



Orange County Sanitation District

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Title: PRIMARY SEDIMENTATION BASINS NO. 3-5 REPLACEMENT AT PLANT NO. 1, PROJECT NO. P1-126

Sponsors: Kathy Millea

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Attachments: 1. Agenda Report, 2. P1-126 PDSA, 3. Presentation - P1-126 PDSA

Date	Ver.	Action By	Action	Result
4/6/2022	1	OPERATIONS COMMITTEE		

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

SUBJECT:

PRIMARY SEDIMENTATION BASINS NO. 3-5 REPLACEMENT AT PLANT NO. 1, PROJECT NO. P1-126

GENERAL MANAGER'S RECOMMENDATION

RECOMMENDATION: Recommend to the Board of Directors to:

- A. Approve a Professional Design Services Agreement with Black & Veatch to provide engineering services for Primary Sedimentation Basins No. 3-5 Replacement at Plant No. 1, Project No. P1-126, for an amount not to exceed \$14,163,000; and
- B. Approve a contingency of \$1,416,300 (10%).

BACKGROUND

Primary treatment is the second of three liquid treatment steps at Orange County Sanitation District (OC San) Plant No. 1. Primary treatment reduces wastewater suspended solids using large concrete basins known as primary clarifiers or primary sedimentation basins.

Plant No. 1 includes two sets of primary clarifiers; a set of 26 rectangular clarifiers and a much older set of three circular clarifiers constructed in the late 1950s and early 1960s. The rectangular clarifiers have enough capacity for normal flows, but in the event of peak wet weather flows or when one side the rectangular basins must be taken out of service for maintenance or condition assessments, the circular basins are needed.

A concept study was performed in 2017 to assess the condition of the circular clarifiers and related facilities and to identify recommended improvements. The study recommended replacing rather than rehabilitating them.

RELEVANT STANDARDS

- Comply with California Government Code §4526: Select the “best qualified firm” and “negotiate fair and equitable fees”
- Protect OC San assets
- 24/7/365 treatment plant reliability

PROBLEM

The circular primary clarifiers at Plant No. 1 and many of their associated support facilities including the primary odor control facility are nearing the end of their useful life. In fact, the circular clarifiers were taken out of service in 2016 to repair mechanical equipment failures and pipe leaks. The interim repairs have been performed and the current facilities are available for service until the new systems are designed and construction of replacements begins.

PROPOSED SOLUTION

Approve a Professional Design Services Agreement for the Primary Sedimentation Basins No. 3-5 Replacement at Plant No. 1, Project No. P1-126. This project will replace the circular primary clarifiers and associated support facilities including sludge pump stations, odor control, and effluent conveyance. The requested professional engineering services are required to design the new facilities.

TIMING CONCERNS

The existing facilities are near the end of their useful life. The facilities will become increasingly unreliable as time passes.

RAMIFICATIONS OF NOT TAKING ACTION

If the basins are not available during a large wet weather event it would cause either a sewage spill upstream or discharging untreated sewage to the ocean.

PRIOR COMMITTEE/BOARD ACTIONS

N/A

ADDITIONAL INFORMATION

Consultant Selection:

OC San requested and advertised for proposals for Primary Sedimentation Basins No. 3-5 Replacement at Plant No. 1, Project No. P1-126, on October 12, 2021. The following evaluation criteria were described in the Request for Proposals and used to determine the most qualified

Consultant.

CRITERION	WEIGHT
Project Understanding and Approach	40%
Related Project Experience	25%
Project Team and Staff Qualifications	35%

Three proposals were received on November 23, 2021 and evaluated in accordance with the evaluation process set forth in OC San’s Purchasing Ordinance by a pre-selected Evaluation Team consisting of OC San staff: one Project Manager, one Project Engineer, two Engineering Supervisors, and one Engineering Manager. The Evaluation Team also included one non-voting representative from the Contracts Administration Division.

The Evaluation Team scored the proposal on the established criteria as summarized in the table below:

	Firm	Approach (Max 40)	Related Experience (Max 25)	Team (Max 35)	Total Score (Max 100)
1	Black & Veatch	34	22	30	86
2	Carollo Engineers, Inc.	30	21	27	78
3	HDR Engineering, Inc.	29	18	22	69

Based on this scoring, two Consultants were shortlisted for interviews on January 11, 2022. Following the interviews, each member of the Evaluation Team scored the Consultants based on both the proposals and interviews using the evaluation criteria and weighting described above. Based on the scoring shown below, Black & Veatch was selected as the most qualified Consultant.

	Firm	Approach (Max 40)	Related Experience (Max 25)	Team (Max 35)	Total Score (Max 100)
1	Black & Veatch	36	22	32	90
2	Carollo Engineers, Inc.	30	21	29	80

Black & Veatch went beyond a general understanding of the Scope of Work and provided specific examples of how the proposed team would efficiently approach unique design challenges of the project. Additionally, the proposal showed that the firm has the appropriate experience, design team, and a well-defined project execution plan with the key decisions needed during the Preliminary Design Phase to start the design with a well-defined scope.

Review of Fee Proposal and Negotiations:

Proposals were accompanied by sealed fee proposals. In accordance with OC San’s Purchasing Ordinance, the fee proposal of only the highest-ranked firm was opened after approval by the Director of Engineering of the Evaluation Committee’s recommendation.

Staff conducted negotiations with Black & Veatch to clarify the Scope of Work requirements,

assumptions used for the estimated level of effort, and the proposed approach to meet the goals and objectives for the project. Although the consultant had a good understanding of the scope, the proposed fee was higher than expected. Through multiple meetings, staff reached agreement on a revised level of effort and reduced the fee to an acceptable level. The following table summarizes how the estimated level of effort was revised through the negotiations process.

	Original Fee Proposal	Negotiated Fee
Total Hours	69,996	70,451
Total Fee	\$15,404,103	\$14,163,000

The Consultant's fringe and overhead costs, which factor into the billing rate, have been substantiated. The contract profit is 5%, which is based on an established formula based on OC San's standard design agreements. Staff is requesting a 10 percent contingency to address revisions as the project progress through preliminary and final design.

Based on the above, staff has determined that the final negotiated fee is fair and reasonable for the level of effort required for this project and recommends award of the Professional Design Services Agreement to Black & Veatch.

CEQA

This project is exempt from CEQA under the Class 2 categorical exemption set forth in California Code of Regulations Section 15302. 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-9, Primary Sedimentation Basins No. 3-5 Replacement at Plant No. 1, Project No. P1-126) and the budget is sufficient for the recommended action. Although the budget is sufficient for this action, staff plans to request an increased budget for this project as part of the Fiscal Year 2022-23 and 2023-24 Budget.

ATTACHMENT

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

- Professional Design Services Agreement
- Presentation

AB:iw