



## Agenda Report

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**FROM:** James D. Herberg, General Manager  
Originator: Rob Thompson, Assistant General Manager

**SUBJECT:**

**PLANT NO. 2 TRICKLING FILTER PUMP STATION VARIABLE FREQUENCY DRIVE REPLACEMENT**

### **GENERAL MANAGER'S RECOMMENDATION**

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Approve a Service Contract with Baker Electric for Plant No. 2 Trickling Filter Pump Station Variable Frequency Drive Replacement, per Specification S-2021-1273BD, for a total amount not to exceed \$191,290; and
- B. Approve a contingency of \$19,129 (10%).

### **BACKGROUND**

The Orange County Sanitation District (OC San) Plant No. 2 secondary treatment process uses three trickling filters for water treatment. Each of the three trickling filters has a pair of Variable Frequency Drive (VFD) controlled pumps to lift flow from the primary basins up to the filter beds. Each pump is rated at 36.4 MGD and five of six pumps are required to deliver peak flow. The existing six VFDs are obsolete and no longer supported by the manufacturer.

### **RELEVANT STANDARDS**

- Protect OC San assets
- 24/7/365 treatment plant reliability
- Maintain a proactive asset management program

### **PROBLEM**

The existing Plant No. 2 Trickling Filter Pump Station is necessary to meet OC San effluent discharge requirements. The VFDs that drive the pumps for this station were declared obsolete by the manufacturer. This means that spare parts and support services are no longer available for these units. One unit has already failed and is in the process of being retrofitted similar to the proposed solution below.

## PROPOSED SOLUTION

Staff recommends replacing Trickling Filter Pump Station VFD internal components with new original equipment manufacturers upgrade kits. This will result in essentially new, supported units, while reusing the old cabinets, conduits, controls, and wiring. The upgraded VFDs will provide more reliable operation and will reduce risk in emergency conditions during peak wet weather flow events that can otherwise result in permit noncompliance.

## TIMING CONCERNS

Proceeding expeditiously is desired to complete the replacement to meet peak wet weather flows.

## RAMIFICATIONS OF NOT TAKING ACTION

Not taking action may cause Trickling Filter Pump Station pumps to be out of service for a prolonged period of time when failures occur due to lack of available spare parts or factory support.

## PRIOR COMMITTEE/BOARD ACTIONS

N/A

## ADDITIONAL INFORMATION

The scope of this project covers the replacement of existing obsolete VFD components with new, factory supported VFD components. A 10% contingency has been suggested to cover any unforeseen issues during replacement.

OC San issued a Notice Inviting Bids on September 2, 2021 for the Plant No. 2 Trickling Filter Pump Station Pumps Variable Frequency Drive Replacement, per Specification No. S-2021-1273BD. Five bids were received on October 7, 2021. The bids were evaluated in accordance with the OC San policies and procedures. Summary information of the bids received is as follows:

<b>Bidder</b>	<b>Amount</b>	<b>Status</b>
Baker Electric	\$191,290	Responsive
Shimmick Construction Inc.	\$255,000	Responsive
AZ CO.	\$270,000	Non-Responsive
Leed Electric, Inc.	\$298,986	Responsive
Mass. Electric Construction Co.	\$336,800	Responsive

Staff recommends approving a Service Contract with the lowest responsive and responsible bidder, Baker Electric, for the Plant No. 2 Trickling Filter Pump Station Pumps Variable Frequency Drive Replacement.

## CEQA

VFD replacement is categorically exempt from CEQA under the Class 1 categorical exemptions set forth in California Code of Regulations Section 15301. Section 15301 (Class 1) exempts from CEQA “the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use”, including “(b) Existing facilities of both investor and publicly-owned utilities used to provide electric power, natural gas, sewerage, or other public utility services”.

## FINANCIAL CONSIDERATIONS

This request complies with authority levels of the OC San Purchasing Ordinance. This recommendation will be funded under the Repair and Maintenance line item for Operations and Maintenance Department (Budget Update - Fiscal Year 2021-2022, Page 45). The available funding is sufficient for this action.

<u>Date of Approval</u>	<u>Contract Amount</u>	<u>Contingency</u>
11/17/2021	\$191,290	\$19,129 (10%)

## ATTACHMENT

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

- Draft Service Contract

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