



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Kerrie Romanow

SUBJECT: SEE BELOW

DATE: May 5, 2021

Approved

Date

5/6/2021

SUBJECT: FIRST AMENDMENT TO THE MASTER CONSULTANT AGREEMENT WITH KENNEDY/JENKS CONSULTANTS, INC., FOR ENGINEERING SERVICES FOR THE 7760 – FACILITY WIDE WATER SYSTEMS IMPROVEMENTS PROJECT AT THE SAN JOSE-SANTA CLARA REGIONAL WASTEWATER FACILITY

RECOMMENDATION

Approve the First Amendment to the Master Consultant Agreement with Kennedy/Jenks Consultants, Inc., for engineering services for the Facility Wide Water Systems Improvements project at the San José-Santa Clara Regional Wastewater Facility, increasing the amount of compensation by \$3,270,000, for a total agreement amount not to exceed \$5,370,000; and extending the term of agreement from June 30, 2023 to December 31, 2025.

OUTCOME

Council approval of the First Amendment to the Master Consultant Agreement (Agreement) with Kennedy/Jenks Consultants, Inc. (Kennedy Jenks) will provide engineering services for detailed design, bid and award, construction, and post construction services necessary to successfully complete the Facility Wide Water Systems Improvements project (Project).

BACKGROUND

The San José-Santa Clara Regional Wastewater Facility (RWF) has over 300,000 linear feet (LF) of piping, 160,000 LF of which are water distribution pipes of the RWF water systems (see Attachment A – Project Location Map). These pipes provide potable water (1W system), utility water, and process water (2W and 3W systems) to support continuous critical operations, as well as providing water to fire hydrants for fire protection (4W system). The water systems were constructed over time with various RWF expansions and need rehabilitation and upgrades due to performance issues, age, and corrosion. The Project will rehabilitate and upgrade the RWF

water systems to improve reliability for water supplied to existing and future facilities within the RWF.

Changes in Project Scope:

The original Project scope identified during the CIP's validation process, in late 2013, was developed based on a 2007 cursory level condition assessment report (Infrastructure Condition Assessment Report, CH2M Hill Engineers, Inc.) and additional needs identified by RWF staff. The planning level cost estimate of \$9,500,000 for the Project scope included:

- Replacement of two 3W pumps
- Installation of two 3W variable frequency drives
- Upgrades to the 1W, 2W, and 4W systems
- 4W pump room upgrades

To fully understand the extent of the Project scope, the City needed a consultant to perform additional analysis, including condition assessments, hydraulic modeling, and a study of existing and future water demands at the RWF.

On September 20, 2016, Council approved an Agreement with Kennedy Jenks, in the amount of \$2,100,000, to provide engineering services for the Project. The consultant completed a desktop condition assessment and hydraulic modeling of the four water systems in June 2018. These efforts identified that significantly greater improvements than originally assumed were necessary to meet future water demands, meet current health and safety regulations, and reduce operational risks associated with aging infrastructure. The two most substantial scope changes include a new 3W high-pressure pump station and extensive pipe replacement after the hydraulic model and desktop condition assessment revealed hydraulic deficiencies and degradation of pipe integrity from age and highly corrosive soils. Kennedy Jenks developed and analyzed various alternatives and completed a conceptual design for the selected alternative in June 2020. The conceptual design level cost estimate is \$34,100,000 compared to the planning level estimate of \$9,500,000. Table 1 summarizes the conceptual design cost estimate and major scope changes for the water systems:

Table 1

Water System	1W (Potable)	2W/3W System (Process)	4W System (Fire)
Cost Estimate (Conceptual)	\$4,300,000	\$22,100,000	\$7,700,000
Major Scope Changes	<ul style="list-style-type: none"> • Airgap tank • Pump station • Hydropneumatic tanks 	<ul style="list-style-type: none"> • New high-pressure pump station • New high-pressure loop • Extensive pipe replacement • Hydropneumatic tanks • Monitoring instrumentation 	<ul style="list-style-type: none"> • Additional connections • Relocated pump station

ANALYSIS

At the time of Council's approval of the Agreement in 2016, the Agreement's total maximum compensation of \$2,100,000 represented approximately 22% of the estimated construction cost of approximately \$9,500,000, which staff considered to be within industry standard for design-bid-build projects. The effort required by Kennedy Jenks to complete the hydraulic model was significantly more than originally assumed during the development of the Agreement due to a lack of institutional and historical knowledge of the water systems, water demand data, monitoring equipment, and complete record drawings. Additionally, the original level of effort assumed that conceptual design and preliminary design could be consolidated because the scope of the project was considered a less complex linear utility project. However, the major scope changes justified including conceptual design into a separate phase. Thus, the available funds in the Agreement will be exhausted after the completion of preliminary design.

This First Amendment will increase the maximum compensation of the Agreement for engineering consultant services by \$3,270,000 for a total amount not to exceed \$5,370,000 to complete detailed design, bid and award, engineering services during construction, and post construction. The amount represents 15.1% of the estimated construction cost of approximately \$34,100,000, which staff considers to be within industry standard for design-bid-build projects.

This amendment also extends the term of the Agreement to reflect the additional effort required to complete the hydraulic model, condition assessment, and added conceptual design phase. Additionally, the major scope changes will extend the duration of construction. The new end date for the Agreement is December 31, 2025.

CONCLUSION

This First Amendment will increase the compensation for engineering consultant services by \$3,270,000 for a total Agreement amount not to exceed \$5,370,000 to successfully complete the remaining tasks of the Project. Incorporation of these services does not affect the construction cost of the Project.

Staff recommends approving this amendment to complete detailed design, bid and award, engineering services during construction and post construction, and believes that the associated fee increase is reasonable with respect to the additional scope changes of the Project.

This amendment also extends the term of the Agreement to reflect the additional effort required to complete the hydraulic model, condition assessment, added conceptual design phase, and extended construction duration. The new end date for the Agreement is December 31, 2025.

EVALUATION AND FOLLOW-UP

No follow-up action with City Council is expected at this time. Quarterly progress reports of the RWF Capital Improvement Program (CIP) will also be submitted to the Treatment Plant Advisory Committee (TPAC) and posted on the City's website.

CLIMATE SMART SAN JOSE

The recommendation in this memo has no effect on Climate Smart San José energy, water, or mobility goals.

POLICY ALTERNATIVES

Alternative #1: Direct staff to complete the additional scope of work utilizing in-house resources.

Pros: None

Cons: Staff does not have the capacity or expertise to complete the required work. Design of the water systems requires in-depth hydraulic engineering and pump station design expertise spanning multiple engineering disciplines (e.g., civil, structural, mechanical, electrical, process, instrumentation and controls).

Reason for not recommending: The complexity of the Project requires the use of specialized expertise and experience with complex hydraulic systems.

PUBLIC OUTREACH

This memorandum will be posted on the City's Council Agenda website for the June 8, 2021 City Council Meeting.

COORDINATION

This Project and memorandum have been coordinated with the Departments of Planning, Building and Code Enforcement, Fire, Finance, the City Manager's Budget Office, and the City Attorney's Office. This memorandum will be presented at the May 20, 2021 TPAC meeting for consideration.

COMMISSION RECOMMENDATION/INPUT

This item is scheduled to be heard at the May 20, 2021 TPAC meeting. A supplemental memo with TPAC's recommendation will be included in the amended June 8, 2021 City Council meeting agenda.

FISCAL/POLICY ALIGNMENT

This Project is consistent with the City Council-approved budget strategy to focus on rehabilitating aging RWF infrastructure, improve efficiency, and reduce operating costs. This Project is also consistent with the budget strategy principle of focusing on protecting our vital core services.

COST SUMMARY/IMPLICATIONS

1. AMOUNT OF RECOMMENDATION: \$3,270,000
2. COST ELEMENTS OF AGREEMENT/CONTRACT (COMPARED TO ORIGINAL AGREEMENT):

	Original	Added	Amended
Alternatives Analysis	\$570,000	\$57,000	\$627,000
Conceptual and Preliminary Design	370,000	1,103,000	1,473,000
Detailed Design	560,000	1,283,000	1,843,000
Bid and Award Services	50,000	44,000	94,000
Engineering Services During Construction	475,000	858,000	1,333,000
SRF Assistance	75,000	(75,000)	0
TOTAL AGREEMENT AMOUNT	\$2,100,000	\$3,270,000	\$5,370,000

3. SOURCE OF FUNDING: 512 – San José-Santa Clara Treatment Plant Capital Fund.
4. FISCAL IMPACT: The Project will have no additional impact on the San José-Santa Clara Treatment Plant Operating Fund (Fund 513) or the General Fund.
5. PROJECT COST ALLOCATION: In accordance with the recommendations set forth in the Capital Project Cost Allocations Technical Memo (Carollo Engineers, March 2016), this project is allocated between the four billable parameters relative to the rolling weighted average distribution of all RWF assets.

BUDGET REFERENCE

The table below identifies the fund and appropriations to fund the contract recommended as part of this memo and remaining project costs, including project delivery, construction, and contingency costs.

Fund #	Appn #	Appn Name	Total Appn	Amount for Contract*	2020-2021 Adopted Capital Budget Page	Last Budget Action (Date, Ord. No.)
512	7679	Facility Wide Water Systems Improvements	\$4,005,000	\$3,270,000	V-140	06/23/2020 Ord. No. 30437

*This funding will be issued to Kennedy Jenks by service order. Funding for service orders is available in the 2020-2021 Adopted Water Pollution Control Plant Capital Budget. Costs to be incurred in future fiscal years are subject to appropriation and, are programmed into the 2022-2026 CIP Budget, pending approval by Council.

CEQA

Not a Project, File No. PP17-001, Feasibility and Planning Studies with no commitment to future actions.

/s/

KERRIE ROMANOW

Director, Environmental Services Department

For questions, please contact Napp Fukuda, Assistant Director, Environmental Services Department at (408) 793-5353.

Attachment

Attachment A: Facility-wide Water System Improvements Project Location Map

The Project extends throughout the San Jose – Santa Clara Regional Wastewater Facility.

