Agenda Item #7.1
For Board Meeting of: May 5, 2022

CITY OF SANTA ROSA
BOARD OF PUBLIC UTILITIES

TO: BOARD OF PUBLIC UTILITIES

FROM: JASON ROBERTS, PE, SUPERVISING ENGINEER
CAPITAL PROJECTS ENGINEERING

SUBJECT: CONTRACT AWARD – LAGUNA TREATMENT PLANT DISINFECTION IMPROVEMENTS PROJECT

AGENDA ACTION: MOTION

RECOMMENDATION

It is recommended by the Contract Review Subcommittee and theTransportation and Public Works and Water Departments that the Board of Public Utilities, by motion, approve the project and award Construction Contract No. C00284 in the amount of $68,109,000 to the lowest responsive bidder, Shimmick Construction Company, Inc. for the Laguna Treatment Plant Disinfection Improvements Project, approve a 10% contingency, and authorize a total contract amount of $74,919,900.

EXECUTIVE SUMMARY

This motion will award a construction contract to replace the Ultraviolet (UV) and hypochlorite disinfection systems, install new effluent and stormwater diversion facilities, and construct a new office trailer for Laguna Treatment Plant (LTP) staff.

BACKGROUND

Ultraviolet (UV) light is the primary disinfection process for the Laguna Treatment Plant (LTP). In 2012, the Division of Drinking Water (DDW) re-evaluated and subsequently de-rated the disinfection system capacity, resulting in deficiency under certain wet weather flow and/or low UV transmittance conditions. Additionally, the existing UV equipment was commissioned in 1998 and is at the end of its useful life. These conditions triggered the need to evaluate disinfection equipment options to ensure that LTP has adequate disinfection capacity of up to 67 million gallons per day. Through various analyses, the City determined that replacing the existing UV system with a new UV system is the most feasible approach to address the capacity and reliability deficiencies.

In January 2016, the City initiated design for replacing the existing UV system. One of the initial steps was to competitively determine which UV manufacturer's equipment would be used for the project as the overall system design is heavily based on equipment selection, simply due to differing performance characteristics of different manufacturer's equipment. Therefore, the most efficient approach was to undergo a formal Request for Proposal (RFP) process to pre-select the UV equipment and then use the selected supplier's equipment parameters to complete the design.

In September 2016, the City publicly issued a formal RFP that established the UV equipment pre-selection process. A selection committee comprised of City staff reviewed all qualified proposals and identified the most qualified supplier: Calgon Carbon UV Technologies, LLC (Calgon Carbon) of Coraopolis, PA. City staff subsequently executed a Memorandum of Understanding (MOU) to establish the duties of Calgon Carbon as the Supplier, terms and conditions, and pricing of the UV equipment (2016 MOU). This 2016 MOU also established that a $70,000 Professional Services Agreement (PSA) would be executed for the Supplier to provide support services and shop drawings during design. The 2016 MOU established an equipment price of $4,656,500 and guaranteed that price for 18 months. This procurement process allowed an equipment specific design effort to proceed accordingly.

In 2017, the design effort was put on hold to perform a value engineering (VE) study. The purpose of the VE study was to provide an additional assessment of disinfection project alternatives to the then-current design in progress. The assessment included a review of the project purpose, design criteria, UV system capacity, capabilities, limitations, and opportunities. There were a total of six (6) disinfection system alternatives including treatment by ultraviolet light, sodium hypochlorite, chloramines, or a combination thereof. The final VE study was issued in October 2017.

Staff reviewed the VE study and performed a subsequent disinfection treatment study - a bench-scale chlorine contact time study, which was completed April 2018. After this additional analysis was complete, City staff determined in October 2018 that the VE study confirmed the City's originally selected alternative of replacing the UV system addressed the LTP's disinfection capacity and reliability issues in the most technically and economically feasible manner.

The City elected not to extend the MOU with Calgon Carbon while these studies were being performed because it was unknown what disinfection process would be recommended by the VE study. As a result, the MOU's pricing terms subsequently expired, and the project scope changed based on the VE study, thereby requiring a new MOU and PSA be established to document the new equipment pricing and complete the design work.

In 2019, the project design was restarted and Calgon Carbon was re-engaged by the City to revise the equipment purchase price and establish a new pricing guarantee. The City and Calgon Carbon subsequently executed an Amended and Restated MOU (2020

MOU) that established the duties of the Supplier, terms and conditions, and revised pricing of the UV equipment. This 2020 MOU established a new equipment price of $5,634,700 and guaranteed that price for 22 months. This represented a price escalation of $978,200. The 2020 MOU also required that the City and Supplier negotiate a Best and Final equipment purchase price and amend the 2020 MOU to incorporate that final price.

In 2021, the City renegotiated the UV equipment purchase price with De Nora UV Technologies (formerly Calgon Carbon). The City and De Nora subsequently executed a Second Amended and Restated MOU (2021 MOU) that established the duties of the Supplier, terms and conditions, and revised pricing of the UV equipment (2020 MOU). This 2020 MOU established a new equipment price of $5,923,491.28 and guaranteed that price until December 31, 2022.

PRIOR BOARD OF PUBLIC UTILITIES REVIEW

On January 7, 2016, the Board approved a Project Work Order under the Master Professional Services Agreement with Carollo Engineers, Inc., to provide Professional Engineering Services for the LTP Disinfection Improvements project.

On November 17, 2016, the Board approved the original Memorandum of Understanding with Calgon Carbon, guaranteeing an equipment purchase price of $4,656,500.00 for a period of 18 months.

On August 16, 2018, staff conducted a staff briefing with the Board to provide an update on the Laguna Treatment Plant Disinfection Improvements project. The staff briefing covered the status of the project, associated activities, and anticipated schedules.

On November 15, 2018, staff conducted a staff briefing with the Board to provide an update on the LTP Disinfection Improvements Project. The staff briefing covered the status of the project, associated activities, and anticipated schedules.

On July 18, 2019, the Board conducted a study session for an update to the LTP Disinfection Improvements project. Staff reviewed the history of the project, the current status of the project, and the anticipated future activities and schedules.

On August 15, 2019, the Board approved Project Work Order Amendment No. 1 under the Master Professional Services Agreement with Carollo Engineers, Inc., to provide professional engineering services for the LTP Disinfection Improvements project.

On August 6, 2020, the Board approved an Amended and Restated Memorandum of Understanding with Calgon Carbon, guaranteeing an equipment purchase price of $5,634,700.00 for a period of 22 months, and approved a Professional Services Agreement with Calgon Carbon for design support services in an amount not to exceed

$86,000.00.

On November 19, 2020, the Board took the following actions: 1) found and determined that the November 2020 Addendum to the Incremental Recycled Water Program Environmental Impact Report (IRWP Program EIR) was the appropriate CEQA documentation for the project, 2) approved the project, 3) approved Amendment No. 2 to Project Work Order No. A010014-2011-09 with Carollo Engineers to provide Professional Engineering Services During Construction for the project in the amount of $1,981,132, with a $150,000 contingency for a total Amendment No. 2 amount of $2,131,132, and a total contract amount not to exceed $6,519,386, and 4) approved a Professional Services Agreement with Psomas to provide construction management and inspection services for the Laguna Treatment Plant Disinfection Improvements Project in the amount of $4,077,950 with a $393,796 contingency for a total contract amount not to exceed $4,471,746.

On May 20, 2021, the Board approved a sole source specification of various electrical and mechanical equipment for the project.

On September 16, 2021, the Board approved Amendment No. 3 to Project Work Order No. A010012-2011-09 with Carollo Engineers for additional design services and supplier coordination in the amount of $750,000 for a total contract amount of $7,269,386.

On December 16, 2021, the Board approved a Second Amended and Restated Memorandum of Understanding with De Nora UV Technologies (formerly Calgon Carbon), guaranteeing a Best and Final equipment purchase price of $5,923,491.28 until December 31, 2022.

ANALYSIS

1. The Project was advertised on January 28, 2022, and bids were received on March 29, 2022. A total of four (4) bids were received, ranging from $68,109,000 to $79,181,414.22. The low bid was 13.5% over the Engineer's estimate.

2. The low bidder, Shimmick Contruction Company, Inc. possesses a valid contractor's license of the required class, as verified by the Contractor's State License Board, and is registered with the State Department of Industrial Relations (DIR).

3. The low bidder, Shimmick Contruction Company, Inc., was judged responsive and responsible by City staff.

4. The contract agreement has been reviewed and approved by the City Attorney.

5. City staff and the engineering design consultant, Carollo Engineers, Inc., have reviewed and evaluated the low bid and determined higher-than-expected bid costs are a result of COVID-19, supply chain issues, rising crude oil prices, and rising material and equipment prices. Given these considerations, City and consultant staff believe the low bid price is fair and reasonable.

6. Construction is anticipated to begin in late May 2022. The length of the contract is 1,075 calendar days. Construction is expected to be completed in January 2025.

FISCAL IMPACT

The funds for this contract award were appropriated with the fiscal year 2021-22 CIP budget as well as mid-year appropriations authorized by City Council. No additional funding is required to award this contract.

ENVIRONMENTAL IMPACT

On November 6, 2003, the Board of Public Utilities certified the Final Environmental Impact Report (EIR) for the Incremental Recycled Water Program (IRWP).

To satisfy the requirements of the California Environmental Quality Act (CEQA), on November 19, 2020, the Board adopted Resolution No. 1241 and approved an Addendum to the IRWP program EIR to address minor changes to the Laguna Plant Upgrade component including adding facilities proposed by this project that were not previously evaluated, as allowed by CEQA Guidelines Section 15162 and 15164. The Addendum concluded that this project is within the scope of the IRWP program EIR and that no further environmental documentation is required.

BOARD/COMMISSION/COMMITTEE REVIEW AND RECOMMENDATIONS

This contract was reviewed and recommended for approval by the Contract Review Subcommittee on April 28, 2022.

ATTACHMENTS

- Attachment 1 – Summary of Bids
- Attachment 2 – Location Map

CONTACT

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