

DATE SUBMITTED 03/10/2016
 SUBMITTED BY Public Services Dir.
 DATE ACTION REQUIRED 03/16/2016

Agenda Item No E-2
 CITY COUNCIL ACTION (X)
 PUBLIC HEARING REQUIRED ()
 RESOLUTION ()
 ORDINANCE 1ST READING ()
 ORDINANCE 2ND READING ()

**IMPERIAL CITY COUNCIL
 AGENDA ITEM**

**SUBJECT: DISCUSSION/ACTION: PROFESSIONAL SERVICES –
 WASTEWATER TREATMENT PLANT UPGRADE DESIGN**

1. APPROVAL OF PROPOSAL FROM ALBERT A. WEBB ASSOCIATES TO PROVIDE PROFESSIONAL SERVICES FOR THE DESIGN OF THE WASTEWATER TREATMENT PLANT UPGRADE IN THE AMOUNT OF \$1,580,000.00

DEPARTMENT INVOLVED: Public Services

BACKGROUND/SUMMARY:

Staff has met with engineers from Albert A. Webb Associates to discuss future plans for the City’s wastewater treatment plant. Brian Knoll with Albert A. Webb presented information to Council at the meeting of February 3, 2016 and direction was given to move forward with the replacement of the older equipment at the wastewater treatment plant in light that the Mesquite Lake project is not moving forward. Based on information presented, city staff is moving forward with upgrading the current treatment site and now have the proposal for the engineering work for updating/retrofitting the existing plant with new and modern equipment. Webb’s proposal for these services is broken down into three phases and is attached for your review.

FISCAL IMPACT: Total cost of \$1,580,000.00
 Source of funds will come from capacity fees which currently has a balance of \$2,500,000.

STAFF RECOMMENDATION: City Council approves the proposal from Albert A. Webb Associates.

MANAGER’S RECOMMENDATION: **MANAGER’S INITIALS** MDB

MOTION:

SECONDED:	APPROVED ()	REJECTED ()
AYES:	DISAPPROVED ()	DEFERRED ()
NAYES:		
ABSENT:	REFERRED TO:	

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WO: ProposalBK
 PH 0000

March 10, 2016

Mr. Jackie Loper
City of Imperial
420 Imperial Avenue
Imperial, California 92251

RE: City of Imperial – Wastewater Treatment Plant Upgrade Design

Dear Mr. Loper:

Pursuant to your request, Albert A. Webb Associates (Webb Associates) has prepared the following proposal to perform professional services as part of the City of Imperial's (City's) Wastewater Treatment Plant Upgrade Project. Our services will generally include soils investigation, site mapping, final construction plans, specifications, engineering during construction, on-site inspection, and SRF loan administration assistance for the City's Wastewater Treatment Plant Upgrade Project. All plans and specification will be prepared under the direction of a professional engineer registered in the State of California and will be signed/sealed by the responsible professional engineer.

Based upon our understanding of the project, Webb Associates' scope of work will be grouped into three phases. Phase I will be the preliminary design, including mapping, geotechnical investigation, major equipment selection, SRF funding application preparation, and environmental document preparation. Phase II will include final design and bidding. Phase III will include construction support services, onsite inspection, SCADA integration and loan administration assistance. For purposes of providing a meaningful project schedule, we have assumed a Notice to Proceed date of March 25th, 2016 which will lead to the completion of design and ready for bidding by February 2017.

Phase I – Preliminary Design and Support Services

- A. **Preliminary Design** – We will review historical influent flows, current WWTP influent data and flow projections as well as current and anticipated discharge requirements in order to establish design criteria for the proposed WWTP. Based upon the established design criteria, a review of available treatment technology will be completed. It is our understanding that the proposed WWTP shall be capable of treating between 2.4 to 3.0 million gallons per day (average daily flow) at the loading rates determined as part of this

scope of work and that the City is requiring the proposed WWTP upgrade produce tertiary water which may be permitted for recycled irrigation use. We also understand that the City's preferred treatment technology is membrane bioreactor (MBR) but other viable options must be considered. In addition to determining the treatment method, we will establish the design parameters for the following facilities:

- Influent lift station upgrades (existing influent lift station to remain)
- Headwork screening, grit removal, and solids handling (existing new headworks to remain)
- UV disinfection
- Mechanical solids dewatering/handling facilities as necessary for treatment process
- On-site electrical, controls and SCADA
- Site work
- Odor control
- Backup power upgrades

B. Major Equipment Selection - Prior to moving into the design phase, it is prudent to identify the major equipment to be utilized. This allows the design to move forward efficiently and with greater detail. In addition to identifying major equipment, we will solicit budgetary proposals to assist in preparing the final cost estimate for this project. In order to accomplish this task we will;

- a. *Outline Selection Criteria and Process with City.* This process will include identifying all equipment to be selected. The selection criteria will be mutually agreed to by the Engineer and the City. Key individuals from the City will be identified to assist in the evaluation process.
- b. *Solicit Budgetary Proposals.* Once the equipment has been identified and the process determined, we will solicit budgetary proposals from the manufacturers
- c. *Visit Operating Facilities of Acceptable Manufactures.* If necessary, as part of the evaluation process, we will make arrangements to visit similar size operating facilities in order to observe the equipment in operation. In our experience, these visits can be very helpful in the evaluation process.
- d. *Receive and Analyze Budgetary Proposals.* We will receive and analyze the budgetary proposals. This process will help identify completeness of proposals and prepare an evaluation matrix following the previously identified selection criteria. Input from the key individuals will also be incorporated into the analysis. A summary of the analysis shall be submitted to the City.
- e. *Select equipment.* With the City's input and direction, the equipment shall be selected so the design phase of the project can commence surrounding the selected equipment.

The major equipment for this project will include items such as biological and mechanical treatment equipment, screens, grit removal systems, blowers, mixers, mechanical sludge handling equipment and disinfection equipment.

- C. **Aerial Topographic Mapping** – The Holt Group will research record maps and perform the calculations necessary to locate survey monuments at the proposed WWTP site. The Holt Group’s survey crew will also perform a field survey to set ground control targets. Any nearby centerline intersections will be “tied-in” to establish reference and control points for right-of-way computations. The design survey will be prepared by a licensed land surveyor registered in the State of California. After ground controls have been set, an aerial survey of the proposed alignments will be completed by Inland Aerial Surveys.

- D. **Geotechnical Investigation** – Landmark Geotechnical Inc. will provide soil exploration services including borings throughout the proposed WWTP site. Based upon the findings of the geotechnical investigation a project specific soils report will be prepared to provide engineering criteria to be utilized during design and recommendations to be utilized during construction.

- E. **State Revolving Fund (SRF) Loan Application** – Our team fully understands the requirements of the SRF application, administration and funding process. We have successfully worked with Blais & Associates on multiple recent wastewater treatment plant projects, and we will utilize their expertise to complete the funding application for this project. The Engineer’s Report (required by SRF) will be prepared by WEBB. We will also review other potential funding programs such as recycled water grant programs.

- F. **CEQA/NEPA Compliance** – Our team is skilled in performing CEQA/NEPA work associated with wastewater projects and is ready to perform the work on this project. We anticipate preparing a CEQA Exemption and a NEPA Exclusion for this project due to the fact that the new facilities will be replacing existing facilities within the same disturbed footprint. If during the course of the project it is determined that additional CEQA/NEPA work will be required, we will prepare a scope and budget to cover the additional work.

- G. **NPDES and CDPH Permitting** – Webb Associates will coordinate with the Regional Water Quality Control Board (RWQCB) and the California Department of Public Health (CDPH) regarding the issuance of a new NPDES discharge permit and permit to recycle treated wastewater for irrigation purposes. As part of this work, we will prepare the permit applications (with input from the City) for City signature and submittal to the RWQCB and CDPH. We will also meet with the RWQCB and CDPH at the 15% and 50% design milestones to keep them informed regarding the design and progress of the project. Webb Associates will not be responsible for permit fees that may be associated with receiving these permits.

Phase II – Final Design

- H. **Complete Detailed Design Documents** – A complete construction package, including all necessary civil, mechanical, structural, electrical and control plans, specifications, and bid documents will be completed for this project. The design will cover all of the project facilities as determined in Phase I. Based upon an assumed Notice to Proceed date of March 25, 2016, our design will be complete and ready for bidding by February 2017. The following are the anticipated design milestones.
- a. *Establish conceptual plans (15%) and review with Owner.* Draft plans will be established using the equipment that was previously identified. The plans will be reviewed with the Owner during a one-day review workshop.
 - b. *Prepare plans and specifications (50%).* Plans and specifications will be prepared to approximately 50% level. The plans and specification will be reviewed with the Owner during a one-day review workshop.
 - c. *Prepare plans and specifications (90%).* Plans and specifications will be prepared to a 90% level and a detailed cost estimate will also be prepared. The 90% plans and specifications will be delivered to the Owner for review and comment.
 - d. *Submit to Owner for final review and bidding (100%).* A final set of plans and specifications will be submitted to the City for final review. Webb Associates will perform a final QA/QC contractibility review of the project. Any comments or items found in either the City's or Webb's final review will be incorporated into the final plans and specifications. Final plans and specifications will be delivered to The City for bidding purposes.
- I. **Bidding Services** – We will assist the City during the bidding phase by attending the pre-bid conference, responding to requests for information (RFIs), and issuing addenda as needed. We will also assist the City in distributing bid documents, attending the bid opening and evaluating the bids

Phase III – Construction Services

- J. **Design Engineering Services during Construction** – We will provide design services through the construction phase and assist the City in working with the Contractor and the for a successful construction project. Our efforts will include responding to RFIs, reviewing submittals, and bi-weekly site visits to review with construction efforts. We have assumed there will be 100 RFIs, 150 submittals, and 25-30 site visits. It is anticipated that construction will last for twelve to fourteen months.
- K. **Onsite Inspection** – WEBB will provide onsite construction inspection during the course of the project. We anticipate that inspection time will range between 50% to full-time during the course of construction, depending on the activities taking place.

- L. **SCADA Programming** – Our team will provide SCADA programming services for the project, including PLC programming and HMI development/programming. All hardware will be provided and installed by the Contractor but programming and control logic will be provided by SKM, Inc. (electrical design engineer).
- M. **Project Closeout** – As-builts and O&M manuals will be assembled at the close of the construction project. Working with the City, we will prepare an overall project O&M Manual that will include standard operating procedures (SOPs) that will be useful for operations and maintenance at the facility. The O&M manual and SOPs will address intent of the design, normal operating conditions, preventative maintenance, and contingency plans for failure modes.
- N. **SRF Loan Administration Support** – SRF Loans require a significant level of reporting and auditing during construction. Our team will provide administrative support services necessary to ensure timely reimbursements and well as maintaining proper documentation to satisfy the periodic project audits that will be performed by the State.

Schedule and Compensation - It is anticipated that the preliminary and final design of this wastewater treatment plant project will be completed within ten months from approval of our contract and notice to proceed. The anticipated milestone dates are as listed above in the Scope of Work.

The total fees for the services described in this proposal shall be \$1,580,000. This project will be performed on a lump sum basis in accordance with the following milestone billing schedule of fees.

Phase I – Preliminary Design & Support Services	\$ 165,000
Phase II – Final Design & Bidding	\$ 525,000
Phase III – Construction Services & SRF Support	\$ 890,000

Key Project Team Members

The primary personnel assigned to this project team will be as shown below. In addition to the primary personnel, highly qualified engineering, design, and administrative staff will be assigned to ensure the project is completed in the most effective and timely manner.

- Mr. Brian Knoll, P.E. (Webb Associates Vice President) will serve as project manager and responsible engineer over the entire project. Mr. Knoll will also be the City’s point of contact and will oversee all phases of the project through completion.
- Mr. Justin Logan, P.E. (Aqua Engineering Principal Engineer) will be the lead project engineer and will be primarily responsible for the design of the WWTP.
- Mr. Mark Jeppsen, P.E. (SKM Engineering Principal Electrical Engineer) will be the lead electrical engineer responsible for the power, control, and SCADA systems.

- Mr. Shane Bloomfield (Webb Associates Senior Engineer) will serve as the assistant project manager and will be the lead design engineer for the sewer pipeline project.
- Mr. Bill Malone, P.E. (Webb Associates Vice President) will provide technical assistance and quality control throughout the project.
- Mr. Jeff Lyon, P.E. (Landmark Geotechnical Principal Engineer) will prepare the geotechnical investigation and will provide quality assurance during the design of this project.
- Mr. Jack Holt, P.E. (The Holt Group Principal Engineer) will provide the mapping and survey work to be utilized during the design of this project.

Exclusions from Webb Associates' Scope of Work

The following items have been specifically excluded from Albert A. Webb Associates scope of work for this project.

1. Environmental documentation (CEQA/NEPA Document) other than what was specified in this scope of work
2. Preparation of permit applications and paying for permits unless specifically indicated in the proposed scope of work
3. Construction staking and surveying during construction
4. Property acquisition
5. Material testing during construction
6. Traffic control plans
7. Utility relocation plans

We thank you for the opportunity to submit this proposal and look forward to working with you and the City of Imperial on these very important projects. Should you have any questions, please contact me at (951) 830-3389.

Sincerely,

ALBERT A. Webb Associates



Brian Knoll, P.E.
Vice President

CC:
Justin Logan, Aqua Engineering
Webb File
BK/bpk