



Orange County Sanitation District

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Agenda Report Details (With Text)

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Title: THICKENING AND DEWATERING BUILDING PIPE SUPPORT IMPROVEMENTS AT PLANT NO. 1, PROJECT NO. FE20-06

Sponsors: Kathy Millea

Indexes:

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Attachments: 1. Agenda Report, 2. FE20-06 Contract

Date	Ver.	Action By	Action	Result
2/23/2022	1	BOARD OF DIRECTORS		
2/2/2022	1	OPERATIONS COMMITTEE	Recommended for Approval	

FROM: James D. Herberg, General Manager
Originator: Kathy Millea, Director of Engineering

SUBJECT:

THICKENING AND DEWATERING BUILDING PIPE SUPPORT IMPROVEMENTS AT PLANT NO. 1, PROJECT NO. FE20-06

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION:

- A. Receive and file Bid Tabulation and Recommendation for Thickening and Dewatering Building Pipe Support Improvements at Plant No. 1, Project No. FE20-06;
- B. Award a Construction Contract to Garney Pacific, Inc. for Thickening and Dewatering Building Pipe Support Improvements at Plant No. 1, Project No. FE20-06 for an amount not to exceed \$793,000; and
- C. Approve a contingency of \$79,300 (10%).

BACKGROUND

Sludge Dewatering and Odor Control at Plant No. 1, Project No. P1-101, completed a new Thickening and Dewatering facility in 2020. The facility includes three thickening centrifuges and three dewatering centrifuges. The thickening centrifuges increase the sludge solids concentration to the anaerobic digesters. The dewatering centrifuges remove water from the anaerobically digested sludge to reduce biosolids hauling and disposal costs.

RELEVANT STANDARDS

- Comply with California Public Contract Code Section 20103.8, award construction contract to lowest responsive, responsible bidder
- Maintain a proactive asset management program
- 24/7/365 treatment plant reliability

PROBLEM

Excessive vibration is occurring in the sludge piping to the thickening centrifuges, and from the thickening centrifuges. This vibration becomes worse with increasing flows. At higher flow rates, the vibration causes excessive wear on the pumps and creates the potential for the discharge piping to fail. Standard pipe supports are not an option because of the congestion in the ceiling area with so many other conduits, pipes, and cable trays.

PROPOSED SOLUTION

Award a Construction Contract for Thickening and Dewatering Building Pipe Support Improvements at Plant No. 1, Project No. FE20-06. This project will add additional bracing, supports, and dampeners to the existing sludge piping to reduce vibration.

TIMING CONCERNS

Until the additional bracing, supports, and dampeners are installed, the system will continue to be operated at lower speeds to reduce the risk of damage to the piping system. In addition, additional pumps are being operated to handle the sludge demand which reduces their useful life.

RAMIFICATIONS OF NOT TAKING ACTION

Without this project, the facility capacity will continue to be reduced and the sludge pumps will have to continue to be operated more frequently and at lower speeds.

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

The technical specifications for Project No. P1-101 required the construction contractor to design and detail pipe supports. However, the pipe supports installed by the contractor did not prevent the vibration issue. OC San could not require the contractor to remedy the vibration issue for two reasons. First, the cost and complexity of designing and bracing the pipes required for this facility would have greatly exceeded what a reasonable bidder would have included in their bid. Second, the specifications did not specifically require the supports to be designed for the thrust load from the pressure in the pipe. That deficiency, however, could have been addressed by a change order had the solution not been as complex. Staff determined that the vibration issue should be addressed under a separately bid project rather than a change order to the original construction contract.

This is a lesson learned. OC San now carefully considers when to require consultants to design pipe supports in detail, depending on the complexity and configuration of piping. In 2005, when the design contract was awarded, this was not the case.

Construction Contract Solicitation

OC San advertised Project No. FE20-06 for bids on November 2, 2021, and seven sealed bids were received on December 8, 2021. A summary of the bid opening follows:

<u>Bidder</u>	<u>Amount of Bid</u>
Engineer's Estimate	\$ 1,000,000
Garney Pacific, Inc.	\$793,000
Vicon Enterprise	\$875,000
GSE Construction Company, Inc.	\$884,200
Houalla Enterprises, Ltd dba Metro Builders & Engineers Group, Ltd	\$1,024,844
Mehta Mechanical Company, Inc. dba MMC, Inc.	\$1,100,000
Tharsos, Inc.	\$1,197,000
Kiewit Infrastructure West Co.	\$1,397,000

The bids were evaluated in accordance with the OC San's policies and procedures. A Notice of Intent to Award was sent to all bidders on December 29, 2021, informing them of the intent of OC San to recommend award of the construction contract to Garney Pacific, Inc.

Staff recommends awarding a Construction Contract to the lowest responsive and responsible bidder, Garney Pacific, Inc., for a total amount not to exceed \$793,000.

CEQA

The project is exempt from CEQA under the Class 1 categorical exemptions set forth in California Code of Regulations Section 15301. A Notice of Exemption will be filed with the OC Clerk-Recorder after OC San Board of Directors approval of the construction contract.

FINANCIAL CONSIDERATIONS

This request complies with the authority levels of OC San's Purchasing Ordinance. This item has been budgeted (Budget Update, Fiscal Year 2021-2022, Appendix A, Page A-8, Small Construction Projects Program, Project No. M-FE) and the budget is sufficient for the recommended action.

ATTACHMENT

The following attachment(s) may be viewed on-line at the OC San website (www.ocsan.gov) with the complete agenda package:

- Construction Contract

RF:dm