



# OPERATIONS COMMITTEE

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## Agenda Report

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**File #:** 2020-1379

**Agenda Date:** 3/3/2021

**Agenda Item No:** 4.

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

**SUBJECT:**

**HEADWORKS REHABILITATION AT PLANT NO. 1, PROJECT NO. P1-105**

**GENERAL MANAGER'S RECOMMENDATION**

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Receive and file Bid Tabulation and Recommendation for Headworks Rehabilitation at Plant No. 1, Project No. P1-105;
- B. Award a Construction Contract to Kiewit Infrastructure West Co. for Headworks Rehabilitation at Plant No. 1 for a total amount not to exceed \$222,330,000; and
- C. Approve a contingency of \$8,893,200 (4%).

**BACKGROUND**

The headworks of a wastewater treatment plant is where all incoming sewers converge through a series of pipes, meters, flow diversions, and gates. Just as sewers cannot be readily taken out of service, neither can a headworks.

The current Headworks facilities at Orange County Sanitation District's (Sanitation District) Plant No. 1 include the original facilities built and modified between the 1950s and 1960s, currently only used for emergencies, and the active facilities which entered service in 1989. The facilities are mechanically intensive, operate in a very corrosive environment, require frequent maintenance and servicing, and can generate substantial odors.

**RELEVANT STANDARDS**

- Comply with California Public Contract Code Section 20103.8, award construction contract to lowest responsible bidder
- 24/7/365 treatment plant reliability
- Zero odor incidents/events under normal operating conditions for Plant Nos. 1 and 2

## **PROBLEM**

The existing headworks has been in service for more than 30 years without a significant rehabilitation effort. Mechanical equipment is at the end of its useful life. Structural and piping corrosion must be addressed to extend the useful life. Electrical equipment is deficient and obsolete. The grit removal system, which is intended to capture abrasive material that causes accelerated wear and tear on downstream equipment and accumulation of inert material in anaerobic digesters, does not perform well.

Complete rehabilitation, including demolition of abandoned facilities, is needed to ensure efficient and reliable operation of this critical facility. The nature of these facilities makes the work highly complex and risky. The project must maintain wastewater flow in active portions of the headworks while rehabilitation work is performed.

## **PROPOSED SOLUTION**

Award a Construction Contract for Headworks Rehabilitation at Plant No. 1, Project No. P1-105. This project will rehabilitate systems including the metering and diversion structure, the bar screen building, the bin loading building, the main sewage pump station, the grit basins, the primary influent channels, and electrical power distribution and control systems. This project will also construct new facilities including a grit pump station, grit handling building, headworks odor control and chemical facility, a drainage lift station, electrical buildings, and other support systems. The original Headworks No. 1 facilities and other unused systems will be demolished as part of this contract.

For this contract, staff is proposing a lower than usual contingency for a rehabilitation project. Midway through construction, staff intends to present to the Board a review of the progress and risks encountered to date.

## **TIMING CONCERNS**

Until the headworks is renovated, existing structural, electrical, and mechanical system deficiencies could require frequent and costly maintenance and could result in spills or other permit violations.

## **RAMIFICATIONS OF NOT TAKING ACTION**

Without this project, the risk of a spill or other permit violation will continue to increase.

## **ADDITIONAL INFORMATION**

Sanitation District staff has long been concerned about the limited number of bidders on such a large, complex, high risk, and long-duration project. Staff has posted the project for two years on its upcoming construction opportunities list and has discussed it with general contractors at certain construction outreach events.

To avoid competition for bidders among its own projects, staff postponed advertisements of the \$113 million A-Side Primary Clarifiers Replacement at Plant No. 2, Contract No. P2-98A, until bids closed on this project.

Although site videos, photographs, and drone-footages of virtually all facilities were provided to interested bidders, staff arranged a series of COVID-19 compliant site walks to further help bidders understand the facilities, risks, access constraints, and other factors that might affect the final bids.

The Sanitation District advertised for bids on September 22, 2020 with bids scheduled to be received on December 15, 2020. In October, one potential bidder requested a one month bid delay indicating they might not submit a bid otherwise. In response, staff conducted a survey of potential bidders that identified only three bidders, including the requestor. To ensure at least three bids would be received, the extension was granted.

On January 19, 2021, three sealed bids were received. A summary of the bids follows:

Engineer's Estimate	\$292,299,000
<u>Bidder</u>	<u>Amount of Bid</u>
Kiewit Infrastructure West Co.	\$ 222,330,000
J.F.Shea Construction, Inc.	\$ 259,506,000
Shimmick Construction Co., Inc.	\$ 276,611,500

The bids were evaluated in accordance with Sanitation District policies and procedures. A notice was sent to all the bidders on February 4, 2021 informing them of the intent of the Sanitation District to recommend award of the construction contract to Kiewit Infrastructure West Co.

Staff recommends awarding a Construction Contract to the lowest responsive bidder, Kiewit Infrastructure West Co., for Headworks Rehabilitation at Plant No.1, Project No. P1-105, for a total amount not to exceed \$222,330,000.

## **CEQA**

The project is included in the "Headworks Rehabilitation at Plant No. 1 (Project No. P1-105)" Mitigated Negative Declaration (MND), State Clearinghouse Number 2019049152.

## **FINANCIAL CONSIDERATIONS**

This request complies with authority levels of Sanitation District's Purchasing Ordinance. This item has been budgeted (Adopted Budget, Fiscal Years 2020-2021 and 2021-22, Section 8, Page 54, Headworks Rehabilitation at Plant No. 1, Project No. P1-105) and the budget is sufficient for the recommended action. Staff intends to recommend a budget reduction as part of the upcoming Fiscal Year 2021-2022 Budget Update.

## **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:*

- Construction Contract
- Presentation

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