

TASK ORDER NO. 5
JACOBS ENGINEERING GROUP, INC.
6 MGD AWT FINAL DESIGN, PERMITTING, & BIDDING
RFQ#7-23-05 - SOUTH BEACHES WASTEWATER TREATMENT PLANT –
6 MGD CONVERSION TO ADVANCED WASTEWATER TREATMENT

IO#: 6540319

THIS TASK ORDER is made and entered into by and between the Board of County Commissioners of Brevard County, Florida, hereinafter referred to as "County" and, Jacobs Engineering Group, Inc., hereinafter referred to as "Consultant", consistent with the terms of the Professional Services Contract for South Beaches Wastewater Treatment Plant – 6 MGD Conversion To Advanced Wastewater Treatment (AWT) RFQ-7-23-05, dated, January 16, 2024 – Engineering Analysis, Design and Construction Oversight Services between the County and Consultant;

WHEREAS, the Professional Services Contract between County and Consultant provides that requirements for professional services are to be set forth in tasks orders;

IT IS AGREED as follows:

SECTION A. BACKGROUND AND INTENT

The South Beaches Wastewater Treatment Facility (SB WWTF) is an 8 MGD permitted annual average daily flow (AADF) domestic wastewater treatment facility consisting of mechanical influent screening, grit removal, two activated sludge treatment trains, secondary clarification, filtration (capacity up to 3 mgd), and disinfection. One treatment train consists of two 3 MGD oxidation ditches and the other train contains one 2 MGD conventional activated sludge (CAS) basin. Following screening and grit removal at the pretreatment facility, the screened raw wastewater is split to two oxidation ditches and one CAS basin.

After secondary clarification in each treatment train, the secondary effluent of each is directed to plant facilities for further processing and treatment, containing filtration, chlorination and equalization. SBWWTF has three permitted effluent disposal methods:

- 12.7 MGD (Peak Hour Flow) deep injection well (DIW).
- 3.0 MGD AADF slow-rate public access system for irrigation within the reuse service area including the Spessard Holland Golf Course.
- 0.11 MGD AADF surface water discharge to the Indian River Lagoon (IRL), permitted during a 5-day period during DIW mechanical integrity testing done every 5 years.

Biosolids from the facility are dewatered and hauled to the landfill for disposal.

Recent Florida State regulatory changes such as the Senate Bill 712 "Clean Waterways Act" (Chapter 2020-150 Laws of Florida), Senate Bill 64 (Chapter 2021-168 Laws of Florida), and House Bill 1557 (Chapter 2024-180 Laws of Florida) have added more stringent requirements for wastewater effluent disposal requiring modifications to the SB WWTF treatment effluent disposal in accordance with Chapter 403.086 of the Florida Statutes.

As explained in the Treatment Alternatives Technical Memo (TM) (Jacobs, June 2024), County elected to convert the SB WWTF to provide AWT in accordance with 403.086(4) of the Florida Statutes. The selected alternative (Alternative No. 4) includes modifications to oxidation ditches for simultaneous nitrification and denitrification, addition of a chemical feed system for phosphorus removal, upgrade of the CAS basin to AWT and addition of denitrification filters with supplemental carbon feed system.

The design of the 2 MGD CAS AWT system was recently completed under Task Order No. 1 of the Professional Services Contract for Continuing Engineering Consultant Services (RFQ #7-22-06). The preliminary design of the 6 MGD Oxidation Ditches AWT has been developed as part Task Order No. 3 of the Professional Services Contract for SB WWTF – 6 MGD Conversion To AWT (RFQ-7-23-05). The preliminary design report was issued on November 25, 2025. Detailed design, permitting and bidding of this project is covered in this task order. Design work for this project is carried out using a phased design delivery approach for a logical and progressive completion of the design.

SECTION B. PROJECT REPRESENTATIVES

For Brevard County Utility Services:

Lucas Siegfried, PE
321-350-8380
Lucas.Siegfried@Brevardfl.gov

For Consultant:

GJ Schers, PMP
239-404-0245
GJ.Schers@Jacobs.com

SECTION C. SCOPE OF WORK

Consultant will provide professional services to develop the design of the improvements to the 6 MGD treatment train and provide professional services for contracting procurement.

The improvements include the conversion of the 6 MGD treatment train to AWT as stated in Florida Statute 403.086 and as detailed in the draft preliminary design report dated November 25, 2025. It also includes replacement of the electrical switchgear and standby generator for the West site of SB WWTF, per the Electrical System Risk Assessment and Power System Improvements Report (CDM, January 2025).

The proposed improvements are:

- Upgrades to four oxidation ditch aerators to meet aeration requirements based on updated influent flows and loads. This includes improvements to the oxidation ditch structures to support the larger aerators.
- Headworks bypass from influent line to Oxidation Ditch #2.
- Flow meter for secondary effluent located in a vault upstream of the upflow filters.
- Denitrification filtration facility including upflow media filters and air scour blowers designed for peak hour flow of 20 MGD.
- Chemical feed facilities for supplemental carbon substrate (e.g. Micro C) to enhance denitrification and ferric chloride for phosphorus removal. The chemical facilities will be covered with a canopy structure.
- Transfer pump station downstream of the new denitrification filters. The pump station will be designed for peak hour flow of 20 MGD.
- Electrical facilities, including MCCs, power panels and variable speed drives, associated with the oxidation ditches, denitrification facility, transfer pump station and chemical feed facilities.
- Denitrification building to house the air scour blowers and electrical facilities for the oxidation ditches, denitrification facility, transfer pump station and chemical feed facilities. The building will be climate controlled.

- Expansion of the existing sodium hypochlorite bulk storage facility including the addition of a new feed pump and associated piping. The new chemical facilities will be covered with a canopy structure.
- Electrical switchgear and standby generator for the West site of SB WWTF. This covers a new FPL feed and transformers. It will also include new feeders to the existing and new MCCs of the 6 MGD facility.
- Modifications to the existing Recycle Building to house the new switchgear. The existing building will be climate controlled.
- Yard piping after the clarifier splitter box to the denitrification filter facility and from the denitrification facility to the equalization/chlorine contact basin. This includes a secondary effluent pipe from the 2 MGD clarifier to the denitrification facility.
- Associated site civil, electrical and instrumentation facilities.

The scope of services is outlined in the tasks below.

Task 1 – 75% Design

After County has approved the preliminary design documents and therewith the location of the new structures, equipment and yard piping, Consultant will develop the intermediate design documents. This will cover the design drawings up to 75% design completion including major equipment technical specifications for the blowers and aeration injection equipment but excludes standard and specific details. The design drawings will follow the CAE/CAD standards of Consultant and will be developed in MicroStation 3D. Consultant's master technical specifications (Division 02 - 49) will be used as the basis for all specifications.

As the design progresses, Consultant will subcontract and manage geotechnical investigation services required to complete the design. The following subsurface soils and geotechnical investigation and analysis will be performed:

- Seven SPT borings will be drilled using truck-mounted drilling equipment and a procedures similar to the Standard Penetration Test outlined in ASTM D-1586. Borings will be sampled at 18-inch intervals to 10 feet deep and at 5-foot intervals below 10 feet.
- Five auger borings will be drilled with a 4-inch diameter, truck-mounted continuous flight auger or a 3-inch diameter hand-held bucket auger. Each sample will be removed from the auger or sampler in the field and then examined and visually classified by our crew chief.
- Representative portions will be sealed and packaged for transportation to a laboratory for further analysis as required. Water level observations will be made in the boreholes during the drilling operation. Routine laboratory visual classification will be performed by a geotechnical engineer.
- Engineering analysis of data obtained will be made to evaluate general subsurface conditions and to develop engineering recommendations to guide site preparation and shallow foundation support for the structures. An estimate of foundation settlement for each structure will be provided. An estimate of the normal seasonal high groundwater level at the boring locations and results of the soil permeability testing will also be provided. Results of this engineering analysis will be documented in a Geotechnical Analysis TM.

The Consultant will also perform a topographical survey to verify and confirm elevation and horizontal control of a few control points near the new facilities, in the northwest quadrant not previously surveyed by the Consultant under Task Order No. 2 of the Professional Services

Contract for SB WWTF – 6 MGD Conversion To AWT (RFQ-7-23-05). The surveying work will include soft digs and ground penetrating radar to locate existing utilities and stormwater features. The results will be integrated in the previous survey Civil3D drawings.

Consultant will develop a Class 3 estimate of probable construction costs, in accordance with the AACE International Recommended Practice No. 56R-08. In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the project, Consultant has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by operating personnel or third parties; and other economic and operational factors that may materially affect the ultimate project cost or schedule.

Consultant will organize a review meeting with County to discuss the draft intermediate design documents, at an approximate 75% completion level. A meeting summary will be prepared to document the conclusions and actions of the meeting. The comments made by County will be incorporated into the detailed design documents.

Task 2 – 90% Design

Under this task, Consultant will develop the detailed design from the Intermediate Design (75%) Phase to the Detailed Design (90%/100%) Phase. The final deliverable will be a Bid Package based on County's requirements consisting of drawings, technical specifications and other documents which fix and describe the requirements of the project. It is assumed that County will provide the upfront division 0 & 1 or 'front end' specifications with Consultant input.

The drawings will cover approximately 165 sheets, including:

- 20 cover and index sheets, abbreviations sheets, general notes, and discipline legends sheets.
- 6 demolition plan view sheets with photographs.
- 3 existing conditions sheet.
- 20 proposed site and yard piping plans, overall plan, and detail sheets.
- 16 architectural plan view, sections, and detail sheets.
- 26 structural plan view, sections, and detail sheets.
- 6 building-mechanical plan view, sections, and detail sheets.
- 22 process mechanical general arrangement sheets with plan views, cross-sections, piping arrangement details and other specific details for the equipment.
- 32 electrical sheets covering single line diagrams, lighting and grounding plans, panel schedule and riser diagrams and electrical plans.
- 14 instrumentation and control sheets covering P&IDs, block diagram, loop descriptions and network diagram.

Consultant will develop a Class 2 estimate of probable construction costs, in accordance with the AACE International Recommended Practice No. 56R-08.

At the 90% completion level, Consultant will organize a formal review meeting with County to discuss the draft detailed design documents. A meeting summary will be prepared to document the conclusions and actions of the meeting.

Task 3 – 100% Design

The comments made by County on the 90% design deliverable will be incorporated into the final version (100%) of the detailed design documents. The County will provide a quick back-check to ensure the comments are properly incorporated. If acceptable to County, this final version (100%) of the detailed design documents will be used as the bid documents. If there are any remaining comments, Consultant will incorporate those and reissue an updated final version (100%) which then will be used as the bid documents.

Task 4 – Permitting Assistance

The following services will be performed by Consultant:

1. Florida Department of Environmental Protection (FDEP) Domestic Wastewater Facility Permit: Consultant will prepare and submit supporting documentation, permit applications and Preliminary Design Report to FDEP for modification of the wastewater treatment facility. The permit application will only be for a modification to the plant and no rerating will be required. Two responses to a request for additional information (RFI) provided by FDEP will be prepared.
2. Environmental Resource Permit: Consultant will prepare and submit supporting documentation, permit application and drawings to the jurisdictional water management district office or FDEP for a modification to the environmental resource permit. No permitting tasks are anticipated involving wetlands or endangered species. Services under this task are limited to only modification of the existing stormwater system permit. One response to a request for additional information provided by the permitting authority will be prepared and submitted to the permitting agency for review.
3. Brevard County Building Permit: The Consultant will provide services to develop application documents for the County's Building Department Permit of the proposed facility improvements covering electrical, structural, site civil and HVAC design/inspection disciplines. The work will include coordination and attendance of a pre-application meeting with the County's Building Department to discuss proposed improvements and to verify the application requirements. The work will cover responses to up to two RFI from the Department. It is anticipated that the permit application will be submitted shortly after the 100% design deliverable has been issued and any comments will be incorporated in the updated final version.

Task 5 – Bidding Services

The following services will be performed by the Consultant:

- Assist County in preparing the bid package. County will prepare the Division 0 & 1 documents for issuing the bid documents. Consultant will assist County in obtaining bids for construction and attend the pre-bid conference.
- Prepare for County's approval written addenda as appropriate to interpret, clarify or expand the bid documents. Consultant will coordinate with County during the bidding process and be available to assist County in addressing bidders' questions and comments at any time during the bidding process.
- Review and advise County as to qualifications of prospective contractors and prospective subcontractors, suppliers, and others proposed by the bidder and will assist in evaluation of bids received for determination of compliance with the bidding

requirements and recommendation of the lowest responsive and responsible bidder. County will be responsible for making the final selection of the successful bidder.

SECTION D. COORDINATION

Consultant will coordinate the services with County Staff members listed below:

| Function | Name | E-Mail | Phone |
|-----------------|----------------|---------------------------------|----------------|
| Engineering | Charlie Ess | Charlie.Ess@brevardfl.gov | (321) 350-8377 |
| Billing | Lavern Burnett | Utility_Contracts@brevardfl.gov | (321) 350-8373 |

SECTION E. COUNTY'S RESPONSIBILITY

The following shall be provided by County to the Consultant:

- 1) County's project manager who will be Consultant's main point of contact during the execution of the project.
- 2) Written deliverable review comments in electronic format. County's project manager will consolidate County's comments to draft deliverables with the goal of responding within two weeks of each submittal date.
- 3) Reasonable access to site and operations, maintenance, and engineering staff.
- 4) Existing available site data and information. The Consultant will reasonably rely upon the accuracy, and completeness of the information/data provided by County or third parties.
- 5) Copies of available as-built drawings, design and construction documents and operating reports and maintenance records.
- 6) Payment of permitting fees.
- 7) Latest County Division 0 & 1 or "Front-End" documents.
- 8) County will make the bid award to preferred bidder and may use the Consultant's bid award recommendation in that decision.

SECTION F. CONSULTANT SERVICES SPECIFICALLY NOT INCLUDED

The following Consultant services are specifically not included:

- 1) Equipment alternative evaluations or value engineering.
- 2) Representation in public, community outreach or commission meetings.
- 3) Project funding services. These are covered under Task Order 4.
- 4) Any investigative and design of remediation work of possible hazardous waste, asbestos, lead paint or other types of contamination.
- 5) Design documents will be prepared for a single construction contract and will be based on the drawing list included in this scope of work. No pre-purchase or pre-selection specifications will be required.
- 6) Consultant's scope includes geotechnical investigations, in-soils, foundation, groundwater,

and other subsurface investigations. The actual characteristics may vary significantly between successive test points and sample intervals and at locations other than where observations, exploration, and investigations have been made. Because of the inherent uncertainties in subsurface evaluations, changed or unanticipated underground conditions may occur that could affect total project cost and/or execution. These conditions and cost/execution effects are not the responsibility of Consultant.

- 7) County will lead the procurement effort, supported by Consultant, including preparation of bidding documents such as invitation to bid, agreement and General Conditions.
- 8) Site plan review services. Based on email communications with Brevard County Planning & Development Department, this project will not be subject to a site plan review per Section 62-1844.7.

SECTION G. DELIVERABLES

The following shall be delivered by Consultant in PDF format unless otherwise noted:

Task 1 – 75% Design

- 75% Design Technical Specifications and Drawings in PDF format
- Class 3 Cost Estimate in PDF format
- Design Review meeting agenda and minutes in PDF format
- Geotechnical Analysis TM
- Civil 3D CAD Files with newly surveyed northwest quadrant integrated

Task 2 – 90% Design

- 90% Design Technical Specifications and Drawings in PDF format
- Class 2 Cost Estimate in PDF format
- Design Review Workshop agenda and minutes in PDF format

Task 3 – 100% Design

- 100% Design Technical Specifications and Drawings in PDF format

Task 4 – Permitting Assistance

- FDEP Domestic Wastewater Facility Permit application
- FDEP Environmental Resource Permit application
- Brevard County Preliminary Building Department Permit application
- Responses to RFI

Task 5 – Bidding Services

- Support documents for bid package, including pricing/bid schedule, description of minimum requirements, and anticipated construction schedule.
- Technical information for bidding addenda.
- Bid award recommendation.

SECTION H. SCHEDULE

Deliverables shall be provided per the following schedule:

| Task | Description | Calendar Days from NTP¹ |
|-------------|---|---|
| 1 | 75% Design | 84 |
| 1 | Class 3 Cost Estimate | 105 |
| 1 | Geotechnical analysis TM | 70 |
| 1 | Civil 3D CAD Files of Topographical Survey | 70 |
| 2 | 90% Design | 168 ³ |
| 2 | Class 2 Cost Estimate | 196 |
| 3 | 100% Design | 238 |
| 4 | FDEP Domestic Wastewater Facility Permit application | 42 |
| 4 | FDEP Environmental Resource Permit application | 98 |
| 4 | Brevard County Preliminary Building Department Permit application | 168 |
| 5 | Bidding Services deliverables including support documents for bid package, technical information for bid addenda and bid award recommendation | N/A ² |

Notes:

1. County review times of each deliverable is maximum 2 weeks upon receipt of deliverable. Review meetings will be scheduled within 1 week of receipt of County comments.
2. Project management and bidding assistance deliverables to be provided on an as-needed basis.
3. 90% design drawings and specifications will be submitted by June 25, 2026.

SECTION I. BASIS OF COMPENSATION

The fee for the scope of work described in Section C above is \$2,023,970 and shall not exceed the amounts shown in the table below for each specific task. County shall periodically compensate Consultant a portion of the task fee based on mutually agreed-upon percentages of completion of each task.

| Task | Description | Fee |
|-------------|-----------------------|--------------------|
| 1 | 75% Design | \$780,384 |
| 1 | Class 3 Cost Estimate | 40,250 |
| 1 | Geotechnical Analysis | \$27,950 |
| 1 | Topographical Survey | \$11,744 |
| 2 | 90% Design | \$699,003 |
| 2 | Class 2 Cost Estimate | \$70,980 |
| 3 | 100% Design | \$300,143 |
| 4 | Permitting Assistance | \$69,370 |
| 5 | Bidding Services | \$24,146 |
| | Total: | \$2,023,970 |

SECTION J. ACCEPTANCE

IN WITNESS WHEREOF, this _____ day of _____, 202_____.

For: BOARD OF COUNTY COMMISSIONERS OF
BREVARD COUNTY, FLORIDA

WITNESS:

By: _____

For: Jacobs Engineering Group, Inc.

WITNESS:

By:



GJ Schers, PMP, Project Manager



Didier Menard P.E., Vice President