVEYING, BIOLOGICAL OR CONSULTING SERVICES BY \$100,000 AS APPROVED BY THE CITY ENGINEER, AND APPROVING A BUDGET AMENDMENT TO THE CITY OF MADERA FISCAL YEAR 2018/19 CAPITAL PROJECTS BUDGET ADDING \$1,763,601 TO CITY PROJECT WWTP 18-02

WHEREAS, the Madera Wastewater Treatment Plant Rehabilitation Project, City Project No. WWTP 18-02, hereinafter called the "Project", is included in the FY 2018/19 Budget for Capital Projects; and

WHEREAS, the City entered into a construction contract for the Project with Cushman Contracting Corporation, hereinafter called "Contractor"; and

WHEREAS, during construction it was discovered the existing wetwell to the Primary Effluent Pump Station is structurally deficient; and

WHEREAS, the City's design engineer prepared drawings and specifications for construction of a new Primary Effluent Pump Station and issued a Request for Proposal to the Contractor for the work under an emergency change order; and

WHEREAS, the Contractor submitted an acceptable proposal for construction of a new Primary Effluent Pump Station; and

WHEREAS, additional funds are necessary for the completion of the construction phase of the Project; and

WHEREAS, funds are available in the unprogrammed fund balance of the Unappropriated Sewer Fund Balance.

NOW, THEREFORE, THE COUNCIL OF THE CITY OF MADERA hereby resolves, finds, determines and orders as follows:

1. The above recitals are true and correct.

2. An emergency contract change order in the amount of \$1,363,601 for the construction of a new Primary Effluent Pump Station is hereby awarded to Cushman Contracting Corporation.
3. Additional Construction Contingencies in the amount of \$300,000 as approved by the City Engineer are hereby authorized.
4. Additional funding up to \$80,000 for construction inspection and management and third party testing, survey, biological or consulting service up to \$20,000 is hereby authorized.
5. The 2018/19 Capital Projects Budget is hereby amended in accordance with Exhibit AA, which is incorporated by reference herein.
6. The City Clerk is authorized and directed to forward a copy of the resolution to the Director of Finance who is authorized to take such action as necessary to implement the terms of this resolution.
7. This resolution is effective immediately.

EXHIBIT AA

CITY OF MADERA

Resolution 19 -

Appropriating Additional Funds for the Madera Wastewater Treatment Plant Rehabilitation Project
City Project No. WWTP 18-02

<u>ORG CODE</u>	<u>OBJECT CODE</u>	<u>PROJECT CODE</u>	<u>DESCRIPTION</u>	<u>(+)</u>	<u>(-)</u>
<u>Waste Water Treatment Plant 17/18 Essential Repairs (20403420)</u>					
20403420	7030	WWTP18-02	Essential Repairs	1,763,601.00	
2040	3210		Unappropriated Fund Balance		1,763,601.00
				<u>1,763,601.00</u>	<u>1,763,601.00</u>

ATTACHMENT NO. 2

To:	Keith Helmuth City of Madera	From:	Beth Cohen, PE Stantec Consulting Services Inc.
File:	Madera WWTP Primary Effluent Pump Station	Date:	February 14, 2019

Reference: Madera WWTP Primary Effluent Pump Station, bidding

As previously determined, the existing Primary Effluent Pump Station (PEPS) at the Madera WWTP needs to be replaced due to the extensive damage of the structural supporting walls and beams. After approval from the City, on November 15, 2018, Stantec prepared detailed design drawings and specification to install a new PEPS wetwell on the eastern side of the existing primary clarifiers. The drawings include:

1. installation of a new wetwell with sufficient room for a future fourth pump, to match the treatment plant capacity (totaling 37.6 MGD of reliable pumping capacity),
2. incorporation of long-lasting plastic lining over the exposed concrete walls and ceiling, to reduce maintenance costs associated with recoating and prevent future concrete corrosion (with predicted 50-year life),
3. ventilation of the structure to limit noxious fume buildup and further reduce corrosion of equipment,
4. relocation of the existing pumps (to limit bypass pumping),
5. demolition of the existing wetwell (removing top of the structure and backfilling with low strength concrete,
6. modification of the existing primary effluent channel walls (to plug the old outlet discharge points and accommodate the new outlet point),
7. providing new pump discharge valving (to replace end-of life equipment, including gate, check, and air release valves),
8. extension of the new discharge manifold,
9. upsize and extend the new return activated sludge (RAS) piping to limit bypass pumping during construction and accommodate future facility flow rates,
10. grading of the surrounding hillside to direct stormwater around the pump station,

Developed prior to issuance to the Contractor, the table on the following page represents the engineering estimate of probable construction costs.

After incorporating final review comments, the final drawings and specification were packaged as a Request for Proposal (RFP #04) and delivered to the contractor, Cushman Contracting Corporation, on January 16, 2019.

ITEM		MORE DESCRIPTION	QUANTITY	UNIT	UNIT COSTS		TOTAL COSTS		OPC TOTAL COST	DIVISIONAL SUBTOTAL
					MATERIAL	LABOR	MATERIAL	LABOR		
DIVISION 0 - CONDITION OF CONTRACT										
Bonds and Insurance		2.50%	1	LS					\$ 25,000	
Submittal Coordination			1	LS				\$ 9,000	\$ 9,000	
Subtotal Division 0										\$ 34,000
DIVISION 1- GENERAL REQUIREMENTS										
Mobilization			0							
Setup Office Trailer and Temp Facilities			0							
Setup Storage Yard			0							
Provide Fire Protection and Portable Generator			0							
Subtotal Division 1										\$ -
DIVISION 2 - SITEWORK										
Excavation			2583	cy	0	13	0	33,044	\$ 33,000	
Backfill, Screened Native			2243	cy	0	32	0	71,737	\$ 72,000	
Backfill - Class 2 AB			18	CY	80	10	1,511	189	\$ 2,000	
Backfill - CLSM			209	CY	75	15	15,644	3,129	\$ 19,000	
Demolition			1	LS	10,000	25,000	10,000	25,000	\$ 35,000	
Subtotal Division 2										\$ 161,000
DIVISION 3 - CONCRETE										
Concrete Slab on Grade		wetwell floor	59	CY	751	0	44,591	0	\$ 45,000	
Concrete Wall		wetwell walls	97	CY	1,064	0	102,724	0	\$ 103,000	
Elevated Slab		wetwell lid	11	CY	1,502	0	16,688	0	\$ 17,000	
Concrete Slab on Grade		pipe slab	10	CY	751	0	7,156	0	\$ 7,000	
Concrete Slab on Grade		sidewalk	1	CY	751	0	834	0	\$ 1,000	
Specialized Concrete		(e) channel w. g	3	EA	2,000	1,500	5,333	4,000	\$ 9,000	
Concrete Wall		fill PEPS chann	4	CY	1,064	0	4,334	0	\$ 4,000	
Concrete										
Subtotal Division 3										\$ 186,000
DIVISION 4 - MASONARY										
Subtotal Division 4			0		0	0	0	0	\$ -	\$ -
DIVISION 5 - METALS										
Alum Grating			165	SF	45	58	7,367	9,603	\$ 17,000	
Alum Grating Support			71	LF	15	19	1,044	1,358	\$ 2,000	
SST Cover			1	EA	1,000	500	1,000	500	\$ 2,000	
Baseplate			3	EA	750	500	2,250	1,500	\$ 4,000	
Subtotal Division 5										\$ 25,000
DIVISION 6 - WOODS & PLASTICS										
Subtotal Division 6										\$ -
DIVISION 7 - THERMAL & MOISTURE PROTECTION										
Subtotal Division 7										\$ -
DIVISION 8 - DOORS & WINDOWS										
Subtotal Division 8										\$ -
DIVISION 9 - FINISHES										
HDPE/PVC Lining			1675	SF	50	30	93,751	56,251	\$ 150,000	
Coaling, extenor			360	SF	48	14	17,280	5,040	\$ 22,000	
Subtotal Division 9										\$ 172,000
DIVISION 10 - SPECIALTIES										
Subtotal Division 10										\$ -
DIVISION 11 - EQUIPMENT										
Relocate Equipment			3	EA	2,000	10,400	6,000	31,200	\$ 37,000	
Subtotal Division 11										\$ 37,000
DIVISION 12 - FURNISHINGS										
Subtotal Division 12										\$ -
DIVISION 13 - SPECIAL CONSTRUCTION										
Subtotal Division 13										\$ -
DIVISION 14 - CONVEYING SYSTEM										
Subtotal Division 14										\$ -
DIVISION 15 - MECHANICAL										
Pipe, Ductile Iron, 30"		RAS	122	LF	300	0	36,648	0	\$ 37,000	
Pipe, Ductile Iron, 30"			65	LF	300	0	19,525	0	\$ 20,000	
ELB, DI, 11.25 Degree, 36-in			2	EA	10,500	1,500	21,000	3,000	\$ 24,000	
ELB, DI, 45 Degree, 36-in			2	EA	11,512	1,279	23,024	2,558	\$ 28,000	
TEE, DI, 36-in			5	EA	20,000	2,000	100,000	10,000	\$ 110,000	
Flex Coupling, 36in			7	EA	1,218	1,868	8,533	13,073	\$ 22,000	
ELB, DI, 90 Degree, 36-in			1	EA	12,791	1,535	12,791	1,535	\$ 14,000	
Sludge gate, 36"			1	EA	20,000	4,000	20,000	4,000	\$ 24,000	
Valve, Swing check w/ lever, 20in			3	EA	12,064	1,561	36,193	4,682	\$ 41,000	
Valve, Gate (w/ handwheel), 20in			3	EA	14,601	1,103	43,803	3,308	\$ 47,000	
2" BV			3	0	250	50	750	150	\$ 1,000	
Combination Air Valve (water), 2"			3	EA	547	294	1,642	883	\$ 3,000	
Subtotal Division 15										\$ 369,000
DIVISION 16 - ELECTRICAL										
Subtotal Division 16			1	LS	\$ 87,150					\$ 87,000
SUBTOTAL							\$ 661,439	\$ 285,738	\$ 950,000	\$ 1,071,000
Overhead, Supervision		2.0%							\$ 21,000	
Material Markup		10%					\$ 66,144		\$ 66,000	
Labor markup		20%						\$ 58,948	\$ 59,000	
Contingency		15%							\$ 156,000	
TOTAL CONSTRUCTION COST										\$ 1,373,000

February 14, 2019

Keith Helmuth

Page 3 of 3

Reference: Madera WWTP Primary Effluent Pump Station, bidding

Cushman provided a proposal, attached to this memorandum, for a cost to do the work for \$1,363,601.27. Their bid is valid for only 30-days from the time of bid (until 03/02/2019), as they are scheduled for demobilization in March. The contractor's cost proposal is very close to the engineer's estimate (\$1.36M vs \$1.37M) and is considered a fair market value. Under the current bid environment, the City will likely not receive lower bids for this work.

If the project is not done as a change order, Stantec will need to prepare the additional drawings and specifications to accommodate a competitive bid (competitive bid packaging is not yet authorized). As previously noted, competitively bidding this project may result in a construction delay by at least three months (to allow for bid advertisement, selection, and contract signing).

With these factors in mind, Stantec recommends that the City proceed with the change order for the Primary Effluent Pump Station and provide Cushman Contracting Corporation with an additional \$1,363,601.27 budget to do the work described herein.

Stantec Consulting Services Inc.



Beth Cohen
Senior Design Engineer

Phone: 916-773-8100

Fax: 916-773-8448

Beth.Cohen@stantec.com

Attachment: Cushman Contracting Change Order Proposal No. 4

CUSHMAN CONTRACTING CORPORATION
PO BOX 147
GOLETA, CA
93116

1/31/19

Attn: Beth Cohen
Stantec Consulting Service Inc.
3875 Atherton Road
Rocklin CA 95765

Project: City of Madera WWTP Rehabilitation Project
Re: Cost Proposal for Modifications Per RFP No.: 4

Beth:

Cushman Contracting Corporation "CCC" hereby submits Change Order Proposal #04 for additional work as described in RFP No.: 4, for a total lump sum cost of \$1,363,601.27. This quote is valid for 30 days. If CCC has not received authorization to proceed by 03/02/2019, we reserve the right to modify the total lump sum cost as necessary.

See the attached pages for lump sum breakdown. Please review and confirm acceptance at your earliest convenience. If you have any questions or require any additional information, feel free to contact me.

Sincerely,

CUSHMAN CONTRACTING CORPORATION



Richard Tomlinson
Project Manager

CUSHMAN CONTRACTING CORPORATION

Job: Madera WWTP Rehabilitation - RFP No. 4
 Loc.: Madera, CA

Item No.	Description	Qty	Unit	Material	Labor	Equipment	Subcontractor	TOTAL
New Primary Effluent Pump Station per RFP No. 4								
								\$ -
1	Misc Direct Costs (lodging, subsistence, field supervision etc.)	1	LS		\$ 46,320.00			\$ 46,320.00
2	Sitework	1	LS	\$ 43,883.00	\$ 24,120.00	\$ 11,900.00	\$ -	\$ 79,883.00
3	Dewatering/Bypass Pumping	1	LS		\$ 1,800.00	\$ 7,000.00	\$ -	\$ 8,800.00
4	Demolition	1	LS	\$ 550.00	\$ 32,800.00	\$ 4,900.00	\$ -	\$ 38,250.00
5	Structural Concrete	1	LS	\$ 60,313.00	\$ 162,980.00	\$ 47,225.00	\$ -	\$ 270,518.00
6	PVC/T-Lock Liner	1	LS	\$ -	\$ -		\$ 40,000.00	\$ 40,000.00
7	Rebar	1	LS	\$ -	\$ -		\$ 114,822.00	\$ 114,822.00
8	Misc Metals	1	LS	\$ 14,443.00	\$ 9,420.00	\$ 900.00		\$ 24,763.00
9	Coatings	1	LS		\$ -		\$ 30,000.00	\$ 30,000.00
10	Equipment Relocation	1	LS	\$ 1,650.00	\$ 21,800.00	\$ 7,500.00		\$ 30,950.00
11	Mechanical/Yard Pipe	1	LS	\$ 303,145.00	\$ 56,060.00	\$ 22,200.00		\$ 381,405.00
12	Electrical	1	LS	\$ -	\$ 10,000.00		\$ 109,229.00	\$ 119,229.00
								\$ -
	SUBTOTALS			\$ 423,964.00	\$ 365,300.00	\$ 101,625.00	\$ 294,051.00	\$ 1,184,940.00
	Material Markup at 10%			\$ 42,396.40				\$ 42,396.40
	Labor/Equipment Markup at 20%				\$ 73,060.00			\$ 73,060.00
	Equipment Markup at 15%					\$ 15,243.75		\$ 15,243.75
	Subcontractor Markup at 5%						\$ 14,702.55	\$ 14,702.55
							Subtotal	\$ 1,330,342.70
							Bonds/Insurance	\$ 33,268.57
							TOTAL	\$ 1,363,601.27