

XXX-18 APPENDIX A TECHNICAL SPECIFICATIONS

Project: Engineering Services for Greenland Water Reclamation Facility

DESCRIPTION OF SCOPE OF SERVICES

GENERAL

Consultant agrees to provide Engineering Services for Greenland Water Reclamation Facility

SCOPE OF SERVICES

The Scope of Work to be performed under this task consists of preliminary design, final detailed design, bid phase support, services during construction, and acceptance testing for Engineering Services for Greenland Water Reclamation Facility

TASK PLAN

A. General tasks that are to be included in this project:

1. Pretreatment Process
2. Biological Nutrient Removal Process
3. Effluent Management
4. Biosolids Management
5. Support Facilities

Using the Project Definitions as guidance, develop design plans and specifications for the work

B. Design Kickoff Meeting

Attend the design kickoff meeting at the date and time established by JEA. Take meeting minutes and submit to JEA.

C. Design Criteria

Comply with JEA Water & Sewer Standard Specifications; JEA Water, Sewer and Reclaimed Water Design Guidelines requirements; JEA Rules and Regulations for Water, Sewer & Reclaimed Water Services.

D. Opinion of Costs

Consultant will prepare opinions of construction cost at all stages of deliverables in accordance with the Association for the Advancement of Cost Engineering International, Inc. (AACE) for the purpose of assisting JEA in preparing budget funding request, evaluating design options. Expected accuracy will be as follows: Class 3 estimate for thirty percent (30%) design deliverable and System study; Class 2 estimate for sixty percent (60%) design deliverable, and Class 1 estimate for ninety percent (90%) and 100% design deliverable.

The design consultant is to provide a complete project estimate report for the design submittal. The design consultant is responsible for estimating the contractor direct construction costs. The JEA Project Manager (PM) is responsible for providing the design consultant with JEA additional direct and indirect costs (i.e., Owner Furnished Equipment, Project Management, Engineering, Miscellaneous, and Services During Construction). The design consultant will include the JEA additional direct costs and indirect costs provided by the PM to form a complete estimate report.

The estimate documentation should be neatly bound in a report or compiled in an electronic file. The estimate report should include the following:

- Summary Estimate

- The summary estimate template is the first sheet on the JEA provided “ WWW Estimate Template for Design Consultants”.
- Variance Analysis
 - The variance analysis is a line by line comparison of all estimates prepared for the project. It contains a summarized breakdown of each estimate that’s been developed along with a variance between the current estimate to the previous estimate. Variances shall be explained by the Consultant.
 - The summarized direct cost breakdown should be consistent from estimate to estimate so the variance analysis is easier to quantify at each estimate submittal. If the previous estimate was at the PD stage it’s most likely that the direct costs weren’t broken down into the detail of the first estimate submittal from the design consultant. This makes aligning the two (2) estimates for a variance analysis difficult. The PM and design consultant will need to use their best judgment as how to line up and compare the two (2) estimates and explain the differences. The direct cost breakdown on the template is only a guide and the design consultant should modify it accordingly based on the project type and scope.
 - The JEA provided “WWW Estimate Template for Design Consultants” has a variance analysis template on the second sheet.
- Detailed Estimate
 - This is the detailed breakdown of the estimate submittal. It should include quantities and units with unit costs for labor, materials, subcontractors and equipment for each line item in the estimate. Each line item should also include a total per unit and a total net cost.
 - As a general guide, the quantities are to be organized in at least two (2) levels or groups: (1) by the project and (2) by major facility, process or conveyance segment. The design consultant is responsible to provide adequate definition of the project and its major components so that the project team can adequately manage the scope and cost at a level of detail to meet project execution and asset management requirements.
- Backup Documentation
 - Documentation including vendor quotes, estimate calculations and takeoffs, assumptions, allowances, contingency justification and any other documentation gathered and/or utilized in the development of the estimate.

E. System Modeling

- Consultant will evaluate operating conditions (head, maximum and minimum flow rates, submergence, and or NPSH) for all the proposed pump stations. Provide system hydraulic schematic which includes all flow conditions (ADF, MDF, PHF).

Consultant will take full responsibility for the accuracy of the hydraulic calculations for the overall system study for the pumping and transmission facilities. Consultant will develop a signed & sealed Technical Memorandum describing the calculations performed and the overall system results obtained.

- Biowin Technical Memorandum shall include:

Consultant will utilize the wastewater treatment process simulator(Biowin) that ties together biological, chemical, and physical process models for the whole plant. The model will provide a tool for predicting plant performance and form a basis for operational control of the treatment process while minimizing operation costs and assessing the stability of environmental balance. The model will support the design, upgrade, and optimize the wastewater treatment plant(s). Process simulation will be captured and results shown with informative tables, charts, and presentation software.

Consultant will take full responsibility for the accuracy of the calculations for the facilities, and recommendations on needed improvements to meet the present and twenty (20) year forecasted flows.

Consultant will develop a signed & sealed Technical Memorandum describing the modeling performed and the overall system results obtained.

F. Permitting Assistance

Provide assistance to JEA in filing and obtaining the necessary permits from local agencies, if required, to include but not limited to:

- FDEP Generic Permit for Groundwater Discharge
- COJ 10-Set Review process.
- COJ Building Permit
- Environmental Resources Permit (ERP) for stormwater management. ERP will be submitted to SJRWMD and/or Army Corps of Engineers (ACOE) if required
- US Army Corps of Engineers Wetland Determination and Permit
- EPA NPDES General Permit for Construction Activities including Notice of Intent and Notice of Termination forms
- Review with FDEP for determination of wastewater permitting, but not limited to the following:
 - **62-604.300(8)(a)**, Notification/Application For Constructing A Domestic Wastewater Collection/Transmission System
 - **62-604.300(8)(b)**, Request For Approval To Place A Domestic Wastewater Collection/Transmission System Into Operation
 - **62-620.910(8)**, Permit to Discharge Stormwater Associated with Industrial Activity Application Form 2F (Revised 10/23/00)
 - **62-620.910(9)**, Application for a Minor Revision to a Wastewater Facility or Activity Permit (Revised 10/23/00)
 - **62-620.910(12)**, Notification of Completion of Construction for Wastewater Facilities or Activities (Revised 10/23/00)
 - **62-620.910(13)**, Notification of Availability of Record Drawings and Final Operation and Maintenance Manuals (Revised 10/23/00)
 - **62-620.910(16)**, Request for Approval of Monitoring Plans for Discharge of Domestic Wastewater to Wetlands

Assistance will include:

- a. Pre-meetings with permit authorities as needed to ensure necessary approvals.
- b. Preparation of applications, exhibits, drawings, and specifications as needed for execution and submittal.
- c. Furnishing additional information about the project design as required for permit approval.
- d. Submittal of applications to the permitting authorities.
- e. JEA will provide payment for necessary permits.

G. Construction Contract Documents

1. Prepare detailed drawings, specifications, and Bid Form for the proposed construction work and for materials and equipment required. The documents shall be prepared for selection of private construction contractors on a competitive bid price basis. The documents shall be prepared as one contract.
2. Update the opinion of probable construction cost for the proposed work covered by the contract documents and provide with final construction contract documents.
3. Review the contract documents for completeness and constructability.
4. Prepare (in accordance with JEA format) and Provide Asset Management Documentation for inclusion in bid specifications.
5. Provide six sets of contract documents to JEA for review at ten percent (10%), thirty percent (30%), sixty percent (60%), ninety percent (90%) and final construction drawings.
6. Provide a critical spare parts list to be included in the bid.
7. Following the review of the completed contract documents meet with JEA to discuss them and to resolve any questions. This item provides for four meetings with JEA personnel to discuss review comments.

8. Bidding Documents to be provided to JEA include drawings, bid form, specifications, and text for inclusion into the JEA Special Conditions, if needed.
9. Provide one (1) CD with electronic drawing files and six (6) copies of the final construction drawings to JEA. Provide electronic files in PDF format and drawings in PDF and ACAD formats.

H. Bid Phase Services

1. If requested by JEA, attend the pre-bid conference at the date and time established by JEA.
2. Interpret construction contract documents in regard to Contractor questions. Support JEA with drawings and/or specification updates for addenda issuance. JEA will coordinate and issue all addenda.
3. JEA will conduct the bid opening. Attendance is not required by designer at the bid opening.
4. Provide signed/sealed Conformed drawings and specifications. JEA will be responsible for the coordination and distribution of conformed copies of the construction contract documents. Provide electronic files in PDF (.pdf) format and drawings in PDF (.pdf) and ACAD (.dwg) formats. JEA will coordinate the distribution of conformed copies of the construction contract documents.

I. Construction Services

1. Provide construction management, administration and inspection services. Attend and participate in the pre-construction meeting to answer technical questions.
2. Review and approve shop drawings.
3. Attend monthly status meetings/site visits.
4. Respond to Contractor RFIs. Responses that require any corrections to plans or specifications are not to be reimbursed.
5. Review Asset Management Information submittals and completed work submitted as part of the monthly contractors invoice to ensure compliance with plans and specifications. Approve final Asset Management Information submittal for accuracy and completeness.
6. Prepare final testing and startup documentation.
6. Preparation of FDEP certification.
7. Substantial and Final Completion.
8. Review and approve final O&M manuals for the equipment.
9. Review and approve Contractor submitted "record" drawings for accuracy and conformance to JEA Standards. Prepare and submit electronic and hard copy Record Drawings.
10. Develop a customized operations manual for the new facility. The Facility Operations Manual will complement the contractor-provided Vendor Operations and Maintenance (O&M) submittals for equipment furnished and installed. The Facility Operations Manual will contain design criteria and operational philosophy, process descriptions, process flow diagrams, P&IDs, descriptions of operator interface controls, control strategies, process control guidance, and process troubleshooting tables.

J. DELIVERABLES

Consultant shall provide the following hard copy and electronic deliverables to include but not limited to:

Ten percent (10%) Schematic Design Document

- Updated Project definition(s) and/or Project system design description
- Summary of design parameters
- Preliminary site layout
- Preliminary hydraulic calculations
- Preliminary electrical one-line diagram
- Process flow diagrams
- Draft piping and instrumentation diagrams (P&IDs)
- Major equipment listing
- Any proposed changes to site(s)
- Initial cost estimate

- Preliminary description of construction materials

Thirty percent (30%) Conceptual Design Document(CDD)

- Updated Project definition(s) and/or Project system design description
- Finalized site layout
- Finalized hydraulic profile/calculations
- Finalized and locked piping and instrumentation diagrams (P&IDs)
- Plan views & major elevation drawings, electrical schematics
- Process calculations finalized
- Project schedule finalized
- Class 3 thirty percent (30%) conceptual cost estimate
- List of specifications
- Preliminary geotechnical report if required
- Preliminary survey if required

Sixty percent (60%) Design

- Class 2 preliminary estimate
- Sixty percent (60%) design drawings
- Mark up of specifications
- P&ID finalized and locked
- Plan view & major elevation drawings
- Electrical schematics
- Final project schedule
- Construction sequence
- Finalized hydraulic calculations

Ninety percent (90%) Design Document

- Ninety percent (90%) engineering drawings
- Ninety percent (90%) written specifications
- Final design calculations
- Applicable permits
- Asset management documentation
- Class 1 ninety percent (90%) definitive cost estimate

100% Design Document

- Updated CDD and/or System Design Description
- Final engineering drawings
- Final written specifications
- Final QC performed
- Final basis of design document
- Final design calculations
- Class 1 final cost estimate
- Critical spare parts review
- Schedule

Proposal Documents

- Proposal set engineering drawings
- Proposal set written specifications
- Proposal Form
- Related Proposal documents

Construction Documents

- Conformed engineering drawings

- Conformed written specifications

K. SCHEDULE CONSTRAINTS

Preliminary design report through Final design/permitting phase shall be completed in accordance with the program schedule.

**APPENDIX B
PHASE 1 PROPOSAL FORM**

006-18 Engineering Services for Greenland Water Reclamation Facility

COMPANY INFORMATION:

COMPANY NAME: _____

BUSINESS ADDRESS: _____

CITY, STATE, ZIP CODE: _____

TELEPHONE: _____

FAX: _____

EMAIL OF CONTACT: _____

PROJECT MANAGER PROXIMITY

In order to receive points for this criterion, Company's office must be occupied and staffed with at least three (3) employees for a duration of six (6) months prior to the Proposal Due Date stated in the RFP.

Check the box to confirm Company meets criterion ☐ YES ☐ NO

The Company shall submit one (1) original Proposal, four (4) duplicates (hardcopies), and five (5) CDs or USB drives. If there is a discrepancy between the electronic copy and hard copy, the hard copy will prevail. JEA will not accept Proposals transmitted via email.

____ (Initials) I have read and understood the Sunshine Law/Public Records clauses contained within this solicitation. I understand that in the absence of a redacted copy my proposal will be disclosed to the public "as-is".

Company's Certification

By submitting this Proposal, the Proposer certifies that it has read and reviewed all of the documents pertaining to this RFP and agrees to abide by the terms and conditions set forth therein, that the person signing below is an authorized representative of the company, that the company is legally authorized to do business in the State of Florida, and that the company maintains in active status an appropriate license for the work. The company certifies that its recent, current, and projected workload will not interfere with the company's ability to Work in a professional, diligent and timely manner.

The Proposer certifies, under penalty of perjury, that it holds all licenses, permits, certifications, insurances, bonds, and other credentials required by law, contract or practice to perform the Work. The Proposer also certifies that, upon the prospect of any change in the status of applicable licenses, permits, certifications, insurances, bonds or other credentials, the Company shall immediately notify JEA of status change.

We have received addenda _____ through _____

Signature of Authorize Officer of Company or Agent

Date

Printed Name & Title

Phone Number

**APPENDIX B
PHASE 1 MINIMUM QUALIFICATION INFORMATION**

RFP # 006-18

Engineering Services for Greenland Water Reclamation Facility

GENERAL

THE MINIMUM QUALIFICATIONS SHALL BE SUBMITTED IN THE FORMAT ATTACHED. THE REPORT SHALL BE PRESENTED IN THE ORDER DESCRIBED BELOW. IN ORDER TO BE CONSIDERED A QUALIFIED SUPPLIER BY JEA YOU MUST MEET ALL THE CRITERIA LISTED AND BE ABLE TO PROVIDE ALL THE SERVICES LISTED IN THIS SPECIFICATION.

THE PROPOSER MUST COMPLETE THE FOLLOWING INFORMATION AND ANY OTHER INFORMATION OR ATTACHMENTS.

PROPOSER INFORMATION

COMPANY NAME: _____

BUSINESS ADDRESS: _____

CITY, STATE, ZIP CODE: _____

TELEPHONE: _____

FAX: _____

E-MAIL: _____

PRINT NAME OF AUTHORIZED REPRESENTATIVE: _____

SIGNATURE OF AUTHORIZED REPRESENTATIVE: _____

NAME AND TITLE OF AUTHORIZED REPRESENTATIVE: _____

- o The Proposer must be listed on JEA's Qualified Proposers List (QPL) in the following categories: **WE1-Water Wastewater Treatment Plant Systems and Pump Stations** and **WE3-Water, Sewer and Reclaimed Water Pipe Greater Than or Equal to 24 Inches**
- o The Proposer shall have successfully completed two (2) Wastewater Treatment Plant designs (advanced treatment design with reclaimed design), both in Florida, each with a minimum of 4 mgd within the last ten (10) years, date ending on the Proposal Phase I Due Date. At least one project shall reflect alternative delivery method by Construction Management at Risk (CMAR). The Proposer shall have participated in services during construction for the projects.

REFERENCE 1

Reference Name_____

Reference Phone Number_____

Reference E-Mail Address _____

Contract Year/Amount _____

Project Title _____

Address of Work _____

Description of Project _____

REFERENCE 2

Reference Name_____

Reference Phone Number_____

Reference E-Mail Address_____

Contract Year/Amount _____

Project Title _____

Address of Work _____

Description of Project _____

**APPENDIX B PHASE 2
PROPOSAL FORM**

006-18 Engineering Services for Greenland Water Reclamation Facility

COMPANY INFORMATION:

COMPANY NAME: _____

BUSINESS ADDRESS: _____

CITY, STATE, ZIP CODE: _____

TELEPHONE: _____

FAX: _____

EMAIL OF CONTACT: _____

The Company shall submit one (1) original Proposal, four (4) duplicates (hardcopies), and five (5) CDs or USB drives. If there is a discrepancy between the electronic copy and hard copy, the hard copy will prevail. JEA will not accept Proposals transmitted via email.

Company's Certification

By submitting this Proposal, the Proposer certifies that it has read and reviewed all of the documents pertaining to this RFP and agrees to abide by the terms and conditions set forth therein, that the person signing below is an authorized representative of the company, that the company is legally authorized to do business in the State of Florida, and that the company maintains in active status an appropriate license for the work. The company certifies that its recent, current, and projected workload will not interfere with the company's ability to Work in a professional, diligent and timely manner.

The Proposer certifies, under penalty of perjury, that it holds all licenses, permits, certifications, insurances, bonds, and other credentials required by law, contract or practice to perform the Work. The Proposer also certifies that, upon the prospect of any change in the status of applicable licenses, permits, certifications, insurances, bonds or other credentials, the Company shall immediately notify JEA of status change.

We have received addenda _____ through _____

Signature of Authorize Officer of Company or Agent

Date

Printed Name & Title

Phone Number