Florida's Warmest Welcome

CITY OF POMPANO BEACH
REQUEST FOR LETTERS OF INTEREST
E-23-20

CONTINUING CONTRACT FOR ENGINEERING SERVICES FOR WATER AND REUSE TREATMENT PLANT PROJECTS

RLI OPENING: August 10, 2020, 2:00 P.M.
PURCHASING OFFICE
1190 N.E. 3RD AVENUE, BUILDING C (Front)
POMPANO BEACH, FLORIDA 33060

July 8, 2020

CITY OF POMPANO BEACH, FLORIDA

REQUEST FOR LETTERS OF INTEREST (RLI)
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CONTINUING CONTRACT FOR ENGINEERING SERVICES FOR WATER AND REUSE TREATMENT PLANT PROJECTS

Pursuant to Florida Statutes Chapter 287.055 "Consultants' Competitive Negotiation Act" the City of Pompano Beach invites qualified engineering firms to submit Letters of Interest, qualifications and experience for consideration to provide Professional Engineering Consulting services to the City on a continuing as-needed basis.

The City will receive sealed proposals until **2:00 p.m. (local), August 10, 2020.** Proposals must be submitted electronically through the eBid System on or before the due date/time stated above. Any proposal received after the due date and time specified, will not be considered. Any uncertainty regarding the time a proposal is received will be resolved against the Proposer.

Proposer must be registered on the City's eBid System in order to view the solicitation documents and respond to this solicitation. The complete solicitation document can be downloaded for free from the eBid System as a pdf at: https://pompanobeachfl.ionwave.net. The City is not responsible for the accuracy or completeness of any documentation the Proposer receives from any source other than from the eBid System. Proposer is solely responsible for downloading all required documents. A list of proposers will be read aloud in a public forum.

Introduction

The City intends to issue multiple contracts to engineering firms to provide continuing professional services to the City for various Water and Reuse Treatment Plant projects. Professional services under this contract will be restricted to those required for any project for which construction costs will not exceed $4 million, and for any study activity for which fees will not exceed $500,000

1. **The types of projects to be undertaken may include, but are not limited to**

   - Reuse Water Treatment Plant Expansion Projects
   - Reuse Water Treatment Plant Modification and/or Enhancement Projects
   - Water Treatment Plant Expansion Projects
   - Water Treatment Plant Modification and/or Enhancement Projects
   - The City's approved Capital Improvement Program maybe found here http://pompanobeachfl.gov/pages/department_directory/budget/budget.html.php

2. **The scope of services may include, but is not limited to, the following;**

   - Prepare studies and make recommendations on methods of operation and/or treatment.

- Prepare preliminary design reports and/or design alternative recommendations. This may include various types of utility modeling, surveying and field data analysis.
- Prepare all required bidding/construction documents for projects. This will include survey preparations, design plan preparations, technical specification preparations and cost estimate preparations. Attendance at all required pre-design, design, bidding and bid award meetings is required.
- Attend pre-bid conference, prepare possible bid addendums for plan revisions. Assist in making bid award recommendations for contracting/construction services.
- Prepare all required permit applications and submittal packages as required for permit issuance of all agency permits (i.e. State, County and City).
- Provide construction engineering/management services for projects. Services during construction may include shop drawing/contractor submittal reviews and approvals, inspection and approval of project improvements, possible plan revisions and review and approval of contractor pay applications.
- Provide project close-out services. This may include preliminary and final acceptance of projects, preparation and approval of punch list items and project certification as required to all permitting agencies.
- Firms must have previous experience in municipal water and reuse treatment plant projects and must be licensed to practice Professional Engineering in the State of Florida, Florida State Statute 471, by the Board of Professional Regulation.

3 Tasks/Deliverables

Tasks and deliverables will be determined per project. Each project shall require a signed Work Authorization (WA) form from the awarded firm to be provided to the City. Forms shall be completed in its entirety and include the agreed upon scope, tasks, schedule, cost, and deliverables for the project Consultant will be required to provide all applicable insurance requirements.

4. Term of Contract

The contracts will be for a term of five (5) years, commencing upon award by the appropriate City officials.

5. Local Business Program

On March 13, 2018, the City Commission approved Ordinance 2018-46, establishing a Local Business Program, a policy to increase the participation of City of Pompano Beach businesses in the City's procurement process.

For purposes of this solicitation, “Local Business” will be defined as follows:

1. **TIER 1 LOCAL VENDOR.** POMPANO BEACH BUSINESS EMPLOYING POMPANO BEACH RESIDENTS. A business entity which has maintained a permanent place of business within the city limits and maintains a staffing level, within this local office, of at least ten percent who are residents of the City of Pompano Beach or includes

subcontracting commitments to Local Vendors Subcontractors for at least ten percent of the contract value. The permanent place of business may not be a post office box. The business must be located in a non-residential zone, and must actually distribute goods or services from that location. The business must be staffed with full-time employees within the limits of the city. In addition, the business must have a current business tax receipt from the City of Pompano Beach for a minimum of one year prior to the date of issuance of a bid or proposal solicitation.

2. **TIER 2 LOCAL VENDOR.** BROWARD COUNTY BUSINESS EMPLOYING POMPANO BEACH RESIDENTS OR UTILIZING LOCAL VENDOR SUBCONTRACTORS. A business entity which has maintained a permanent place of business within Broward County and maintains a staffing level, within this local office, of at least 15% who are residents of the City of Pompano Beach or includes subcontracting commitments to Local Vendors Subcontractors for at least 20% of the contract value. The permanent place of business may not be a post office box. The business must be located in a non- residential zone, and must actually distribute goods or services from that location. The business must be staffed with full-time employees within the limits of the city. In addition, the business must have a current business tax receipt from the respective Broward County municipality for a minimum of one year prior to the date of issuance of a bid or proposal solicitation.

3. **LOCAL VENDOR SUBCONTRACTOR.** POMPANO BEACH BUSINESS. A business entity which has maintained a permanent place of business within the city limits of the City of Pompano Beach. The permanent place of business may not be a post office box. The business must be located in a non-residential zone, and must actually distribute goods or services from that location. The business must be staffed with full-time employees within the limits of the city. In addition, the business must have a current business tax receipt from the City of Pompano Beach for a minimum of one year prior to the date of issuance of a bid or proposal solicitation.

You can view the list of City businesses that have a current Business Tax Receipt on the City's website, and locate local firms that are available to perform the work required by the bid specifications. The business information, sorted by business use classification, is posted on the webpage for the Business Tax Receipt Division: www.pompanobeachfl.gov by selecting the Pompano Beach Business Directory in the Shop Pompano! section.

The City of Pompano Beach is **strongly committed** to insuring the participation of City of Pompano Beach Businesses as contractors and subcontractors for the procurement of goods and services, including labor, materials and equipment. Proposers are required to participate in the City of Pompano Beach's Local Business Program by including, as part of their package, the Local Business Participation Form (Exhibit A,) listing the local businesses that will be used on the contract, and the Letter of Intent Form (Exhibit B) from each local business that will participate in the contract.

Please note that, while no goals have been established for this solicitation, the City encourages Local Business participation in *all* of its procurements.

If a Prime Contractor/Vendor is not able to achieve the level of goal attainment of the contract, the Prime Vendor will be requested to demonstrate and document that good faith efforts were made to achieve the goal by providing the Local Business Unavailability Form (Exhibit C), listing firms that were contacted but not available, and the Good Faith Effort Report (Exhibit D), describing the efforts made to include local business participation in the contract. This documentation shall be provided to the City Commission for acceptance.

The awarded proposer will be required to submit "Local Business Subcontractor Utilization Reports" during projects and after projects have been completed. The reports will be submitted to the assigned City project manager of the project. The Local Business Subcontractor Utilization Report template and instructions have been included in the bid document.

Failure to meet Local Vendor Goal commitments will result in "unsatisfactory" compliance rating. Unsatisfactory ratings may impact award of future projects if a sanction is imposed by the City Commission.

The city shall award a Local Vendor preference based upon vendors, contractors, or subcontractors who are local with a preference as follows:

1. For evaluation purposes, the Tier 1 and Tier 2 businesses shall be a criterion for award in this Solicitation. No business may qualify for more than one tier level.

2. For evaluation purposes, local vendors shall receive the following preferences:

   a. Tier 1 business as defined by this subsection shall be granted a preference in the amount of five percent of total score.

   b. Tier 2 business as defined by this subsection shall be granted a preference in the amount of two and one-half percent of total score.

3. It is the responsibility of the awarded vendor/contractor to comply with all Tier 1 and Tier 2 guidelines. The awarded vendor/contractor must ensure that all requirements are met before execution of a contract.

6. Required Proposal Submittal

Submission/Format Requirements

Sealed proposals shall be submitted electronically through the eBid System on or before the due date/time stated above. Proposer shall upload response as one (1) file to the eBid System. The file size for uploads is limited to 250 MB. If the file size exceeds 250 MB the response must be split and uploaded as two (2) separate files.

Information to be included in the proposal: In order to maintain comparability and expedite the review process, it is required that proposals be organized in the manner specified below, with the sections clearly labeled:

Title page:

Show the project name and number, the name of the Proposer's firm, address, telephone number, name of contact person and the date.

Table of Contents:
Include a clear identification of the material by section and by page.

Letter of Transmittal:
Briefly state the Proposer's understanding of the project and express a positive commitment to provide the services described herein. State the name(s) of the person(s) who will be authorized to make representations for the Proposer, their title(s), office and E-mail addresses and telephone numbers. Please limit this section to two pages.

Technical Approach:
Firms or teams shall submit their technical approach to the tasks described in the scope, including details of how each phase of the project would be completed, and how their firm proposes to maintain time schedules and cost controls.

Schedule:
Proposer shall provide a timeline that highlights proposed tasks that will meet all applicable deadlines.

References:
References for past projects in the tri-county area (Broward, Palm Beach, and Miami-Dade.) Describe the scope of each project in physical terms and by cost, describe the respondent's responsibilities, and provide the contact information (name, email, telephone number) of an individual in a position of responsibility who can attest to respondent's activities in relation to the project.

List any prior projects performed for the City of Pompano Beach.

Project Team Form:
Submit a completed "Project Team" form. The purpose of this form is to identify the key members of your team, including any specialty subconsultants.

Organizational Chart:
Specifically identify the management plan (if needed) and provide an organizational chart for the team. The proposer must describe at a minimum, the basic approach to these projects, to include reporting hierarchy of staff and sub-consultants, clarify the individual(s) responsible for the co-ordination of separate components of the scope of services.

Statement of Skills and Experience of Project Team:
Describe the experience of the entire project team as it relates to the types of projects described in the Scope section of this solicitation. Include the experience of the prime consultants as well as other members of the project team; i.e., additional personnel, sub-consultants, branch office, team members, and other resources anticipated to be utilized for this project. Name specific projects (successfully completed within the past five years) where the team members have performed similar projects previously.

Resumes of Key Personnel
Include resumes for key personnel for prime and subconsultants.

Office Locations:
Identify the location of the office from which services will be rendered, and the number of professional and administrative staff at the prime office location. Also identify the location of office(s) of the prime and/or sub consultants that may be utilized to support any or all of the professional services listed above and the number of professional and administrative staff at the prime office location.

If firms are situated outside the local area, (Broward, Palm Beach, and Miami-Dade counties) include a brief statement as to whether or not the firm will arrange for a local office during the term of the contract, if necessary.

Local Businesses:
Completed Local Business program forms, Exhibits A-D.
NOTE: Form B must be signed by a representative of the subcontractor, NOT of the Prime.

Litigation:
Disclose any litigation within the past five (5) years arising out your firm's performance, including status/outcome.

City Forms:
The Proposer Information Page Form and any other required forms must be completed and submitted electronically through the City's eBid System. The City reserves the right to request additional information to ensure the proposer is financially solvent and has sufficient financial resources to perform the contract and shall provide proof thereof of its financial solvency. The City may as at its sole discretion ask for additional proof of financial solvency, including additional documents post proposal opening, and prior to evaluation that demonstrates the Proposer's ability to perform the resulting contract and provide the required materials and/or services.

Reviewed and Audited Financial Statements:

Proposers shall be financially solvent and appropriately capitalized to be able to service the City for the duration of the contract. Proposers shall provide a complete financial statement of the firm's most recent audited financial statements, indicating organization's financial condition. Must be uploaded to the Response Attachments tab in the eBid System as a separate file titled "Financial Statements" and marked "CONFIDENTIAL."

Financial statements provided shall not be older than twelve 12) months prior to the date of filing this solicitation response. The financial statements are to be reviewed and submitted with any accompanying notes and supplemental information. The City of Pompano Beach reserve the right to reject financial statements in which the financial condition shown is of a date twelve (12) months or more prior to the date of submittals.

The City is a public agency subject to Chapter 119, Florida's Public Records Law and is required to provide the public with access to public records, however, financial statements that are required as submittals to prequalify for a solicitation will be exempt from public disclosure.

The City reserves the right to request additional information to ensure the proposer is financially solvent and has sufficient financial resources to perform the contract and shall provide proof thereof of its financial solvency. The City may as at its sole discretion ask for

additional proof of financial solvency, including additional documents post proposal opening, and prior to evaluation that demonstrates the Proposer's ability to perform the resulting contract and provide the required materials and/or services.

A combination of two (2) or more of the following may substitute for audited financial statements:

1) Bank letters/statements for the past 3 months
2) Balance sheet, profit and loss statement, cash flow report
3) IRS returns for the last 2 years
4) Letter from CPA showing profits and loss statements (certified)

7. Insurance

The insurance described herein reflects the insurance requirements deemed necessary for this contract by the City. It is not necessary to have this level of insurance in effect at the time of submittal, but certificates indicating that the insurance is currently carried or a letter from the Carrier indicating upgrade ability will speed the review process to determine the most qualified Proposer.

The successful Proposer(s) shall not commence operations until certification or proof of insurance, detailing terms and provisions of coverage, has been received and approved by the City of Pompano Beach Risk Manager.

The following insurance coverage shall be required.

a. Worker's Compensation Insurance covering all employees and providing benefits as required by Florida Statute, Chapter 440, regardless of the size of the company (number of employees). The Contractor further agrees to be responsible for employment, control and conduct of its employees and for any injury sustained by such employees in the course of their employment.

b. Liability Insurance

1) Naming the City of Pompano Beach as an additional insured, on General Liability Insurance only, in connection with work being done under this contract.

2) Such Liability insurance shall include the following checked types of insurance and indicated minimum policy limits.

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LIMITS OF LIABILITY

	Type of Insurance		each occurrence	aggregate
GENERAL LIABILITY: ***MINIMUM $1,000,000 per OCCURRENCE/$1,000,000 AGGREGATE***				
	* Policy to be written on a claims incurred basis			
XX	comprehensive form			
XX	premises - operations	bodily injury		
__	explosion & collapse hazard	property damage		
__	underground hazard	_____		
__	products/completed operations hazard	bodily injury and		
XX	contractual insurance	property damage		
XX	broad form property damage	combined		
		_____		
XX	independent contractors			
XX	personal injury	personal injury		
AUTOMOBILE LIABILITY: ***MINIMUM $1,000,000 per OCCURRENCE/$1,000,000 AGGREGATE***				
		bodily injury (each person)		
XX	comprehensive form	bodily injury (each accident)	_____	_____
XX	owned	property damage	_____	_____
XX	hired	bodily injury and		
XX	non-owned	property damage combined		
REAL & PERSONAL PROPERTY				
XX	comprehensive form	Consultant must show proof they have this coverage.		
EXCESS LIABILITY				
XX	umbrella form	bodily injury and property damage		
XX	other than umbrella	combined	$2,000,000.	$2,000,000.
XX	**PROFESSIONAL LIABILITY**	$2,000,000.	$2,000,000.	
	* Policy to be written on a claims made basis			

The certification or proof of insurance must contain a provision for notification to the City, and the City's contracted law enforcement provider if applicable, thirty (30) days in advance of any material change in coverage or cancellation.

The successful Proposer shall furnish to the City the certification or proof of insurance required by the provisions set forth above, within ten (10) days after notification of award of contract.

8. Selection/Evaluation Process

A Selection/Evaluation Committee will be appointed to select the most qualified firm(s). The Selection/Evaluation Committee will present their findings to the City Commission.

The Committee will rank responses based upon the following criteria.

	Criteria	Point Range
1.	Prior experience of the firm with projects of similar size and complexity: a. Number of similar projects b. Complexity of similar projects c. References from past projects performed by the firm d. Previous projects performed for the City (provide description) e. Litigation within the past 5 years arising out of firm's performance (list, describe outcome)	0-45 points
2.	Qualifications of personnel including sub consultants: a. Organizational chart for project b. Number of technical staff c. Qualifications of technical staff: (1) Number of licensed staff (2) Education of staff (3) Experience of staff on similar projects	0-35 points
3.	Proximity of the nearest office to the project location: a. Location b. Number of staff at the nearest office	0-10 points
4.	Is the firm a certified minority business enterprise as defined by the Florida Small and Minority Business Assistance Act of 1985? (Certification of any sub-contractors should also be included with the response.)	0-10 points

Value of Work Previously Awarded to Firm (Tie-breaker) - In the event of a tie, the firm with the lowest value of work as a prime contractor on City of Pompano Beach projects within the last five years will receive the higher ranking, the firm with the next lowest value of work shall receive the next highest ranking, and so on. The analysis of past work will be based on the City's Purchase Order and payment records.

The Committee has the option to use the above criteria for the initial ranking to short-list Proposers and to use an ordinal ranking system to score short-listed Proposers following

presentations (if deemed necessary) with a score of "1" assigned to the short-listed Proposer deemed most qualified by the Committee.

Each firm should submit documentation that evidences the firm's capability to provide the services required for the Committee's review for short listing purposes. After an initial review of the Proposals, the City may invite Proposers for an interview to discuss the proposal and meet firm representatives, particularly key personnel who would be assigned to the project. Should interviews be deemed necessary, it is understood that the City shall incur no costs as a result of this interview, nor bear any obligation in further consideration of the submittal.

When more than three responses are received, the committee shall furnish the City Commission (for their approval) a listing, in ranked order, of no fewer than three firms deemed to be the most highly qualified to perform the service. If three or less firms respond to the RLI, the list will contain the ranking of all responses.

The City Commission has the authority to (including, but not limited to); approve the recommendation; reject the recommendation and direct staff to re-advertise the solicitation; or, review the responses themselves and/or request oral presentations and determine a ranking order that may be the same or different from what was originally presented to the City Commission.

9. Hold Harmless and Indemnification

Proposer covenants and agrees that it will indemnify and hold harmless the City and all of its officers, agents, and employees from any claim, loss, damage, cost, charge or expense arising out of any act, action, neglect or omission by the Proposer, whether direct or indirect, or whether to any person or property to which the City or said parties may be subject, except that neither the Proposer nor any of its subcontractors will be liable under this section for damages arising out of injury or damage to persons or property directly caused by or resulting from the sole negligence of the City or any of its officers, agents or employees.

10. Retention of Records and Right to Access

The selected firm shall maintain during the term of the contract all books of account, receipt invoices, reports and records in accordance with generally accepted accounting practices and standards. The form of all records and reports shall be subject to the approval of the City's Internal Auditor. The selected firm must comply with the Internal Auditor's recommendation for changes, additions, or deletions. The City's Internal Auditor must be permitted during normal business hours to audit and examine the books of account, reports, and records relating to this contract. The selected firm shall maintain and make available such records and files for the duration of the contract and retain them until the expiration of three years after final payment under the contract.

11. Communications

No negotiations, decisions, or actions shall be initiated or executed by the firm as a result of any discussions with any City employee. Only those communications, which are in writing from the City, may be considered as a duly authorized expression on behalf of the

City. In addition, only communications from firms that are signed and in writing will be recognized by the City as duly authorized expressions on behalf of firms.

12. No Discrimination

There shall be no discrimination as to race, sex, color, age, religion, or national origin in the operations conducted under any contract with the City.

13. Independent Contractor

The selected firm will conduct business as an independent contractor under the terms of this contract. Personnel services provided by the firm shall be by employees of the firm and subject to supervision by the firm, and not as officers, employees, or agents of the City. Personnel policies, tax responsibilities, social security and health insurance, employee benefits, purchasing policies and other similar administrative procedures applicable to services rendered under this agreement shall be those of the firm.

14. Staff Assignment

The City of Pompano Beach reserves the right to approve or reject, for any reasons, Proposer's staff assigned to this project at any time. Background checks may be required.

15. Contract Terms

The contract resulting from this RLI shall include, but not be limited to the following terms:

The contract shall include as a minimum, the entirety of this RLI document, together with the successful Proposer's proposal. Contract shall be prepared by the City of Pompano Beach City Attorney.

If the City of Pompano Beach defends any claim, demand, cause of action, or lawsuit arising out of any act, action, negligent acts or negligent omissions, or willful misconduct of the contractor, its employees, agents or servants during the performance of the contract, whether directly or indirectly, contractor agrees to reimburse the City of Pompano Beach for all expenses, attorney's fees, and court costs incurred in defending such claim, cause of action or lawsuit.

16. Waiver

It is agreed that no waiver or modification of the contract resulting from this RLI, or of any covenant, condition or limitation contained in it shall be valid unless it is in writing and duly executed by the party to be charged with it, and that no evidence of any waiver or modification shall be offered or received in evidence in any proceeding, arbitration, or litigation between the parties arising out of or affecting this contract, or the right or obligations of any party under it, unless such waiver or modification is in writing, duly executed as above. The parties agree that the provisions of this paragraph may not be waived except by a duly executed writing.

17. Survivorship Rights

This contract resulting from this RLI shall be binding on and inure to the benefit of the respective parties and their executors, administrators, heirs, personal representative, successors and assigns.

18. Termination

The contract resulting from this RLI may be terminated by the City of Pompano Beach without cause upon providing contractor with a least sixty (60) days prior written notice.

Should either party fail to perform any of its obligations under the contract resulting from this RLI for a period of thirty (30) days after receipt of written notice of such failure, the non-defaulting part will have the right to terminate the contract immediately upon delivery of written notice to the defaulting part of its election to do so. The foregoing rights of termination are in addition to any other rights and remedies that such party may have.

19. Manner of Performance

Proposer agrees to perform its duties and obligations under the contract resulting from this RLI in a professional manner and in accordance with all applicable local, federal and state laws, rules and regulations.

Proposer agrees that the services provided under the contract resulting from this RLI shall be provided by employees that are educated, trained and experienced, certified and licensed in all areas encompassed within their designated duties. Proposer agrees to furnish the City of Pompano Beach with all documentation, certification, authorization, license, permit, or registration currently required by applicable laws or rules and regulations. Proposer further certifies that it and its employees are now in and will maintain good standing with such governmental agencies and that it and its employees will keep all license, permits, registration, authorization or certification required by applicable laws or regulations in full force and effect during the term of this contract. Failure of Proposer to comply with this paragraph shall constitute a material breach of contract.

20. Acceptance Period

Proposals submitted in response to this RLI must be valid for a period no less than ninety (90) days from the closing date of this solicitation.

21. RLI Conditions and Provisions

The proposal must be submitted to the City on or before the time and date stated herein. All Proposers, by submission of a proposal, shall agree to comply with all of the conditions, requirements and instructions of this RLI as stated or implied herein. All proposals and supporting materials submitted will become the property of the City.

Exceptions or deviations to this solicitation may not be added after the submittal date.

All Proposers are required to provide all information requested in this RLI. Failure to do so may result in disqualification of the proposal.

The City reserves the right to postpone or cancel this RLI, or reject all proposals, if in its sole discretion it deems it to be in the best interest of the City to do so.

The City reserves the right to waive any technical or formal errors or omissions and to reject all proposals, or to award contract for the items herein, in part or whole, if it is determined to be in the best interests of the City to do so.

The City shall not be liable for any costs incurred by the Proposer in the preparation of proposals or for any work performed in connection therein.

22. Standard Provisions

a. Governing Law

Any agreement resulting from this RLI shall be governed by the laws of the State of Florida, and the venue for any legal action relating to such agreement will be in Broward County, Florida.

b. Licenses

In order to perform public work, the successful Proposer shall:
Be licensed to do business in Florida, if an entity, and hold or obtain such Contractor' and Business Licenses if required by State Statutes or local ordinances.

c. Conflict Of Interest

For purposes of determining any possible conflict of interest, each Proposer must disclose if any Elected Official, Appointed Official, or City Employee is also an owner, corporate officer, or an employee of the firm. If any Elected Official, Appointed Official, or City Employee is an owner, corporate officer, or an employee, the Proposer must file a statement with the Broward County Supervisor of Elections pursuant to §112.313, Florida Statutes.

d. Drug Free Workplace

The selected firm(s) will be required to verify they will operate a "Drug Free Workplace" as set forth in Florida Statute, 287.087.

e. Public Entity Crimes

A person or affiliate who has been placed on the convicted vendor list following a conviction for public entity crime may not submit a proposal on a contract to provide any goods or services to a public entity, may not submit a proposal on a contract with a public entity for the construction or repair of a public building or public work, may not submit proposals on leases of real property to public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Florida Statute, Section 287.017, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

f. Patent Fees, Royalties, And Licenses

If the selected Proposer requires or desires to use any design, trademark, device, material or process covered by letters of patent or copyright, the selected Proposer and his surety shall indemnify and hold harmless the City from any and all claims for infringement by reason of the use of any such patented design, device, trademark, copyright, material or process in connection with the work agreed to be performed and shall indemnify the City from any cost, expense, royalty or damage which the City may be obligated to pay by reason of any infringement at any time during or after completion of the work.

g. Familiarity With Laws

It is assumed the selected firm(s) will be familiar with all federal, state and local laws, ordinances, rules and regulations that may affect its services pursuant to this RLI. Ignorance on the part of the firm will in no way relieve the firm from responsibility.

h. Withdrawal Of Proposals

A firm may withdraw its proposal without prejudice no later than the advertised deadline for submission of proposals by written communication to the General Services Department, 1190 N.E. 3rd Avenue, Building C, Pompano Beach, Florida 33060.

i. Composition Of Project Team

Firms are required to commit that the principals and personnel named in the proposal will perform the services throughout the contractual term unless otherwise provided for by way of a negotiated contract or written amendment to same executed by both parties. No diversion or substitution of principals or personnel will be allowed unless a written request that sets forth the qualifications and experience of the proposed replacement(s) is submitted to and approved by the City in writing.

j. Invoicing/Payment

All invoices should be sent to City of Pompano Beach, Accounts Payable, P.O. Drawer 1300, Pompano Beach, Florida, 33061. In accordance with Florida Statutes, Chapter 218, payment will be made within 45 days after receipt of a proper invoice.

k. Public Records

1. The City of Pompano Beach is a public agency subject to Chapter 119, Florida Statutes. The Contractor shall comply with Florida's Public Records Law. Specifically, the Contractor shall:

    a. Keep and maintain public records that ordinarily and necessarily would be required by the City in order to perform the service;

    b. Provide the public with access to such public records on the same terms and conditions that the City would provide the records and at a cost that

does not exceed that provided in chapter 119, Fla. Stat., or as otherwise provided by law;

c. Ensure that public records that are exempt or that are confidential and exempt from public record requirements are not disclosed except as authorized by law; and

d. Meet all requirements for retaining public records and transfer to the City, at no cost, all public records in possession of the contractor upon termination of the contract and destroy any duplicate public records that are exempt or confidential and exempt. All records stored electronically must be provided to the City in a format that is compatible with the information technology systems of the agency.

2. The failure of Contractor to comply with the provisions set forth in this Article shall constitute a Default and Breach of this Agreement and the City shall enforce the Default in accordance with the provisions set forth herein.

23. Questions and Communication

All questions regarding the RLI are to be submitted in writing to the Purchasing Office, 1190 N.E. 3rd Avenue, Building C (Front), Pompano Beach, Florida 33060, fax (954) 786-4168, or email purchasing@copbfl.com. All questions must include the inquiring firm's name, address, telephone number and RLI name and number. Questions must be received at least seven (7) calendar days before the scheduled solicitation opening. Oral and other interpretations or clarifications will be without legal effect. Any addendum necessary to answer questions will be posted to the City's website, and it is the Proposer's responsibility to obtain all addenda before submitting a response to the solicitation.

24. Addenda

The issuance of a written addendum is the only official method whereby interpretation, clarification, or additional information can be given. If any addenda are issued to this solicitation the City will attempt to notify all known prospective Proposers, however, it shall be the responsibility of each Proposer, prior to submitting their response, to contact the City Purchasing Office at (954) 786-4098 to determine if addenda were issued and to make such addenda a part of their proposal.

PROJECT TEAM

RLI NUMBER _____

Federal I.D.#_____

PRIME

Role	Name of Individual Assigned to Project	Number of Years Experience	Education, Degrees
Principal-In-Charge			
Project Manager			
Asst. Project Manager			
Other Key Member			
Other Key Member			

SUB-CONSULTANT

Role	Company Name and Address of Office Handling This Project	Name of Individual Assigned to the Project
Surveying		
Landscaping		
Engineering		
Other Key Member		
Other Key Member		
Other Key Member		
Other Key Member		

(use attachments if necessary)

EXHIBIT A
CITY OF POMPANO BEACH, FLORIDA
LOCAL BUSINESS PARTICIPATION FORM

RLI Number & Title: _____ Prime Contractor's Name: _____

Name of Firm, Address	Contact Person, Telephone Number	Type of Good/Service to be Purchase	% of Work

EXHIBIT B
LOCAL BUSINESS
LETTER OF INTENT TO PERFORM AS A SUBCONTRACTOR

RLI Number_____

TO: _____
(Name of Prime or General Bidder)

The undersigned City of Pompano Beach business intends to perform subcontracting work in connection with the above contract as (check below)

_____ an individual _____ a corporation

_____ a partnership _____ a joint venture

The undersigned is prepared to perform the following work in connection with the above Contract, as hereafter described in detail:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____ _____
(Date) (Name of Local Business Contractor)

BY: _____

EXHIBIT C
LOCAL BUSINESS
UNAVAILABILITY FORM

RLI #_____

I,_____
(Name and Title)

of_____, certify that on the _____day of

_____, _____, I invited the following LOCAL BUSINESSES to bid work items to be performed in the City of Pompano Beach:

Business Name, Address	Work Items Sought	Form of Bid Sought (i.e., Unit Price, Materials/Labor, Labor Only, etc.)

Said Local Businesses:

___ Did not bid in response to the invitation

___ Submitted a bid which was not the low responsible bid

___ Other:_____

Signature: _____

Date: _____

Note: Attach additional documents as available.

EXHIBIT D
GOOD FAITH EFFORT REPORT
LOCAL BUSINESS PARTICIPATION

RLI #_____

1. What portions of the contract have you identified as Local Business opportunities?

   _____

   _____

   _____

   _____

2. Did you provide adequate information to identified Local Businesses? Please comment on how you provided this information.

   _____

   _____

   _____

3. Did you send written notices to Local Businesses?

   ____ Yes ____ No

   If yes, please include copy of the notice and the list of individuals who were forwarded copies of the notices.

4. Did you advertise in local publications?

   ____ Yes ____ No

   If yes, please attach copies of the ads, including name and dates of publication.

5. What type of efforts did you make to assist Local Businesses in contracting with you ?

   _____

   _____

7. List the Local Businesses you will utilize and subcontract percentage of work.

_____ _____

_____ _____

_____ _____

8. Other comments: _____

_____

_____

_____

_____

EXHIBIT E

MINORITY BUSINESS ENTERPRISE PARTICIPATION

RLI #_____

List all members of your team that are a certified Minority Business Enterprise (as defined by the State of Florida.) You must include copies of the MBE certificates for each firm listed.

Name of Firm	Certificate Included?

City of Pompano Beach, FL
Individual Award

Bid Information

Bid Creator	Jeff English Purchasing Agent
Email	jeffrey.english@copbfl.com
Phone	(954) 786-4098
Fax	(954) 786-4168
Bid Number	E-23-20
Title	Continuing Contracts for Engineering Services for Water and Reuse Treatment Plant Projects
Bid Type	RLI
Issue Date	7/8/2020 12:28 PM (ET)
Close Date	8/10/2020 02:00:00 PM (ET)
Alternates	

Contact Information

Contact	Jeff English
Address	1190 NE 3rd Avenue Building C Pompano Beach, FL 33060
Telephone	(954) 786-4098
Fax	(954) 786-4168
Email	purchasing@copbfl.com

Ship to Information

Contact	
Address	
Telephone	
Fax	
Email	

Supplier Information

Company	Stantec Consulting Services, Inc
Contact	
Address	800 Fairway Drive, Suite 195 Deerfield Beach, FL 33441
Telephone	(954) 481-2812
Fax	
Email	
Submitted	8/10/2020 01:42:12 PM (ET)

Supplier Notes

We appreciate the opportunity to submit our qualifications and hope to continue providing services to the City of Pompano Beach.

Award Total : $.00

E-23-20
Stantec Consulting Services, Inc
Supplier Response

Event Information

Number: E-23-20
Title: Continuing Contracts for Engineering Services for Water and Reuse Treatment Plant Projects
Type: Request for Letters of Interest
Issue Date: 7/8/2020
Deadline: 8/10/2020 02:00 PM (ET)
Notes: Pursuant to Florida Statutes Chapter 287.055 "Consultants' Competitive Negotiation Act" the City of Pompano Beach invites qualified engineering firms to submit Letters of Interest, qualifications and experience for consideration to provide Professional Engineering Consulting services to the City on a continuing as-needed basis.

The City will receive sealed proposals until **2:00 p.m. (local), August 10, 2020.** Proposals must be submitted electronically through the eBid System on or before the due date/time stated above. Any proposal received after the due date and time specified, will not be considered. Any uncertainty regarding the time a proposal is received will be resolved against the Proposer.

Proposer must be registered on the City's eBid System in order to view the solicitation documents and respond to this solicitation. The complete solicitation document can be downloaded for free from the eBid System as a pdf at: https://pompanobeachfl.ionwave.net. The

City is not responsible for the accuracy or completeness of any documentation the Proposer receives from any source other than from the eBid System. Proposer is solely responsible for downloading all required documents. A list of proposers will be read aloud in a public forum.

Contact Information

Contact: Jeff English
Address: Purchasing
1190 NE 3rd Avenue
Building C
Pompano Beach, FL 33060
Phone: (954) 786-4098
Fax: (954) 786-4168
Email: purchasing@copbfl.com

Stantec Consulting Services, Inc Information

Address: 800 Fairway Drive, Suite 195
Deerfield Beach, FL 33441
Phone: (954) 481-2812

By submitting this Response I affirm I have received, read and agree to the all terms and conditions as set forth herein. I hereby recognize and agree that upon execution by an authorized officer of the City of Pompano Beach, this Response, together with all documents prepared by or on behalf of the City of Pompano Beach for this solicitation, and the resulting Contract shall become a binding agreement between the parties for the products and services to be provided in accordance with the terms and conditions set forth herein. I further affirm that all information and documentation contained within this response to be true and correct, and that I have the legal authority to submit this response on behalf of the named Supplier (Offeror).

Grace Morales
Signature

grace.morales@stantec.com
Email

Submitted at 8/10/2020 12:42:13 PM

Supplier Note

We appreciate the opportunity to submit our qualifications and hope to continue providing services to the City of Pompano Beach.

Requested Attachments

Proposal — Stantec_Pompano Beach_Water and Reuse TPs_FINAL.pdf

Electronic version of proposal must be uploaded to the Response Attachments tab. The file size for uploads is limited to 250 MB. If the file size exceeds 250 MB the response must be split and uploaded as two (2) separate files.

Financial Statment — Stantec Annual Report-2019.pdf

Will remain confidential pursuant to section 119.071 of the State of Florida Statutes.

Tier 1/ Tier 2 Local Business Form — Tier1-2.pdf

To comply with the City's Local Business Program as a Tier-1 or Tier-2 vendor, you must complete this form and upload it to the Response Attachments tab.

Local Business Program Forms — Local Business Forms.pdf

These forms are to be completed and uploaded to the Response Attachments tab. Online Only

Proposer Information Page — Proposer Information Page.pdf

Proposer Information Page Form is to be included in your proposal that must be uploaded to the Response Attachments Tab.

Minority Business Enterprise Participation Form — Minority Participation.pdf

If your firm or any sub-consultant is a certified minority business enterprise this form must be completed and included with your proposal. If any members of your team are a certified Minority Business Enterprise copies of their certifications must be included in your submittal.

Project Team Form — Project Team.pdf

Project Team Form is to be included in your proposal that must be uploaded to the Response Attachments Tab.

Bid Attributes

1 Drug-Free Workplace

Whenever two or more bids which are equal with respect to price, quality, and service are received for the procurement of commodities or contractual service, a bid received from a business that certifies that it has implemented a Drug-free Workplace Program shall be given preference in the award process. If bidder's company has a Drug-free Workplace Program as outlined in General Conditions, section 32., indicate that by selecting yes in the drop down menu.

Yes

2 Conflict of Interest

For purposes of determining any possible conflict of interest, all bidders must disclose if any City of Pompano Beach employee is also an owner, corporate officer, or employee of their business. Indicate either "Yes" (a City employee is also associated with your business), or "No". (Note: If answer is "Yes", you must file a statement with the Supervisor of Elections, pursuant to Florida Statutes 112.313.)Indicate yes or no below with the drop down menu.

No

3 Local Business Participation Percentage

If you have indicated local business participation on the Local Business Participation Form Exhibit A enter the percentage of the contract that will be performed by local Pompano Beach businesses.

No response

4 Terms & Conditions

Check the box indicating you agree to the terms and conditions of this solicitation.

Agree

5 Acknowledgement of Addenda

Check this box to acknowledge that you have reviewed all addenda issued for this solicitation.

Yes

pompano beach
Florida's Warmest Welcome

Continuing Contract for Engineering Services for Water and Reuse Treatment Plant Projects

(RFQ No. E-23-20)

Stantec

Title Page

Project Name and Number

Continuing Contract for Engineering Services for Water and Reuse Treatment Plant Projects | RFQ No.: E-23-20

Firm Name, Address, and Phone Number

Stantec Consulting Services Inc.
800 Fairway Drive, Suite 195
Deerfield Beach, Florida 33441
954 806-7106

Contact Person

Neil Johnson, PG, PMP

Date

August 10, 2020

Table of Contents

1. Letter of Transmittal

July 29, 2020

Stantec
Stantec Consulting Services Inc.
800 Fairway Drive, Suite 195,
Deerfield Beach, FL 334441

City of Pompano Beach
1190 NE 3rd Avenue, Building C (Front)
Pompano Beach, Florida 33060

Reference: Continuing Contracts for Engineering Services for Water and Reuse Treatment Plant Projects (E-23-20)

Dear Selection Committee,

Stantec is pleased to submit our statement of qualifications for the City of Pompano Beach RFQ No. E-23-20, Continuing Contracts for Engineering Services for Water and Reuse Treatment Plant Projects. This contract is a critical step in maintaining the reliability of the City's treatment plant and pipeline infrastructure and providing a dependable water and water reuse system for the communities and businesses. Our record of accomplishment shows that we provide quality and responsive services, even on very short notice.

This is what we do. Over 95% of our Southeast Florida work has been for the public sector with a team and management staff that are local to Broward County and Southeast Florida. As designers of water and wastewater treatment plants around the world, and as a #1 ranked water consultant (ENR 2019), our experience and commitment will maximize the community's investment as we provide value-oriented services to meet your needs. Stantec brings cutting edge technology it develops in one part of the world and shares it across the globe to serve the local community. It is with this same drive and passion that we will approach each project and every aspect of your needs. We believe that our local familiarity, blended with our national and international expertise provides the City with the value and trust you desire in a consultant.

This is where we come from. Stantec is not new. We did not just move into the neighborhood and set up shop. Stantec has grown organically as well as through the acquisition of some of the most successful firms with South Florida connections including MWH in January of 2017, C3TS, Wilson Miller & Associates, and Greenhorne & O'Mara with one of the highest staff retention results for any Florida corporate transition. Together, we have over 17,000 staff in 26 countries, but even more importantly, we have been working locally through these firms in Broward County for over 47 years.

This is how we do it. To this end, Stantec is responding with a team that will offer a strong local presence in Florida. Understanding the needs of the City, we have assembled a team consisting of members with specific technical skills to meet the City's needs efficiently.

Together, the entire Stantec team will bring:

Our Team's Water, Wastewater, Pipeline and Pump Station Experience within Broward County – Collectively, the Stantec team has aided clients through compliance, expansion, treatment and quality issues for both water and wastewater. For 49+ years we have worked and continue to serve many utilities in the region including Broward County, Fort Lauderdale, Hallandale Beach, Hollywood, Sunrise, Pompano Beach, Tamarac, Davie, Deerfield Beach, Miramar, Oakland Park, Coral Springs, West Palm Beach, Wellington, Lake Worth, Palm Beach, Miami-Dade, and Hillsborough Counties, and South Florida Water Management District.

A Deep Bench of Local Experience - We are leaders in hydrogeology, treatment plant design, conveyance design, permitting and construction in the Tri-County area. Stantec is the prime consultant for the MDWASD $1.9B Consent Decree in Miami-Dade where we are the Engineer of Record for improvements to the three (3) largest wastewater treatment plants, totaling to 308 million gallon day (MGD) annual average day flow capacity. In compliance to Ocean Outfall Legislation Stantec is designing, permitting and constructing fifteen (15) new Class I Deep Injection Wells at three (3) project sites. This project is described in the Past Performance section of this proposal. Stantec is the prime consultant for the historic surface water treatment plant with capacity of 50 MGD for the City of West Palm Beach. We are the pioneers for water reuse, having designed the first reuse plant in Broward County for the City of Pompano Beach, "Our Alternative Supply Irrigation System" (OASIS). More importantly, we have several General Engineering Services contracts for various utilities within Broward County.

Experienced Management Team – A project with this level of diversity requires a qualified, experienced leader at the helm. Stantec is proud to present **Neil Johnson, PG, as Principal in Charge.** Neil possesses 29 years of expertise in water, wastewater and reuse, hydrogeology, project management, and the South Florida regulatory environment. Neil

will be responsible for the overall management of the contract and to ensure that all the resources available from the organization are brought to bear on each task order assignment. Equally important, **Brian LaMay, PE, will serve as the Contract Manager** for each assignment and brings 22 years' experience in designing water and wastewater projects including treatment plants, pump stations, pipelines, construction oversight, and testing. Brian's leadership and local knowledge allows him to select the best team members based on the task assigned by the City. Assisting Neil and Brian will be a team of experts in each possible task assigned under this contract including engineers in all disciplines, architects, planners, and construction management personnel. Additionally, Stantec provides professional hydrogeologists, hydraulic modelers, energy auditors, operational planners and financial analysts that not many teams can offer.

Strong Local Regulatory Experience in Southeast Florida – Our long-term Florida presence and in-depth project experience has helped us forge strong professional relationships with state and local government agencies. These relationships have enabled team members to efficiently permit numerous water and wastewater projects throughout the state. Our substantial expertise will allow us to efficiently complete permit preparation and compliance tasks, streamlining the delivery of any job.

Please note that we have reviewed the City's General Terms, Conditions and Provisions, and believe that should we be selected for this contract, we will be able to conclude a mutually satisfactory contract with you.

As we are all aware, we are working in unprecedented times as a result of the COVID-19 pandemic. The situation is fluid. Our proposal is based on our understanding of performing these services in normal conditions. As the nature and extent of the impacts due to this outbreak cannot be fully identified or quantified at this time, we feel it would be prudent to submit this proposal based on normal conditions, without accounting for impacts due this outbreak, and to discuss with you once we are able to evaluate the impacts and to work collaboratively with you on a path forward. We would be pleased to have a further discussion with you to share our respective plans and efforts to help mitigate the impact of this evolving situation on your proposed projects.

With our qualifications highlighted above and details within the proposal, Stantec is enthusiastic about this contract and sincerely appreciates the opportunity to present our qualifications for your review. We look forward for the opportunity to present our ideas for assisting the City with the challenges you face and ultimately helping you better serve your customers.

Respectfully Submitted,

STANTEC CONSULTING SERVICES INC.

Neil Johnson, PG, PMP
800 Fairway Drive, Suite 195
Deerfield Beach FL 33441
954.806.7106 office / 954.481.2818 fax
neil.johnson@stantec.com
Federal Tax Identification No. 11-2167170
Florida Geologist License No. 2052

2. Technical Approach

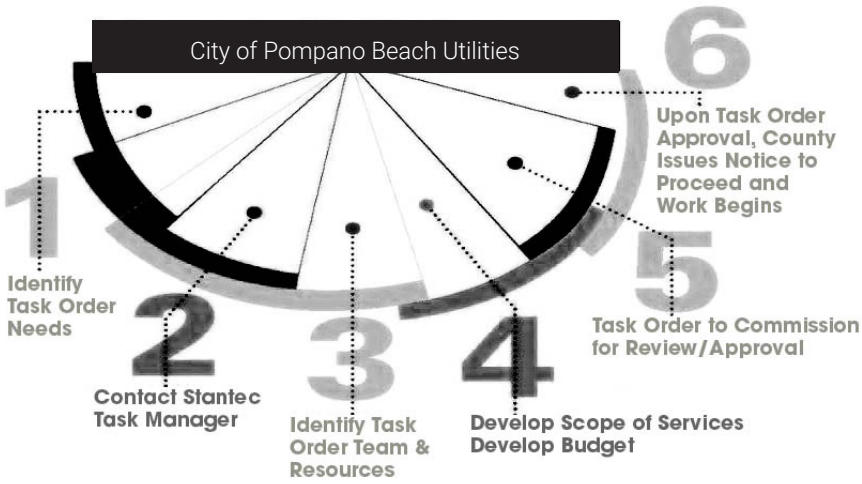
Technical Approach

The beginning of any project is the most important phase of the project. We will work closely with the City staff in the development of a comprehensive scope of work. The project approach for these types of projects must always begin with a clear and thorough understanding of the client's goals. Meetings between the City and the Stantec team will be conducted by Stantec Principal in Charge, Neil Johnson, and Stantec Contract Manager, Brian LaMay, along with the lead technical project manager depending on the discipline involved in the task assignment. The purpose of these meetings is to identify the goals (both primary and secondary) for the project and to solidify understanding of the scope with all project team members.

The following sections provide a more detailed synopsis of Stantec's approach utilizing our Project Task Order Delivery platform that will ensure that all assigned water and wastewater (reuse) treatment projects will be completed in a technically competent, timely and cost-effective manner.

Project Task Order Delivery is a Partnership

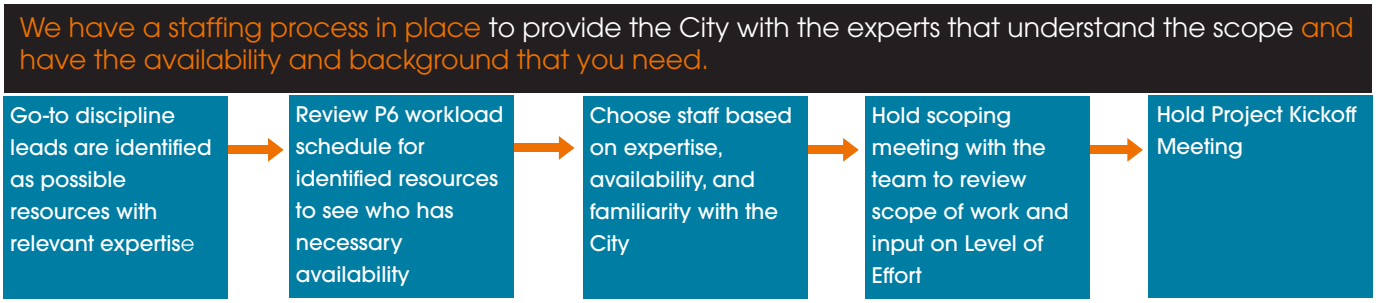
Stantec has prepared this project approach and methodology specifically for the City and would be deployed based on our understanding of the City's issues, challenges and requirements associated with each individual project. By utilizing a General Consulting Services contract, Stantec's Water Group has at its disposal whatever resources may be needed, whenever they are needed - making the on-call team a partner with the City. When a project need arises, Stantec's on-call team, including both in house and sub consultant staff, can mobilize the necessary resources quickly and demobilize when the work is completed. Consequently, the City does not have to increase staffing levels to ramp up and down with projects. This provides flexibility to the City's Water Utilities Division, allowing for immediate Administration and/or Commission scrutiny and approval, if required.



As seen in the graph (Water & Wastewater Division), our simplified, successful approach to water or wastewater project task order management involves working in an integrated, overlapping partnership with all members of the task order team.

1. **Identify Task Order Needs.** The initial phase is initiated by the City's Utilities administration and project management staff. The City, usually through its thoroughly evaluated Capital Improvement Program (CIP) project description and narratives, provides to Stantec's Contract Manager an overview of its needs through definition of the project scope.
2. **Contact Stantec's Project Manager.** After notice from the City, Stantec's Contract Manager contacts the appropriate Stantec Project Manager to inform him or her that the project has been approved on a preliminary basis.
3. **Identify Task Order Team & Resources.** The Stantec Contract Manager and Project Manager will meticulously compare the City's needs and scope of work and proceed with the selection of the most qualified, available Task Order Team members and required supporting resources. A project organization chart is prepared and approved by the Project Manager.
4. **Develop Scope of Services and Project Budget.** The selected Team, utilizing their unique scope-specific experience and skillset, with input from the City, develops the detailed engineering scope of services required to meet the project technical and project management prerequisites. The Team, led by the Stantec Project Manager, develops the Task Order project budget. Stantec's library of project work enables the confident utilization of

recent fee estimates from similar water and wastewater treatment projects. I this manner, Stantec has remained consistent with all of our clients in its approach to scope and fee estimation.



5. **Task Order Submittal.** The Project Task Order is presented to the City Utilities administration or City Commission for review and approval.
6. **Task Order Approval/Kickoff Meetings.** The City issues the Notice to Proceed (NTP) and project work begins. Kickoff and project management reporting meetings and frequent Stantec team meetings will occur, both internally and with City staff. The entire project team is required to attend regularly scheduled internal meetings and meetings with City staff are generally scheduled weekly / biweekly / monthly as appropriate for the project. A project overview, deliverables, assignments, schedule, and budgets are reviewed with the team during the kickoff meeting and will be included within overall project management reports for each assigned project.

Overview and Methodology

Project Methodology

Members of Stantec's proposed Team have worked closely with City staff in the past, which has given us a solid foundation for working on upcoming task orders. We will build on this knowledge and experience base to execute the work under this contract in a timely and cost-efficient manner.

The sections below outline the Stantec Team's budget, schedule and project performance approach which are applicable to many of the water/wastewater treatment projects listed in the City's CIP. Each component of the 30% (Preliminary Design), 60% (Intermediate Design) and 100% (Final Design) submittals are plotted against schedule timelines within the Primavera 6 platforms.

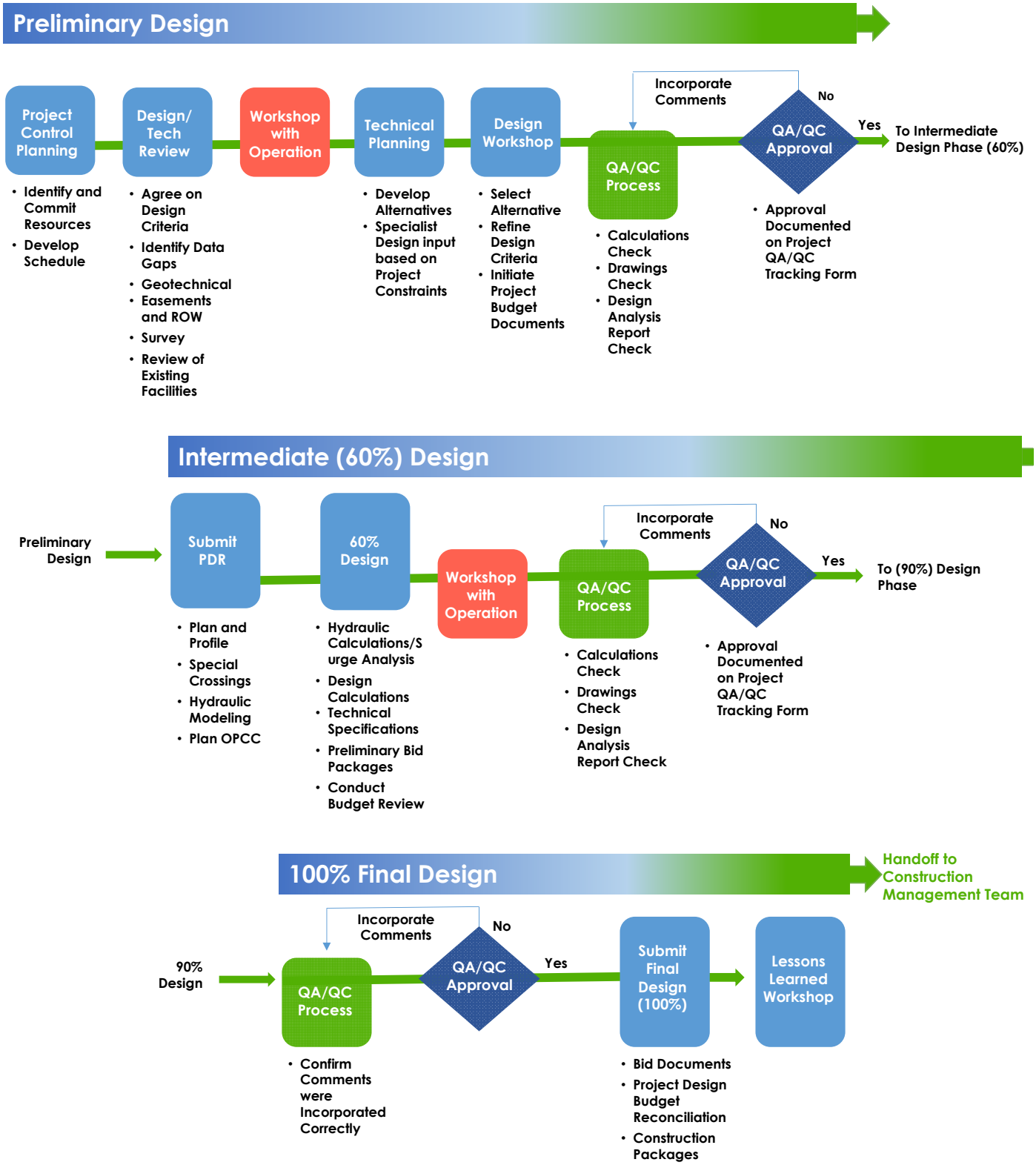
Schedule and Budget Controls

Stantec's proven project management controls will be used for tracking the water and wastewater treatment project schedules and budgets. Schedule and budget considerations need to be considered during work order negotiations to ensure that the staff and billing rates are appropriately aligned. **The Stantec team will develop the project and budget schedule using Primavera P6 or Microsoft Project scheduling software.** We will resource-load the P6 schedule so that projections for labor and other costs are included in our overall schedule tracking. Our financial system is tied into the P6 schedule so that
actual costs are tracked by task and projections of future costs can be added, ensuring that we have a real-time tracking tool of project costs to date with projected expenditures by task. This allows for early identification of potential project budget issues so that the Stantec team can develop solutions to ensure all water and wastewater projects are within budget and delivered ahead of schedule.

Stantec often utilizes the E-Builder Enterprise software program to effectively manage water and wastewater projects. E-Builder Enterprise is a web-based platform where Stantec archives all project communications, stores all design drawings and narratives, stores project schedules, permits, and calendars, and maintains project financial reports/ spreadsheets.

Regardless of the software systems utilized, Stantec recognizes that these tools are only valuable if used correctly

with accurate input data using a well thought out critical path with achievable milestone dates for deliverables. Our experience with task order management and multiple project contracts has instilled in our team an ability to predict production and permitting efforts with high degrees of accuracy. Typically, we will build in float for most tasks to account for unforeseen issues that arise during the plan development and permitting phases. This allows for delivery on time and on target for most projects. See Section 3 Schedule Control for more specific information.

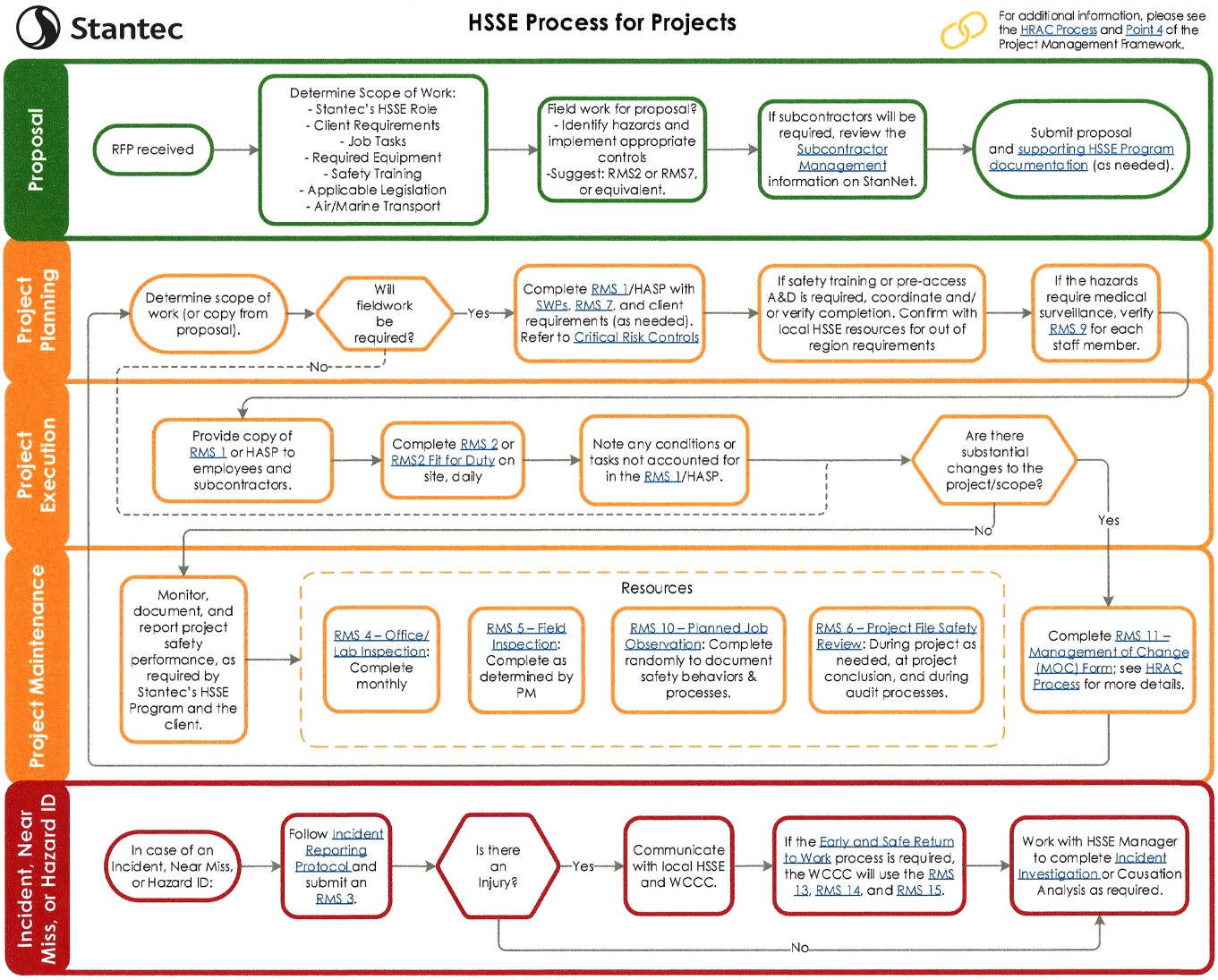


Quality Assurance and Quality Control

Stantec believes that QA/QC should be about more than simply verifying the accuracy and quality of the services we produce. As an ISO 9001 certified firm, we believe it should be a process whereby value is engineered into the project and constructability is ensured. Stantec aggressively pursues its commitment to quality in every deliverable made and service the firm provides. Recognizing the critical importance of careful quality control, Stantec has assigned Becky Hachenburg and Hal Schmidt, both seasoned professional engineers, that would not actively work on the Division's water and wastewater projects, to act as our independent QA/QC Managers.

Prior to starting any task order project, Stantec's Project Managers schedule an internal meeting with key team members will be held to define roles and responsibilities, establish realistic schedules, and clearly identify project milestones and goals. The following specifics will also be created or monitored:

1. **Health, Safety, Security and Environment (HSSE) -** Minimizing risk is a key component of Stantec's project process and safety vision. While requirements vary between projects, safety is always Stantec's top priority. Stantec's renowned HSSE Process for Projects flowchart illustrates how Stantec's HSSE program is woven through the project process. The flowchart is designed to logically follow the progression of a project.
2. **Document Control -** Stantec uses an electronic document records management system (including E-Builder Enterprise) that tracks all documents, including non-electronic documents, by project.
3. **Subcontracting -** Stantec requires its subcontractors to identify and plan the production processes that directly affect quality and to perform these processes under controlled conditions.
4. **Inspection and Verification/Testing -** Stantec documents results for receiving incoming products, work in process, and final inspection of outgoing documents.
5. **Nonconformance -** Stantec maintains procedures to correct nonconforming work so such work is not inadvertently used or installed.
6. **Corrective Action/Training -** Includes procedures for investigating the cause of nonconforming work, the corrective action to prevent recurrence, and methods of analysis to detect and eliminate potential causes of nonconforming work. Stantec identifies training needs and provides the training for all technical and professional personnel performing activities that affect quality.



Data Management and Tracking

When it comes to data management Stantec's people, process and technology capabilities are at the forefront of the industry. Our team has schedulers, financial controllers, certified project managers that are able to work with a given process, help refine process and can also define new processes.

Internally at Stantec, we use Oracle systems to capture and manage financial information, Primavera and Microsoft project to track project schedules and excel based spreadsheets to track quality of our projects.
We provide range of services to clients starting from excel based monthly operating reports, access database and forms to capture asset information, GIS to depict the data geospatially, hydraulic modeling software to capture buried asset information, Building Information Model to capture asset information and so forth.

Stantec has the ability to deliver a state-of-the-art analytics platform that can receive near-time unstructured information from the City's SCADA, CMMS, GIS, and other business systems and disseminate useful and meaningful information through enterprise wide dashboards. The intelligent platform solution can use innovative technologies including the Big Data, cloud based computing, predictive analytics and strategic sensors and can incorporate best management practices
to manage utility.

3. Schedule

Schedule Controls

Stantec recognizes the importance of developing and meeting schedules and budgets, especially with task order driven projects under CSA contracts. In developing schedules and budgets that are practical and can be maintained to the benefit of its clients, Stantec considers several key factors:

- The development of realistic timeframes with adequate review time for the client and regulatory agencies.
- Adequate in-house QA / QC time for phase submittals.
- Weekly production team meetings to prioritize workloads.
- Building in "float" at key tasks for added discussion or, as necessary, additional research to allow the project team to resolve all issues without falling behind schedule; if no float is needed, tasks can be completed early.
- Maintenance and updates to a Critical Path Project Schedule, presented at regular progress meetings with City staff to keep them informed of important budgeting and scheduling milestones.

At the outset of each project, Stantec's Project Manager will develop a resource-based Critical Path Schedule and project payout curve as part of our Project Management Plan (PMP). Schedule progress will be monitored at bi-weekly project meetings with key personnel. Schedule updates will also be made anytime scope changes or critical factors occur. Closely monitoring the project schedule allows Stantec's Project Manager to make informed decisions regarding resource needs. Should conditions warrant, the Project Manager will have the company's full breadth of resources available to keep or get projects back on schedule.

Our staff is well versed in various schedule management tools including Prima Vera, Microsoft Project and eBuilder Schedule Tracker. But these tools are only valuable if used correctly with accurate input data using a well thought out critical path with achievable milestone dates for deliverables. Our experience with task order management and multiple project contracts has instilled in our team an ability to predict production and permitting efforts with high degrees of accuracy. Typically, we will build in float for most tasks to account for unforeseen issues that arise during the plan development and permitting phases. This allows for delivery on time and on target for most projects.

Occasionally, the City might require a project to be "fast tracked" due to constraints on their end. That is the case with many utility and storm water projects because of the potential for severe impact to the public and the delivery time to finished product. In that scenario, we shall develop a schedule backwards starting on the back end at the final deliverable date (advertisement and bid) that allows the contractor to proceed with construction and intersperse the individual intermediate task deliverable dates that will need to be met to ensure that the final package can be delivered on time. Usually, plan production is not the main factor that prohibits fast tracking of projects. The main issues that negatively impact schedules are as follows:

- Procuring the PO and NTP as soon as possible.
- Inadequate or undefined scope of services.
- Securing field data as fast as physically possible, including geotechnical and survey data.
- Lack of UG utility locates.
- No pre-submittal meeting with permitting agencies.
- Underestimating permit review and not responding to RAI's promptly.
- Underestimating the City approval process with regard to the AAC, DRC and P&Z board approvals
- Untimely response time for review of plans by City staff, including AAC, DRC and P&Z boards.
- Inadequate internal QC of Plans leaving too many errors and typos.

There are more issues that can specifically hinder schedules, but the aforementioned are ones that we have identified over the years as being the most impactful. This can be especially true of the AAC, DRC and P&Z approval processes. The AAC meets every two weeks so that is a plus as long as we get submitted prior to the cutoffs for inclusion on the meeting agendas. However, the DRC and P&Z boards only meet once a month and failure to meet the submittal date for those can be extremely costly to the schedule. Plus, we recognize that the AAC approval must be met in order to even gain approval from P&Z. By meeting the City board schedules and eliminating the other aforementioned impacts, we

can help the City streamline the project and meet milestone deliverables that normally would not be considered achievable.

Specifically, our Stantec team has direct experience in the types of projects identified in the Scope of Services for the City of Pompano Beach Parks RFQ. It is customary for all of our task order driven projects to be accompanied by a Gantt Chart Schedule complete with CPM elements and an estimate of City staff review time.

Ability to Meet Time Requirements

Stantec stands ready to proceed quickly on any project provided to us by the City. Considering our experience and familiarity with projects of this type, we believe we are in a position to move quickly on any set of projects for which we are selected. Stantec's planning, programming, and design process is structured with particular attention to cost & time management and budget control to guarantee the budget and time allocation for each project. We hold an ISO 9001 Quality Management certification. To meet this certification, all projects are subject to our 9-point project management framework.

Maintaining a project on schedule begins with understanding the key issues that drive it and developing contingency plans to control it. The primary purpose of the project schedule is to provide a full accounting of all relevant activities and phases as well as the proper sequencing of project related events such that the project is delivered on schedule. We feel confident we can meet the City's project schedules because of our varied background in this kind of work. Following are some of the ways we propose to control the project schedule by addressing the issues noted previously:

- Accelerate all non-critical path activities to compensate for unforeseen delays later on
- Meet with City staff, public officials, and key community members ahead of time for consensus on key project issues
- Develop a Pro-active Project Management Plan (PMP)
- Develop a clear understanding of Scope of Services to ensure the schedule is created correctly from the start
- Coordinate with the permitting agencies early, parallel to design development

We believe that the Stantec Team has the experience and knowledge in planning and designing public and private projects that no other firm can match. We are confident that we can successfully fulfill and execute the requirements of this contract and meet the City's expectation for budget and schedule.

Methods to Expedite Schedule

There are always a number of items that will need to be worked through in advance that can affect the schedule of any project, especially smaller task order type projects where there may be more stakeholders than traditional roadway or building projects:

- Data collection – This is one of the most important portions of a project that requires great diligence, forethought and coordination. We understand that surveys of the various city properties and R/W might already exist. But it is unclear to us at this point in time whether additional survey will be required of us for each requested task order assignment. Whether a survey needs to be done by us or delivered to us in electronic format will affect how quickly the project can get started. Either way, we are prepared to engage our surveyor and expedite as needed or assist the City in developing the scope for them to contract with an independent surveyor under separate contract. Getting the surveyor on board during the proposal phase will allow them to schedule their field crews to start on day one after receiving a Notice To Proceed. Likewise, it is also probable that a geotechnical investigation will need to be performed as well to handle drainage and pavement design. Finally, procuring as-builts and performing subsequent UG locates to verify the existing underground utilities will also need to be performed. All of this affects the Due Diligence phase and can be streamlined with a little coordination and effort.
- Permitting – We will meet with the permitting agencies (BCEPGM, SFWMD, BCHD, BCSWM, FDEP and/or the City BD and Engineering) to address the specific needs for any and all permitting. The response we receive will determine how quickly the project can progress. If the agencies insist that we go through extensive submittal and review procedures, then the project timeline will need to reflect those review periods that are outside of our control. However, by initiating pre-application meetings with the agencies, a lot of the review period is reduced.

- Material Selection – There are some complexities in working with any open-ended government specifications that will allow for competitive bidding among vendors and manufacturers. This happens rarely with roadway and drainage improvement projects. However, especially with marine, coastal, parks and CRA projects, if the City knows which products and materials that they want to purchase and install, it streamlines the design process to be specific to the selected materials, especially with direct purchases by the City to save on tax and markup.
- Project Delivery – This is usually one of the triggers in affecting any schedule, and that depends on whether the project will go through the traditional design-bid-build format or whether or not the City intends to have a CM at Risk or JOC contractor on board, and further if the City desires to use a design-build format for delivery. We have experience with all of these and can assist the City in expediting the process.
- City Progress Meetings – We understand that there will always be a need to work with the City throughout the design process for any project. In fact, we highly recommend establishing progress meetings in advance based on the approved milestone deliverable schedule agreed upon by all parties. Any disruption to that schedule of meetings may impact the ultimate approval of project submittals.

Schedule Versus Budget

Budget also plays an integral part of delivering a project on schedule because designing any project that exceeds the client's budget requires extensive redesign to meet the original goals. Therefore, cost estimating remains a critical part of both our design and permitting process. This function will be a joint effort by the City and the Consultant to ensure that any redesign is minimized and does not affect the schedule. This function will be established in the CPM schedule as a deliverable so that cost estimating is established at the start of the project. Cost control should be achieved by adopting a predictive cost planning approach by the team. During all DD and CD phases of the project, Stantec will review the cost estimates and meet with the City to refine the design to maintain the project on-budget and on-time.

Typical CPM schedules from similar projects are included herein to illustrate our firm's knowledge of scheduling and commitment to expediting each and every project we work on. One is a simple schedule while the other illustrates a schedule with more complex considerations.

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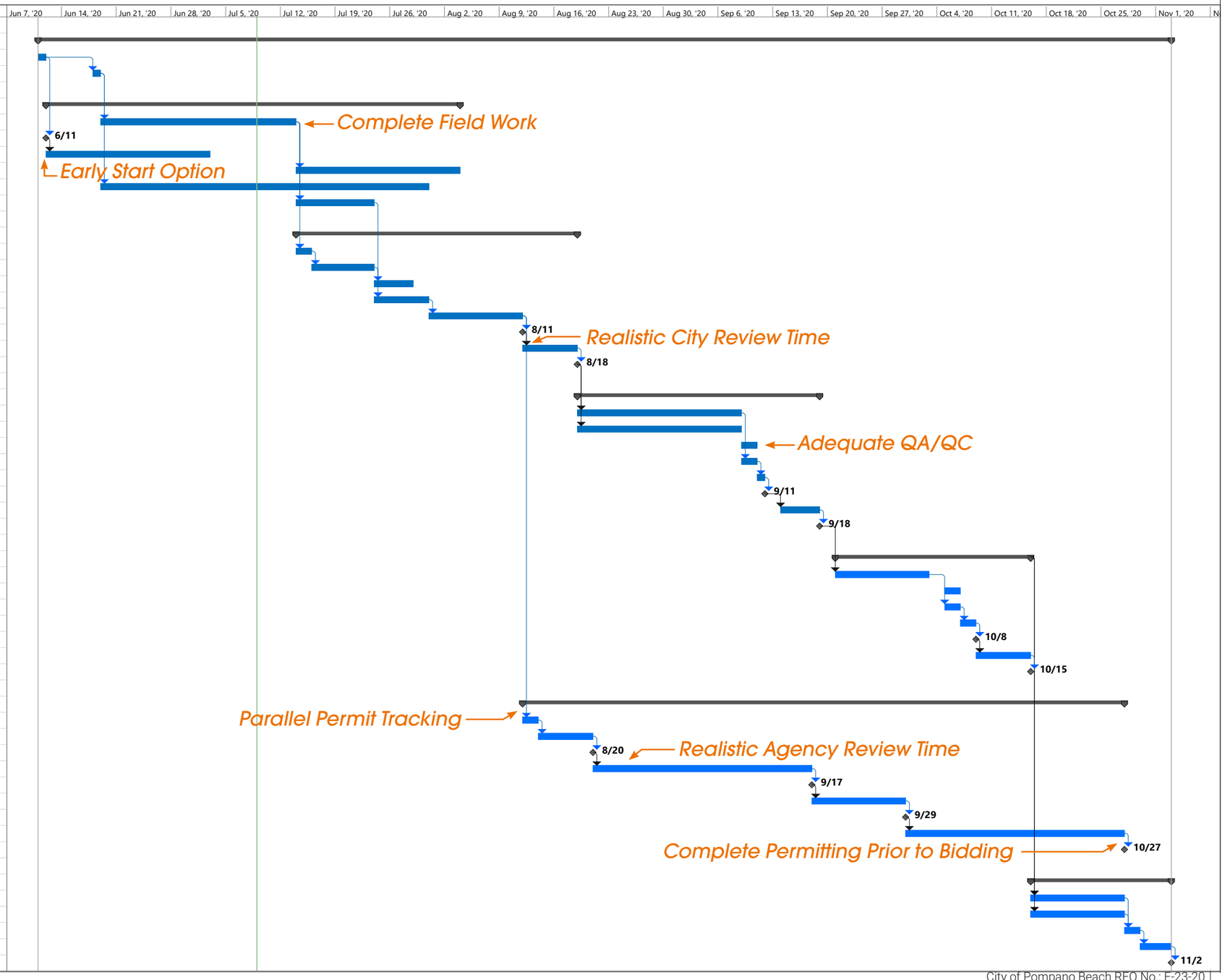
Sample Schedule

Pioneer Grove Drainage Improvements Project

City of Deerfield Beach
Pioneer Grove Drainage Improvements Project Schedule
Thu 7/9/20

Stantec

ID	Task Name	Duration	Start	Finish
1				
2	**Project**	**103 days**	**Thu 6/11/20**	**Mon 11/2/20**
3	**PO Issued**	1 day	Thu 6/11/20	Thu 6/11/20
4	**NTP / Project Kick-off meeting**	1 day	Thu 6/18/20	Thu 6/18/20
5				
6	**Field Work/ Due Diligence**	**37 days**	**Thu 6/11/20**	**Mon 8/3/20**
7	Survey	17 days	Fri 6/19/20	Mon 7/13/20
8	Sunshine One Call	0 days	Thu 6/11/20	Thu 6/11/20
9	Assess Utilities	15 days	Fri 6/12/20	Thu 7/2/20
10	Geotechnical Study	15 days	Tue 7/14/20	Mon 8/3/20
11	Review As Builts and Existing Permits	30 days	Fri 6/19/20	Thu 7/30/20
12	Preapre Base sheets	8 days	Tue 7/14/20	Thu 7/23/20
13				
14	**Concept Design and Schematics**	**26 days**	**Tue 7/14/20**	**Tue 8/18/20**
15	Drainage Basin Calculations	2 days	Tue 7/14/20	Wed 7/15/20
16	Storm Water Analysis	6 days	Thu 7/16/20	Thu 7/23/20
17	Drainage Modelling	3 days	Fri 7/24/20	Tue 7/28/20
18	Concept Plans	5 days	Fri 7/24/20	Thu 7/30/20
19	Schematics - Preliminary Design Plans	8 days	Fri 7/31/20	Tue 8/11/20
20	Submit to City	0 days	Tue 8/11/20	Tue 8/11/20
21	City Review	5 days	Wed 8/12/20	Tue 8/18/20
22	Review Meeting	0 days	Tue 8/18/20	Tue 8/18/20
23				
24	**60% Construction Documents**	**23 days**	**Wed 8/19/20**	**Fri 9/18/20**
25	Plan Design/Production	15 days	Wed 8/19/20	Tue 9/8/20
26	Coordinate with utility companies	15 days	Wed 8/19/20	Tue 9/8/20
27	Cost Estimate	2 days	Wed 9/9/20	Thu 9/10/20
28	QA QC	2 days	Wed 9/9/20	Thu 9/10/20
29	Finalize 60% Construction Documents	1 day	Fri 9/11/20	Fri 9/11/20
30	Submit 60% Design Package to City	0 days	Fri 9/11/20	Fri 9/11/20
31	City Review	5 days	Mon 9/14/20	Fri 9/18/20
32	60% Design Review Meeting	0 days	Fri 9/18/20	Fri 9/18/20
33				
34	**90% Construction Documents**	**19 days**	**Mon 9/21/20**	**Thu 10/15/20**
35	Plan Design/Production	10 days	Mon 9/21/20	Fri 10/2/20
36	90% Construction Specifications and Cost Est	2 days	Mon 10/5/20	Tue 10/6/20
37	QA QC	2 days	Mon 10/5/20	Tue 10/6/20
38	Finalize 90% Construction Documents	2 days	Wed 10/7/20	Thu 10/8/20
39	Submit 90% Design Package to City	0 days	Thu 10/8/20	Thu 10/8/20
40	City Review	5 days	Fri 10/9/20	Thu 10/15/20
41	90% Design Review Meeting	0 days	Thu 10/15/20	Thu 10/15/20
42				
43	**Permitting**	**55 days**	**Wed 8/12/20**	**Tue 10/27/20**
44	Pre application Mtgs with BCSWM & SFWMD	2 days	Wed 8/12/20	Thu 8/13/20
45	Prepare applications	5 days	Fri 8/14/20	Thu 8/20/20
46	Submit application packages	0 days	Thu 8/20/20	Thu 8/20/20
47	Agency Review	20 days	Fri 8/21/20	Thu 9/17/20
48	RAI's from Agencies	0 days	Thu 9/17/20	Thu 9/17/20
49	Update resubmittal packages	8 days	Fri 9/18/20	Tue 9/29/20
50	Resubmit to Agencies	0 days	Tue 9/29/20	Tue 9/29/20
51	Agency Review	20 days	Wed 9/30/20	Tue 10/27/20
52	Final Permit approval	0 days	Tue 10/27/20	Tue 10/27/20
53				
54	**Final Construction Documents/Bid Set Assembly**	**12 days**	**Fri 10/16/20**	**Mon 11/2/20**
55	Plan Design/Production	8 days	Fri 10/16/20	Tue 10/27/20
56	Final Construction Specifications	8 days	Fri 10/16/20	Tue 10/27/20
57	QA QC	2 days	Wed 10/28/20	Thu 10/29/20
58	Finalize Construction Documents	2 days	Fri 10/30/20	Mon 11/2/20
59	Submit Final Design/Bid Package	0 days	Mon 11/2/20	Mon 11/2/20



4. References

General Engineering Services: Water Treatment Plant Contract

West Palm Beach, Florida

Contact:
Poonam Kalkat, Director of Public Utilities
City of West Palm Beach

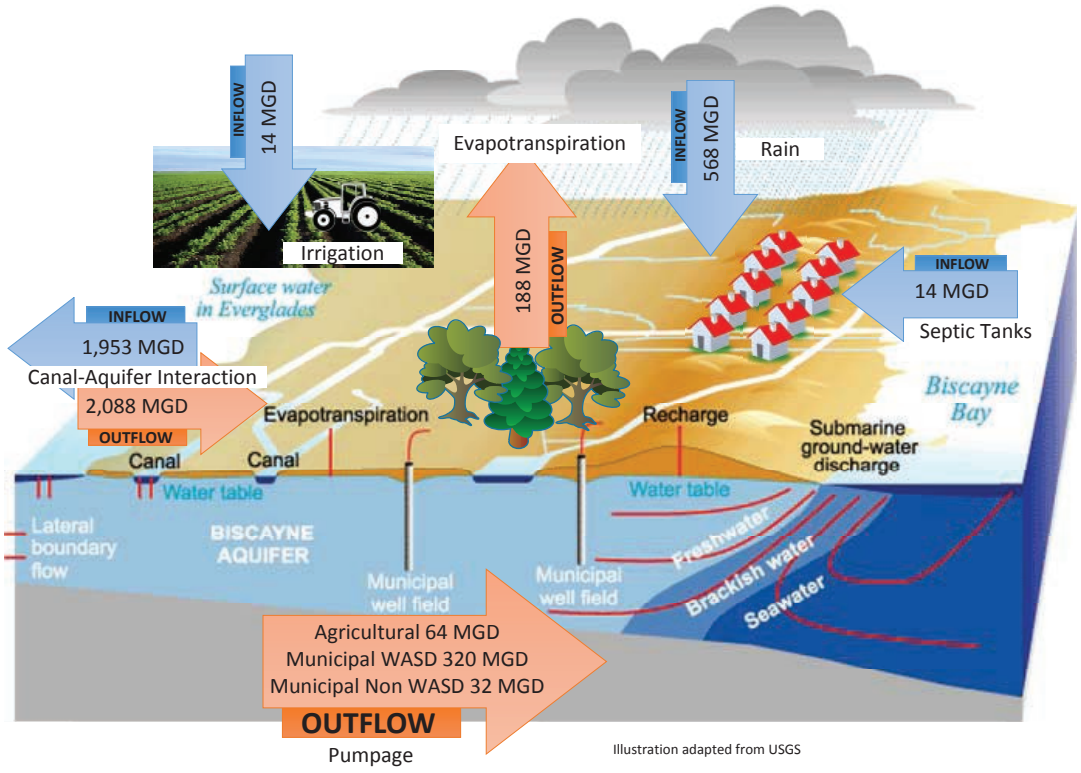
(561) 822-2284

pkalkat@wpb.org

Stantec has been the City's treatment engineer for the past ten years completing nearly 30 individual work authorizations (WA) under this master contract to plan, design, permit, and provide construction management services for these vital system improvements. Several of these authorizations include:

- Treatment Process Selection - Bench and Pilot Testing (WA-1 & WA-31)
- Powder Activities Carbon (PAC) Treatment System (WA-28)
- MIEX/UF Preliminary Design
- New Electrical Generator and Switchgear Building (WA-16 & WA-23)
- UV System and Related Infrastructure (WA-33)
- Existing WTP Condition Assessment for Structural, Mechanical, Electrical, and Controls
- New Chemical Feed Systems (WA-11, WA-13 & WA-15)
- High Service Pump Modifications (WA-33)

Project Cost: $$ 15,914,838 (Fee)



Miami Dade Hydrogeologic Services

Miami-Dade County, Florida

Contact:
Dr. Virginia Walsh, Project Manager
Miami Dade Water and Sewer Dept.

(786) 251-1849

virginia.walsh@miamidade.gov

Stantec was selected to perform hydrogeologic/geologic services and consultation related to WASD's Wellfields, Injection Wells and Aquifer Storage and Recovery (ASR) Wells, which included geochemical studies, groundwater modeling, monitoring, testing, permitting, design, specialized hydrogeologic oversight during construction and other services as needed. Injection wells refer to Underground Injection Control (UIC) Class I or Class V Exploratory wells that are drilled into the Lower Floridan Aquifer, including the Boulder Zone and Cretaceous formations beneath the Lower Floridan Aquifer. Stantec also provided provide hydrogeologic services to WASD by planning and optimizing use of current and future Class I and Class V injection and ASR well systems in the County.

Stantec is providing planning, design, permitting, and technical oversight services for 16 new Class I Injection Wells at the North, Central, South, and future West District Wastewater Treatment Plants to support WASD in addressing the 2008 Ocean Outfall Legislation (OOL) requirements to cease using ocean outfalls by 2025. WASD is increasing their injection well capacity by 280 million gallons per day as part of the OOL program. FDEP UIC has already issued the construction permit for 7 Class I and 4 dual-zone monitoring wells at the Central District Plant. The project is currently in the bidding phase.

Project Cost: $15,000,000 (Fee)

Miami Dade Consent Decree

Miami-Dade County, Florida

Contact:
Isaac Smith, Senior Program Manager
Miami Dade Water and Sewer Dept.

(786) 552-8255

isaac.smith@miamidade.gov

Stantec provides engineering services related to the CD Projects at the three largest WWTPs in Florida encompassing a combined 360 MG of annual average day flow. The services entail option evaluation, alternative analysis, cost estimating, basis of design development, detail design, permit assistance, bid assistance and engineering services during construction. Process ranges from master pump station, headworks, screenings, grit removal, odor control, oxygenation improvements, contact stabilization for activated sludge, RAS pipe and pumps upgrades, WAS upgrades, clarifier improvements, thickening, dewatering, biosolids digestion, cogeneration, effluent pumps stations, electrical building upgrades, substation replacement and so forth.

Designs were performed using Autodesk Revit modeling. Revit is Building Information Modeling (BIM) software that allows designs to be performed in three-dimension. Multiple disciplines are able to work on different building elements at the same time allowing for better clash detection and reduce potential conflicts. The models were used to perform client review to obtain input where client was able to visualize end product prior to construction of commencement. The models were used to obtain buying and to perform real time decision making.

We also completed the evaluation of the assets and operations at the WWTP and pump stations on schedule and budget by using our project management and cost control measures.

Project Cost: $581,000,000 (WWTP Total) $60,000,000 (Fee)

GAC Pilot and Plant Evaluation at the Fiveash Water Plant

Ft. Lauderdale, Florida

Contact:
Omar Castellon, Chief Engineer
City of Ft. Lauderdale

(954) 857-4416

ocastellon@fortlauderdale.gov

Stantec served on a team to perform an investigation into the use of granular activated carbon (GAC) for water color control at the existing 50 mgd Fiveash Water Treatment Plant (WTP), and evaluate options for the future of the overall Fiveash water treatment system.

Stantec performed following services:

- Existing Facility Status Confirming Condition Assessment
- Alternate Facility Location Study
- Water Supply Investigation
- C-51 Reservoir Water Supply versus Florida Aquifer Water Supply Comparison
- WTP Facility Siting
- Conceptual Capital, Operations/Maintenance Costs, and Net Present Worth Determinations

It was recommended that the City proceed with design and construction of a new state-of-the-art water treatment facility at the Prospect Wellfield site with a proposed treatment process consisting of a combination of nanofiltration and ion exchange (Treatment Scheme 11). The recommended alternative utilizes a technology of which the City is familiar, along with an additional technology that results in a robust treatment system. Subsequent to the plan, recommendations of delivery options and impact of delivery options to the rates was provided to the City in a workshop.

Project Cost: $650,000

Civil Engineering, Continuing Services Agreement

Sunrise, Florida

Contact:
Timothy Welch, Utilities Director
City of Sunrise

(954) 888-6000

twelch@sunrisefl.gov

The City of Sunrise serves approximately 220,000 customers with water and wastewater services from their three water treatment and three wastewater treatment facilities. Under this contract Stantec provides various services ranging from planning, concept studies, detail design and third-party construction management services.

Several of these authorizations are highlighted below:

- SGICP Reuse WM and ASR Raw WM CMS
- Springtree Wastewater Treatment Plant Equipment and Storage Building Design
- Design and Bidding Service for Improvements to LS 128 and 210
- SW 121 Avenue Watermain Replacement
- Water Supply Facilities Plan Update 2019
- Evaluation of Sludge Runoff Management
- NW 25th Court Lighting Study and Design

Project Cost: $1,805,183 (Fee)

Program Management Services – Capital Improvements Program

Sunrise, Florida

Contact:
Timothy Welch, Utilities Director
City of Sunrise

(954) 888-6000

twelch@sunrisefl.gov

As the City's program manager, Stantec managed five engineering consulting firms in addition to providing support staff. The program consisted of 50+ projects ranging from concept level planning to construction closeout phase. Stantec provided the City with planning, scoping, coordination and quality reviews during execution, permitting, consultant oversight, technical reviews, schedule management, and budget controls for a $110 M 5-year CIP.

Example projects that Stantec provided include:

- Permitting assistance of deep injection well (WWTP) and concentrate wells
- Pump station data evaluation to target I/I improvements in the system
- Alternative evaluation of phased reuse plan and developed a plan for reuse distribution system
- Assisted with evaluation and advised the City to develop a prioritized well rehabilitation program for Springtree Biscayne wellfield rehabilitation
- Consumptive use coordination support to implement reuse
- Preparation of annual capital improvement plans and CIP to consider prioritization for rehabilitation of water supply wells, treatment plants, water mains, collection and forcemains and lift stations
- Grant identification and application and annual reporting assistance.
- Prepared Water Supply Facilities Plant Update 2018 and Prepared Connection Fee Update 2013

Project Cost: $8,310,078 (Fee)

Rehabilitate, Replace & Upgrade Program – Central District WWTP

Miami-Dade County, Florida

Contact:
Humberto Codispoti, Senior Professional Engineer
Miami-Dade Water and Sewer Dept.

(305) 275-3124

humberto.codispoti@miamidade.gov

Since 2007, under two contracts, Stantec has been engaged by MDWASD to perform evaluation, designs and provide engineering and construction services to rehabilitate, replace and upgrade the 143MGD average day flow WWTP. We commenced with developing an asset condition and renewal evaluation of nearly all assets at the facility and two large associated pump stations. The facility has more than 1,800 assets in 18 process areas spanning six engineering disciplines. Various projects have been designed and/or implemented under these contracts; example projects include:

- Plant 2 RAS Pump Station Upgrades
- Air Scrubber and Grit Building MCC Replacement
- Permitting Assistance and Regulatory Coordination
- Sludge Digester Rehabilitation Basis of Design Report
- Operation and Maintenance Consulting
- Master Pump Station 3 Design, Permitting, Bidding and CM
- Influent Characteristic Study
- Master Pump Station 2 Expansion
- Industrial Injection Well Pump Station
- Existing Bio-gas System P&IDs
- Toxicity and Disinfection Study
- pH Dilution – Mixing Zone Study

Project Cost: $13,200,000 (Fee)

Professional Engineering Services

Davie, Florida

Contact:
Renuka Mohamad, Director of Utilities
Town of Davie

(305) 282-0403

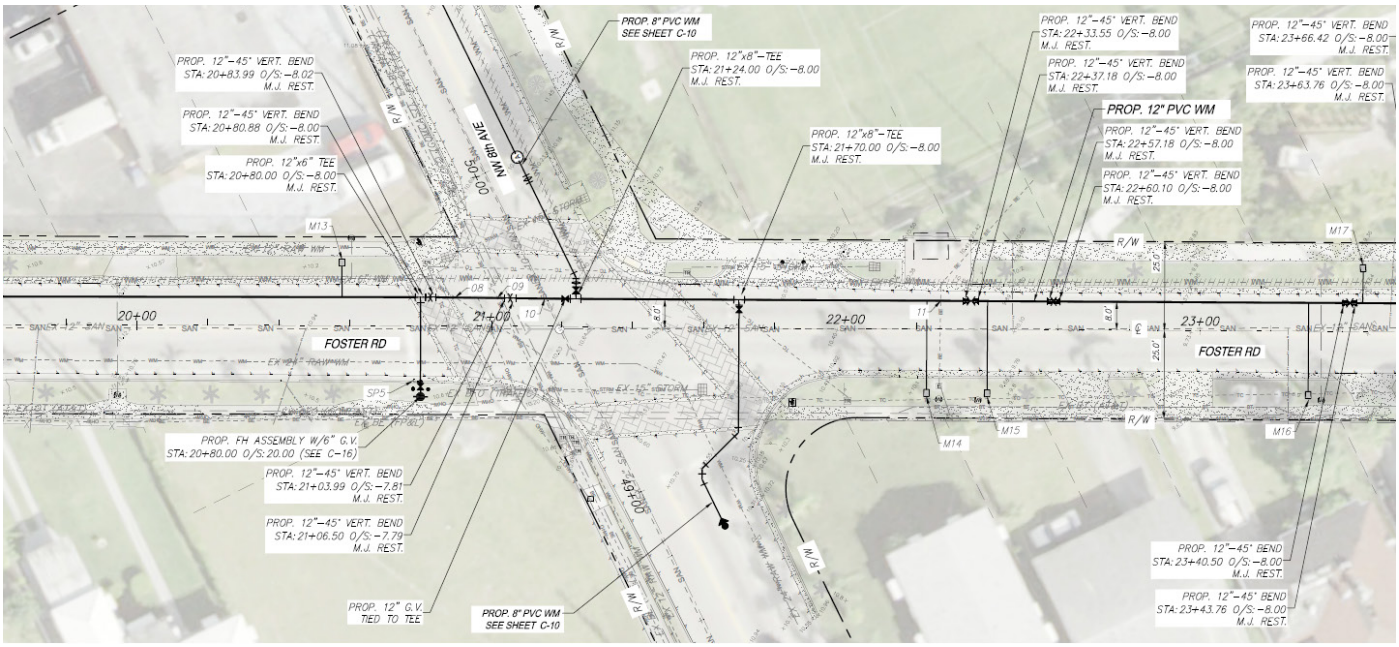
renuka_mohammed@davie-fl.gov

Stantec has been providing the Town with Engineering service for the past ten years completing various individual project authorizations under this master contract to plan, design, permit, and provide construction management services for these vital system improvements.

Several of these authorizations are highlighted below:

- Temporary Carbon Dioxide System
- Lift Station 3 Improvements
- SCADA Telemetry Upgrades
- Water Supply Facilities Plan
- Brentwood Water and Sewer Improvements

Project Cost: $461,345 (Fee)



Hallandale - Foster Road Water Main

Hallandale Beach, Florida

Contact:
Jesus Padron, Project Manager
City of Hallandale Beach

(954) 457-1397

jpadron@cohb.org

City of Hallandale Beach desires to replace the an existing 6-inch Asbestos Cement (AC) water main along Foster Road between NW 9th Avenue to NW 4th Avenue, improve water quality, fire flow and fire protection to residents and businesses along the corridor. Improvement includes the installation approximately 3,250 LF of proposed 12-inch Polyvinyl chloride (PVC) Water Main along Foster Road from NW 9th Avenue to NW 4th Avenue, and approximately 2, 400 LF of 8-inch PVC water main along NW 9th Street. The existing 6-inch AC water main along Foster Road will be abandoned in place.

The project also includes installation of new fire hydrants according to City of Hallandale Beach Fire Department requirements, new water services, reconnections of existing stub outs within the project limits, roadway milling and resurfacing and replacement of pavement markings.

Stantec services provided include conducting site investigations, utility coordination, topographic surveys, geotechnical investigation, verified vertical and horizontal on existing utilities, engineering design, develop construction documents (plans & specifications), permitting through Florida Department of Environmental Protection (FDEP) and Broward County Traffic, and providing support services during procurement and construction.

Project Cost: $199,000 (Fee)

Engineering Construction Services Owner Advisor

West Palm Beach County, Florida

Contact:
Krystin Berntsen, Director, Engineering Division
Palm Beach County Water Utilities Department (PBCWUD)

(561) 493-6085

kberntsen@pbcwater.com

In 2014, PBCWUD awarded Stantec a contract to assist in the delivery of its 2015–2020 capital improvement program (CIP) as owner's advisor. Through FY 2019, the CIP was valued at approximately $310 million and consist of approximately 290 discrete projects. Projects are grouped into the three main areas of conveyance, treatment, or Glades Service Area and their progress is monitored under 31 separate packages through the planning, design, bid/award, construction, and closeout phases of the project delivery life cycle. These projects are focused on expansion or rehabilitation and renewal of PBCWUD's physical assets in their water, wastewater, and reclaimed water systems, including pumping and treatment facilities, wellfields, and transmission/ distribution and collection conveyance systems. The PBCWUD system includes five water treatment plants, three wastewater treatment plants, and three water reclamation facilities with a combined capacity of 113 MGD, 59 MGD, and 52 MGD, respectively.

Key highlights from Stantec's work as owner's advisor include:

- Maintaining an SBE participation percentage greater than the County's 15% goal
- Accelerating annual average project delivery encumbrance from $25 million per year to approximately $60 million per year through FY 2019
- Implementing program management tools and processes
- Integrating PBCWUD's CIP tool data into consolidated reporting
- Developing project-specific outreach and communication plans

Project Cost: $18,907,346 (Fee)

5. Project Team Form

PROJECT TEAM

RLI NUMBER E-23-20

Federal I.D.# 11-2167170

PRIME

Role	Name of Individual Assigned to Project	Number of Years Experience	Education, Degrees
Principal-In-Charge	Neil Johnson, PG	29	MS/BS: Geology
Project Manager	Brian LaMay, PE	22	ME, Ind&Sys Eng./ BS, Env Eng
Asst. Project Manager	Heath Wintz, PE	21	BS EnvEng
Other Key Member	Becky Hachenburg, PE (QA/QC Water Treatment)	25	MSc, Ind&Sys Eng./BS, Env Eng
Other Key Member	Sangeeta Dhulashia, PE, PMP, (QA/QC Planning)	24	BS, Chem. Eng./ MS, Env. Eng.

SUB-CONSULTANT

Role	Company Name and Address of Office Handling This Project	Name of Individual Assigned to the Project
Surveying	Craig A. Smith & Associates 277 Goolsby Blvd., Unit 4C Deerfield Beach, FL 33442	Robert D. Keener, PSM
Landscaping		
Engineering	Keith & Associates 301 East Atlantic Boulevard Pompano Beach, FL 33060	Mark Mitchell
Other Key Member	Radise International (Geotechnical) 4152 W Blue Heron Boulevard, Suite 1114 Riviera Beach, FL 33404	Tom Mullin, PE
Other Key Member		
Other Key Member		
Other Key Member		

(use attachments if necessary)

OTHER KEY MEMBERS:

Name of Individual Assigned to Project	# of Years Experience	Education, Degrees
Hal Schmidt, PE, QA/QC Reclaimed Water, Energy Audits	39	MS/BS, Civ. Eng.
Zuhal Ozturk, PhD, PE, Planning Lead	13	PhD/MS/BS, Env. Eng.
Jeovanni Ayala Lugo, PE, Reclaimed Water Treatment Team Lead	20	BS, Chem. Eng.
Rick Cowles, PG, Water Supply and Deep Injection Wells Team Lead	29	BS, Geology
Dave Clark, PE, Pipeline and Pump Station Design Team Lead	18	MS/BS, Civ. Eng.
Ernesto Gianella, PE, PMP, Planning Support	26	MBA; MS/BS, Civ. Eng.
Terrance Glunt, PE, Pipeline and Pump Station Design Team Lead	43	BS, Civ. Eng.
Marlon Medina, PE, CFM, Pipeline and Pump Station Design Team Lead	12	BS, Civ. Eng.
William Weber, PE, Civil Engineering	20	BS/MS, Env. Eng.
Jarah Parke, PE, Mechanical Engineering	18	MS/BS, Civ. Eng.
Craig Kaltenbach, PE, Structural Engineering	25	BS, Civ. Eng.
Shana Wygonik, RA, LEED AP, Architectural	19	BS,Science/BA,Arch
John Nel, AScT, PMP, Electrical Engineering	38	MS/Elec. Eng.
Brad Buchanan, PE, Instrumentation	7	BS, Elec. Eng.
Savvas Savvas, PE, LEED AP, HVAC	35	BS/MS, Mech. Eng.
Jeff Crews, PE, LEED AP, Stormwater Engineering	32	BS, Civ. Eng.
Carlos Herdocia, PE, LEED AP, Civil Engineering	32	BS, Civ. Eng.
William Vogel, BIM Design	44	AS, Civ. Eng. Tech.
Sean Compel, PE, ENV SP, LEED AP, Construction Management	18	BS, Civ. Eng.
Kyle Stevens, Financial Analysis	11	BS/MS, Economics
James Hale, GISP, GIS and Mapping	19	BS, Geography
Gabe Maul, Bench and Pilot Studies	10	BS/ME, Env. Eng.

6. Organizational Chart

Project Team

(S) Stantec
(K) Keith and Associates
(R) Radise
(C) Craig A. Smith

PRINCIPAL IN CHARGE

Neil Johnson, PG (S)

CONTRACT MANAGER

Brian LaMay, PE (S)

QA/QC

Becky Hachenburg, PE (S) ***Water Treatment***
Sangeeta Dhulashia, PE, PMP (S) ***Planning***
Hal Schmidt, PE (S) ***Reclaimed Water***

Project Delivery

PLANNING

Team Leader
Zuhal Ozturk, PhD, PE (S)

Support
Ernesto Gianella, PE (S)
Victoria Botto, EIT (S)

WATER TREATMENT

Team Leader
Heath Wintz, PE (S)

Support
Antonio Inojal, PE (S)
Gabe Maul (S)

RECLAIMED WATER TREATMENT

Team Leader
Jeovanni Ayala Lugo, PE (S)

Support
Sergio Hoyos, PE (S)
David Socha, PE (S)

WATER SUPPLY AND DEEP INJECTION WELLS

Team Leader
Rick Cowles, PG (S)

Support
Cora Sommerfield (S)
Nycole Sharma, PG (S)

PIPELINE AND PUMP STATION DESIGN

Team Leader
Dave Clark, PE (S) ***Pipeline***

Support
Marlon Medina, PE (S) ***Pump Stations***
Terrance Glunt, PE ***(S) Stormwater***

Engineering and Technical Support

ENGINEERING DISCIPLINES

William Weber, PE (S) ***Civil***
Jarrah Parke, PE (S) ***Mechanical***
Craig Kaltenbach, PE (S) ***Structural***
Shana Wygonik, RA, LEED AP (S) ***Architectural***
John Nel (S) ***Electrical***
Brad Buchanan, PE (S) ***Instrumentation***
Savvas Savvas, PE, LEED AP (S) ***HVAC***
Jeff Crews, PE (S) ***Stormwater***
Carlos Herdocia (S) ***Civil***
William Vogel (S) ***BIM Design***

FIELD INVESTIGATIVE SERVICES

Robert D. Keener, PSM (C) ***Survey***
Tom Mullin, PE (R) ***Geotech***
Mark Mitchell (K) ***SUE***

OPERATION AND MAINTENANCE

David Socha, PE (S) ***Plant Trouble Shooting***
Heath Wintz, PE (S) ***Process Evaluation***
Gabe Maul (S) ***Bench and Pilot Studies***
Hal Schmidt, PE (S) ***Energy Audits***

TECHNICAL SUPPORT

Lilian Marrero (S) ***Permitting***
Kyle Stevens (S) ***Financial Analysis***
Kelly Westover (S) ***Grant Support***
James Hale, GISP (S) ***GIS and Mapping***

CONSTRUCTION MANAGEMENT SERVICES

Sean Compel, PE (S) ***Construction Manager***
Fernando Vargas (S) ***Inspector***
Ricardo Julien (S) ***Inspector***

7. Statement of Skills and Experience

Qualifications of the Firm

Stantec, in business for the past 65 years, provides professional consulting services in planning, engineering, architecture, landscape architecture, environmental sciences, project management, and project economics for infrastructure and facilities projects. We are a publicly owned company, supporting public and private sector clients in a diverse range of markets, at every stage, from initial concept and financial feasibility, to project completion and beyond. Our services are offered through more than 22,000 employees operating out of more than 400 locations. With a long-term commitment to the people and places we serve, Stantec has the unique ability to connect to projects on a personal level and advance the quality of life in communities across the globe.

Founded: 1954 (66 years in business)
Ownership: Publicly Owned Stock Exchange: NYSE / TSX: STN

We first started our Florida Operations to serve Disney World. We have provided water and wastewater services in Broward County for over four decades.

66 Years in Businesss	**17,000+** Employees	**350** Locations
18 Offices in Florida	**700** Employees in Florida	**120** Staff in Water Practice
1,500+ Communities rely on our water solutions		**47** Years Serving in Broward County

Deerfield Office: 800 Fairway Dr #195
Deerfield Beach, FL 33441

Stantec is one of the world's leading firms for capital improvements and rehabilitation projects with experience in the water and wastewater sector. Our team has unmatched qualifications in water resources, having planned and implemented projects including groundwater supply development for surficial and Floridan aquifers, water treatment, storage tanks, high service pump stations, collection, distribution, and transmission systems, pump stations, wastewater treatment, reclaimed water treatment, and effluent disposal projects.

Office Location

Stantec has 18 offices in Florida with over 120 staff providing services in water and wastewater sector. Stantec has two offices in Broward County with locations in City of Deerfield Beach and City of Sunrise. Stantec's Deerfield Beach office located at 800 Fairway Drive, is just one (6) miles away from the City of Pompano Beach (City Hall) and is five (5) miles from the City of Pompano Beach Utilities Department. Our staff will be ready and available to the City for anything you may need. Our team will be led by Principal in Charge Neil Johnson, PG, PMP and Contract Manager Brian LaMay, PE. Neil and Brian will both provide responsive service and will be available to the City immediately once a request is made.

General Experience of the Firm

Water touches every part of life in a community, which is why public agencies, utility companies, and industries are increasingly treating water like the very thing it is, a precious resource. They build systems to treat, store, and deliver drinking water; collect, treat, and discharge wastewater; manage surface water quantity and quality; tap and treat groundwater; and irrigate crops and landscapes, plus subsystems for industry and power production. **Many of the world's top engineers and scientists have come together at Stantec** because they view water a bit differently, as a holistic system rather than unconnected networks divided by jurisdictional boundaries.

Stantec delivers solutions for conveyance, wastewater treatment, water treatment, and water resources projects that minimize cost and maximize the sustainability of the resource. Working throughout the hydrologic cycle, our team optimizes all of a community's water interactions. We use natural processes to our clients' advantage and seek opportunities to provide added value with thoughtful planning, design, and maintenance. We understand the importance of designing aesthetically pleasing facilities and creating opportunities for recreation and education. Throughout the world, we are helping communities tap into water's potential.

As designers of water and wastewater treatment plants around the world, our experience and commitment to excellence maximizes the value of a community's investment by providing the best overall value for your specific situation. With water and wastewater treatment reaching levels of complexity and regulatory scrutiny warranting specialized oversight and facility performance measured constantly, it's important to have the most appropriate, cost-effective solution the first time, every time. We evaluate and optimize by minimizing consumption and discharge, characterizing process streams, addressing hydraulic loading and variability, and troubleshooting process problems while identifying pollution- prevention alternatives and sustainable technologies.

Experience Designing and Permitting Utilities Facilities

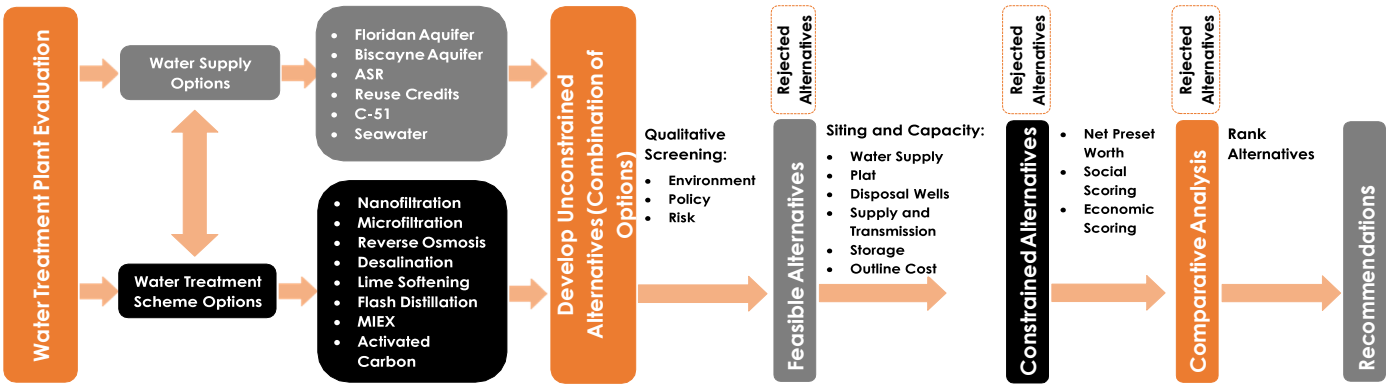
Planning

Stantec is one of the world's leading firms for capital improvements and rehabilitation planning. We have successfully completed over 800 Master Plans and feasibility studies for water, wastewater and reuse systems using innovative tools and approach. Our Florida team has completed over 35+ Master Plans within the last two decades. Our team has unmatched qualifications in water resources, having planned and implemented projects including groundwater supply development from the surficial and Floridan aquifer, surface water treatment and supply systems, reservoirs, aquifer storage and recovery, indirect potable reuse, reclaimed water and conjunctive use strategies.

Stantec is recognized across Florida as an industry leader in Master Planning having completed a wide range of planning efforts in the following areas:

- Water Resource Planning
- Alternative Evaluations of Systems and Processes - Water, Wastewater and Reuse
- Service Area, Regulatory and Emerging Trend Evaluations - Water, Wastewater and Reuse
- Infrastructure Assessment - Water, Wastewater and Reuse
- Capacity and Process Evaluations - Water, Wastewater and Reuse
- Evaluation of Capacity, Management, Operation and Maintenance Programs
- Operation and Process Optimization
- Hydraulic Analysis - Water EPS, Water Quality, Wastewater and Reuse
- CIP, Prioritization, Budget Reviews and Financing

Stantec's tailored planning approach based on a case study for London 2100 was recently selected by the City of Fort Lauderdale to conduct the Five Ash WTP Evaluation.



Hydrogeologic Services

Stantec staff has designed, permitted, rehabilitated and constructed more than 250 supply wells in Florida in both surficial and Floridan aquifers. Stantec spent 25 years exploring the aquifers in southern Florida for water supply, potential saline water upcoming, and water levels to support wellfield development and groundwater modeling efforts.

Stantec is a leader in injection well facilities design with design, permitting, construction and rehabilitation services for nearly 40 deep injection wells throughout Florida including the recent deep injection well for the City of Pompano Beach. Our team has completed more than 65 ASR wells in more than 10 states for storage and recover of treated drinking water and raw groundwater for public water supply and reclaimed water for irrigation and reuse supply.

Water Treatment

Stantec has continued to emphasize work in the field of Water Treatment, with the design of more than 1,000 water treatment plants ranging in capacity from 0.25 MGD to over 1 billion gallons per day and in treatment processes from conventional treatment to membrane filtration to ozonation. We have also conducted well over 100 pilot studies of a variety of treatment processes. Stantec is a Global leader in water treatment, with extensive experience in all water treatment technologies and unit processes including:

- Membrane treatment
- Lime softening
- Advance treatment
- Automation/information management
- Construction administration and commissioning
- Operation and management evaluations
- Pilot and treatability studies
- Process review and optimization
- Residuals management
- Water quality assessment

Stantec's water treatment local, national and global qualifications are impressive. Our Florida water treatment experience includes lime softening, nano filtration, MIEX, and reverse osmosis plants. Stantec is the prime consultant for the historic surface water treatment plant with capacity of 50 MGD for the City of West Palm Beach.

Well Sitting, Design, Permitting, & Construction 1A WTP, Lauderdale Lakes, FL

Reverse Osmosis Water Treatment Plant, Venice, FL

Wastewater and Reuse (Reclaimed) Treatment

Stantec engineers are experienced in the evaluation and design of conventional and state-of-the-art processes for wastewater treatment, biosolids processing, and reclaimed water. In addition, quite often our clients need to increase the capacity of their wastewater treatment plant as quickly and economically as possible. Stantec has developed an unmatched reputation for utilizing the BioWin™ simulation modeling technique to identify and capitalize on existing treatment capacity to provide the required increase, without the need of building any new structures.

Experience in all Phases of Wastewater Engineering

On the treatment side, we have significant expertise in all facets of wastewater liquid stream and solids stream treatment ranging from single process and compliance evaluations to turnkey delivery of completely operational facilities. In summary, our staff's wastewater experience includes:

- Wastewater Treatment
  - » Pretreatment (screening/girt removal)
  - » Advanced Secondary Treatment
  - » Biological Nutrient Removal (BNR)
  - » Effluent Filtration (conventional sand, deep bed, membranes, etc.)
  - » Disinfection (chlorine, UV, AOP, etc.)
  - » Membrane Bioreactors (MBR)
- Odor Control Containment and Control
- Biosolids Processing and Handling
  - » Thickening and Dewatering
  - » Class A and B Stabilization Technologies
  - » Sludge Drying
  - » Biogas Utilization and Management
- Effluent Management
  - » Public Reclaimed Water
  - » Deep Well Injection
  - » Aquifer Storage and Recovery
- Facility Process Modeling
- Telemetry/SCADA
  - » Process Control
  - » SCADA System Applications
  - » Telemetry Systems
- Operational Optimization
  - » Energy Reduction Studies
  - » Chemical Cost Optimization
  - » Biowin™ Modeling
  - » Improved Operator Simulation Training

↑ *Wastewater Treatment Pant Headworks Upgrades*

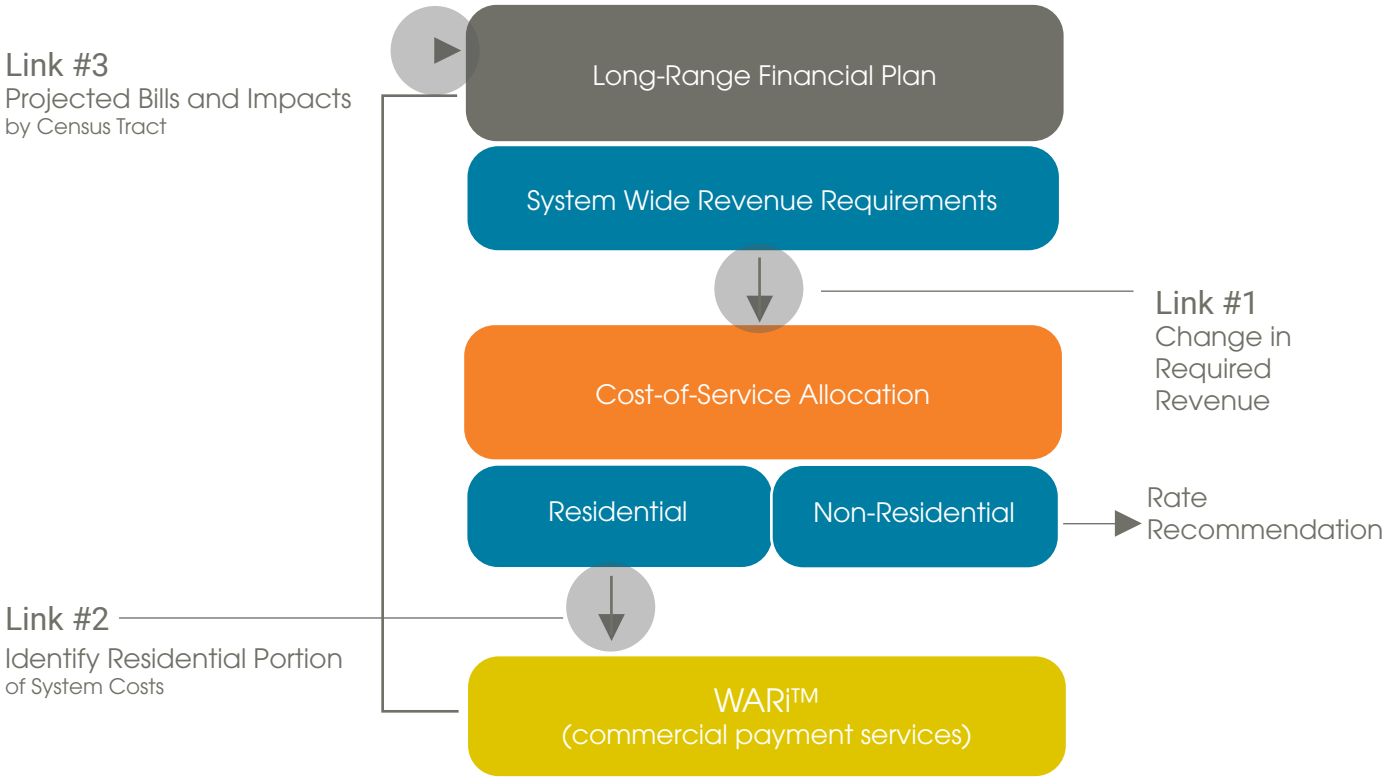
We are leaders in hydrogeology, wastewater treatment plant design, permitting and construction in the Tri-County area. Stantec is prime consultant for the MDWASD $1.9B Consent Decree in Miami-Dade where we are the Engineer of Record for improvements to the **three largest wastewater treatment plants**, totaling to 308 MGD annual average day flow capacity. In compliance to **Ocean Outfall Legislation** Stantec is designing, permitting and constructing fifteen (15) new **Class I Deep Injection Wells** at three project sites.

Rate Studies and Financial Services

At Stantec we understand that the goal of any municipality is to serve the constituents in a way that is both equitable and sustainable. Public agencies need strong analytical and technical resources to address the multiple complex drivers faced by utilities today.

The key for a utility to be self-sustaining is that it be financially self-sufficient. Best policies are developed in collaboration with financing and engineering staff to find the balance between safeguard of community resources and allowing sufficient flexibility for system operations. With our financial planners, certified accountants and engineers, Stantec is able to bring efficient holistic financial planning resulting in financial self-sufficiency for a municipality. Our Financial Analysis and Management System (FAMS-XL) modeling platform always results in the lowest possible rate for utility customers without sacrificing the financial performance needed by the utility.

With 35+ professionals dedicated only to water and wastewater financial consulting services our practice possesses the largest collection of 20+ year financial management consultants in the US water industry.



Our Experience:

- Rate and fee studies at enterprise level
- Cost of service analysis
- Long-term financial and capital plans
- Financial scenario modeling
- Development fees/system development charges
- Benchmarking
- Affordability studies
- Cost of service analysis
- Revenue variability solutions
- Bond feasibility reports

Our Clients:

- City of Casselberry, FL
- City of Clearwater, FL
- City of Cocoa, FL
- City of Coral Springs, FL
- City of Deltona, FL
- City of Dunedin, FL
- City of Fort Lauderdale, FL
- City of LaBelle, FL
- City of Lake Worth, FL
- City of Lynn Haven, FL
- City of Minneola, FL
- City of Mount Dora, FL
- City of New Port Richey, FL
- City of Opa-locka, FL
- City of Palmetto, FL
- City of Plant City, FL
- City of Polk City, FL
- City of Port St. Joe, FL
- City of Safety Harbor, FL
- City of Sarasota, FL

Please see our key projects within our Qualifications Statement Section.

Infiltration and Inflow

Uncontrolled wet weather flow contributions within wastewater collection systems can significantly impact our communities' social, environmental, and economic health. Excessive wet weather flows reduce the available capacity of systems and lead to basement and surface flooding, both of which are categorized as system overflows. These overflows lead to the degradation or destruction of aquatic habitat and recreational areas, increased erosion of stream banks, and can limit the economic potential of a municipality by reducing the available capacity for future growth.

Stantec understands the complexities involved in developing efficient, effective, and economical wet weather flow management strategies. We use state-of-the-art monitoring and modeling, practical Infiltration / Inflow programs, COPined sewer system optimization studies, and the implementation of real time control solutions to reduce COPined sewer overflow and flooding risks.

Micromonitoring Technology

Micromonitoring is a new tool in this investigation process which identifies sewer segments with significant contributions. In conjunction with wet-weather CCTV inspection, micromonitoring can identify key public and private property contributions. Identifying individual private property sources allows a municipality to work with property owners rather than launching blanket invasive investigations such as fliers, sump pump investigations, and smoke testing. Micromonitoring helps program managers focus activities and reduce the quantities of detailed investigations.

Micromonitoring is similar to conventional flow monitoring but with modifications to the monitoring equipment. This technology uses a device called a micromonitor which is a fibreglass weir insert with a defined rating curve. The weir is installed behind a standard Area-Velocity probe on a Street-Level-Insertion band, thus eliminating Confined Space Entry requirements for installations. At low subcritical flows, the micromonitor acts as a weir with a primary rating curve. At higher supercritical flows, the micromonitor offers no obstruction, and the AV probe calculates the flow directly from the continuity equation. The micromonitor can be installed in any pipe, independent of hydraulics and can measure flows as low as 1.0 gpm.

Pump Station

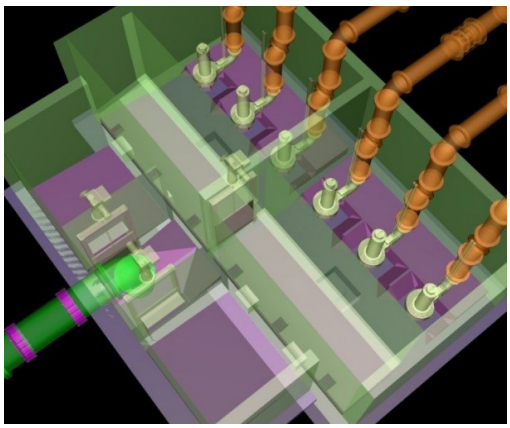
Stantec has completed design of over 1,000 water and wastewater pump/lift stations, ranging in capacity from 230 gpm to 640,000 gpm, with connected horsepower as high as 94,000 HP. These facilities have included raw water pumping stations, high lift pumping stations, influent and effluent wastewater pumping stations, and many other types of pumping facilities. Our Team has been responsible for successfully completing and delivering several large master pump station projects here in Broward County, and recently completed Miami Dade Water and Sewer Department's (M-D WASD)Pump Station 3, a 29 MGD master sewage pump station, including permitting and bidding services. The pump station is of a multi-level wetwell/dry configuration with two self-cleaning wetwells, four 300 hp vertical non-clog pumps with medium voltage motors, and medium voltage variable speed drives. The wetwells are over 30 feet deep, requiring a coffercell and tremie seal to control groundwater during construction.

Stantec completed the design of 12 wastewater pump stations being upgraded as part of M-D WASD Pump Station Improvement program (PSIP). The program aims to bring over 112 pump stations into compliance, with each pump station having to be certified as meeting an established operational requirement. Upgrades were necessary to meet US EPA Consent Decree Criteria and bring all of the pump stations into compliance with Florida's Department of Environmental Protection (FDEP) standards, and current peak flow demands. The upgrades included new wet well and valve vault structures, new pumps, upgrading existing electrical FPL service to 277/480V transformer, instrumentation and controls, and site work. As Stantec was also part of the PSIP Program Management Team charged with managing the five consultants responsible for the design and permitting of the 112 pump stations. In addition to the pump stations, Stantec also completed improvement and upgrades at M-D WASD South and Central District Wastewater Treatment Plants in support of the Consent Decree Program with an estimated construction cost of $150 million dollars.

Stantec has worked closely with various municipalities around the Country, performing improvement projects to bring their water and wastewater facilities into compliance under a consent decree and consent order. These municipalities include City of West Palm Beach Florida, Miami Dade Water and Sewer, Sewerage and Water Board of New Orleans, City of Atlanta Georgia and City of Akron Ohio.

Stantec has a proven track record of having successfully delivered water and wastewater pipeline projects here in Broward and Miami- Dade County through conventional and alternative delivery methods. Our approach for developing a pipeline design maximizes functionality and operational life of the system, while minimizing the operational and maintenance requirements of the facility. Our Team is also aware of the need to develop these pipeline designs within the budgeted and available funding. We understand that small-diameter pipeline conveyance systems are critical infrastructure and, as such, must meet or exceed everyone's expectations long into the future. Successful design and construction of any pipeline project involves identification, understanding, and evaluation of numerous engineering design and construction considerations. Some of the more critical aspects of engineering design for projects are:

- Developing a topographic survey and existing utility base plan
- Evaluating and establishing a pipeline alignment
- Evaluating and selecting pipe material based on intended use, location, and subsurface geology
- Identifying and mitigating utility conflicts and constructibility issues
- Determining restrained lengths for vertical/horizontal bends and pipeline valves
- Identifying and securing required permits and environmental clearances
- Developing Maintenance of Traffic (MOT) and access plans for proposed construction
- Evaluation of corrosion protection measures
- Completing surge analysis and implementing control strategies



Pipelines – Trenchless Installation

As part of Stantec's linear infrastructure service area, our team utilizes trenchless technology for new utility installations and existing infrastructure rehabilitation. Whether it is for crossing a river or other environmentally-sensitive areas, or for minimizing disruption to the public in a busy urban setting, Stantec brings the appropriate trenchless technology for developing an advanced solution. In today's economic climate, maximizing the useful life of all infrastructure has become even more critical. When there's no easy solution, our linear infrastructure team provides clients with the options they need to reach a successful implementation.

For new utility installations, project specifics determine the preferred trenchless method. These may include horizontal directional drill (HDD), conventional or microtunneling, guided bore or pilot tube microtunneling, pipe jacking, or cased bores.

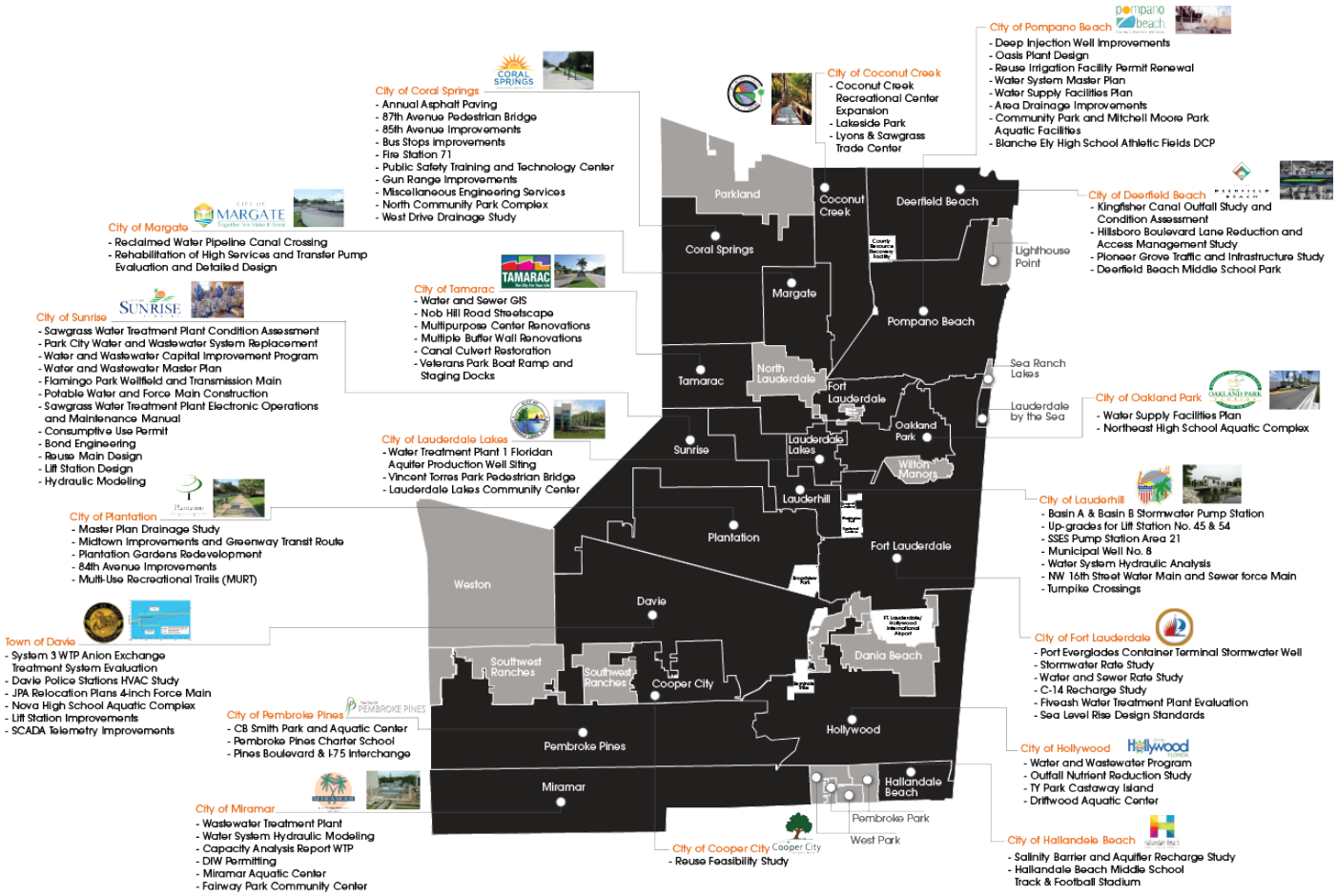
For infrastructure rehabilitation, Stantec has experience ranging from the initial condition assessment through selection of the preferred rehabilitation methods, including cured-in-place pipe (CIPP), slip-lining, joint sealing, pipe bursting, or splitting. Stantec has successfully delivered hundreds of trenchless technology solutions for new utility installations

and existing infrastructure rehabilitation, including:

- Cased Bores
- Conventional Tunneling and Microtunneling
- Cured-in-Place (CIP) Pipe
- Guided Bore and Pilot Tube
- Horizontal Directional Drilling (HDD)
- Joint Sealing
- Pipe Bursting/Splitting
- Pipe Jacking
- Slip-lining
- Swagelining

Experience in Broward County

Stantec has been providing water and wastewater services in Broward County for over forty six (46) years. Stantec has extensive experience in General Engineering Services type contracts with multiple task order type assignments. Our team members have extensive understanding of local challenges, drivers, needs, regulations and permitting requirements. We have solid relationships with all regulatory entities including, but not limited to: FDEP, EPGMD, SFWMD, local building departments, Drainage Control Districts, and FDOT.



Key Individuals - Past Performance

We bring creative, inspired people, across multiple disciplines together and create a talented pool of subject specialists who truly understand the project and it's significance to the City, community, and stakeholders. We believe in using the best people available for the job at hand and that is why we have a team that blends:

- A responsive project management team. We see ourselves as partners with the City and this requires a dedicated project manager who knows and understands the challenges that the City faces first hand.
- A team of professionals with breadth and depth of applicable experience. It is important that the City gain from the experiences of their selected consultants. Our team has analyzed several systems from many different perspectives and it is important that we make that institutional knowledge available to the City.

We have been careful to select team members that are:

- Right for this project
- Available to start immediately
- Dedicated in their effort and enthusiasm to produce the best possible outcome

All similar experience projects within this proposal were managed, designed, and completed by current staff listed on the team organizational chart for this proposal. Please see more specific information for each of them on the following table.

KEY INDIVIDUAL QUALIFICATIONS AND PAST PERFORMANCE

Key Personnel	Qualifications	Projects
 **Neil Johnson, PG** Principal-in-Charge	• 29 years of experience • Hydrogeology, geology, drilling, inspections • Production wells, UIC Class I Injection wells, UIC Class V ASR wells • Design, construction oversight, testing and rehabilitation of wells • Characterization of sediments, interpretation of hydrogeologic, geophysical and geochemical data	• City of Sunrise Master Plan • City of Sunrise CUP • City of Sunrise CIP Program • City of Pompano Beach General Engineering Services • Miami-Dade Hydrogeological Services • Palm Beach County Hydrogeological Services • City of Sunrise Injection Well Permitting and Rehabilitation
 **Brian LaMay, PE** Project Manager	• 22 years of experience • Facility Evaluation and Assessments • Detail Design of Water and Wastewater Treatment Plants • Pipeline and Pump Station Designs • Treatment (Water, wastewater, reuse) • Planning, alternative analysis, design, permitting, bidding, construction • Extensive CM, CEI and ESDC experience	• CDWWTP Reverse Activated Sludge (RAS) Pump Station Improvements • Park City Water Main Replacement • Sawgrass Water Treatment Plant Expansion • Flamingo Park Wellfield and Raw Water Transmission Main • Master Pump Station No.3, Miami-Dade County • Design Build Criteria Package for Gravity Sewer Interceptors to Pump Station No.3 • Rehabilitation of High Service and Transfer Pump Evaluation and Detailed Design

KEY INDIVIDUAL QUALIFICATIONS AND PAST PERFORMANCE

Key Personnel	Qualifications	Projects
 **Becky Hachenburg, PE** QA/QC - Water Treatment	• 25 years of experience • Water resource management, supply, ASR, surface water storage, canal conveyance, constructed wetlands • Water Treatment Process Evaluations • Detail Design of Water Treatment Plants • Pilot testing for WTPs • Microfiltration, nanofiltration, brackish reverse osmosis • Electronic Operation and Maintenance Manuals	• Palm Beach County General Engineering Services • City of Sunrise CIP Program • City of West Palm Beach MIEX/UF Prelim. Design • City of West Palm Beach Treatment Process Selection • City of West Palm Beach Existing Condition Assessment • City of West Palm Beach High Service Pump Modification • City of Sunrise Master Plan • City of Pompano Beach Hydraulic Master Plan
 **Sangeeta Dhulashia, PE** Planning Lead	• 24 years of experience • Developed 16+ Master Plans in Tri-County • Comprehends utility needs – worked on four infrastructure programs • Resource evaluation • Treatment (Water, Wastewater, Reuse), pump station, pipelines, biosolids • Planning, alternative analysis, design, permitting, bidding, construction • Extensive CIP experience • Connection Fee, Rate Study, Bond Reports	• City of Sunrise Master Plan • City of Sunrise GES Client Manager • City of Fort Lauderdale Fiveash WTP Evaluation • Engineering Feasibility and Bond Report - Sunrise • City of Cape Coral Facilities Expansion • City of North Miami Beach Filter Rehabilitation • City of Sunrise CIP Program • Design Services for WWTP Miami Dade Consent Decree CDWWTP Headworks Upgrades • City of Pompano Beach Master Plan • City of Pompano Beach Water Supply Facilities Plan • Town of Davie - GES Client Manager • Hallendale Beach Foster Road WM • MDWASD Design Services for WWTP Consent Decree
 **Hal Schmidt, PE** QA/QC - Reclaimed Water	• 36 years of experience • Planning, design, permitting, construction management and startup of over $2.5B worth Wastewater capital improvement projects. • Biological nutrient removal, membranes, reclaimed water, biosolids, energy recovery • Served on numerous state and national forums with workgroups related to rules, regulations, legislation and emerging technologies	• City of Sunrise CIP Program – Wastewater and Reclaimed Water Projects • City of Sunrise Master Plan • Design Services for WWTP Miami Dade Consent Decree • City of Cape Coral Facility Expansion • City of Venice Reverse Osmosis Treatment Plant • City of North Port Water Reclamation Facility • Wastewater Treatment Plant – New Dewatering Facility

KEY INDIVIDUAL QUALIFICATIONS AND PAST PERFORMANCE		
Key Personnel	**Qualifications**	**Projects**
 **Zuhal Ozturk, PE** Planning Lead	• 13 years of experience • Water and wastewater treatment, water reuse and permitting • Planning, design, and management of complex civil/environmental engineering permitting efforts • Advanced wastewater treatment processes, and stormwater modeling, remediation of chlorinated solvents using permeable reactive barriers, hydrogeological modeling of solute transport and industrial wastewater treatment.	• CD 1.07 SDWWTP Digesters and Control Building Upgrades • Fort Lauderdale - Fiveash Water Treatment Plant Evaluation and GAC Pilot Testing Project • Town of Davie, Ten-Year Water Supply Facilities Work Plan (WSFWP) - 2020 Update • City of Sunrise, Ten-Year Water Supply Facilities Work Plan (WSFWP) – 2020 Update • Oakland Park, Ten-Year Water Supply Facilities Work Plan (WSFWP) - 2020 Update • CD 1.11 SDWWTP General Electric Design Substations 9, 10, 11, and 12
 **Heath Wintz, PE** Water Treatment Team Lead	• 17 years of experience • Treatment and disinfection of potable water • Detail Design of Water Treatment Plants • Pilot testing for WTPs • Design of Hydraulic structures, chemical feed, process control, wellhead design • State of the art UV disinfection design in Florida • Plant automation	• Miami-Dade Hydrogeological Services • City of West Palm Beach Mixing and Metering • City of West Palm Beach UV System and related infrastructure • City of West Palm Beach Chemical Feed System • City of West Palm Beach High Service Pump Modification
 **Jeovanni Ayala, PE** Reclaimed Water Treatment Lead	• 18 years of experience • Planning, design, permitting, construction management and startup of Wastewater and residuals treatment projects. • Prepared operations manuals and standard operating procedures • Worked on alternate delivery such as Design Build projects as owners representative • Extensive liquid and solid stream WW treatment and handling experience	• City of Sunrise Master Plan • City of Sunrise Southwest WRF Preliminary Design • Miami-Dade WASD WWTP – Dewatering Facility • Miami-Dade WASD Design Services for WWTP Consent Decree • City of Sunrise CIP Program • City of Venice Reverse Osmosis Treatment Plant • City of North Port Water Reclamation Facility • City of Cape Coral Biosolids Treatment • Falkenburg AWT Plant Expansion

KEY INDIVIDUAL QUALIFICATIONS AND PAST PERFORMANCE

Key Personnel	Qualifications	Projects
 **Rick Cowles, PG** Water Supply and Deep Injection Wells Lead	• 29 years of experience in groundwater supply development • Works within the regulatory framework related to environmental and construction issues • Has designed and installed numerous production wells for drinking water supply, groundwater recovery, water quality issues, and gradient control. • Has conducted aquifer testing to evaluate well efficiency, well field yield, determine recovery well capture zone and to determine aquifer coefficients	• Deep Injection Well Design and CA Services • Deep Inject Well IW-2 • Testing of Deep Injection Well • 15 MGD Recovery Well System Design for FPL • 15 MGD Test Production Well Design for FPL • Biscayne Aquifer Test Production Well for FPL • Upper Floridan Aquifer Well • Foam Removal System Full Scale Design and Construction Services • Water Supply Development for Duke Energy
 **Dave Clark, PE** Pipeline and Pump Station Design	• 17 years of experience • Preliminary Design, alternative analysis and feasibility studies • Detail Design of Water distribution & transmission infrastructure • Detail Design of Wastewater collection and transmission infrastructure • Design-Build and criteria packages for Water and Wastewater Pipeline projects • Utility coordination, design, permitting, bidding, construction support services	• West River Interceptor Overflow Pump Station and Force Main • City of Sunrise ASR Well Raw and Reuse Water Mains • Town of Davie 4” FM • M-D WASD 16” WM, 8” FM & 8” Gravity Sewer • M-D WASD 36” FM Design-Build Criteria Package • M-D WASD 54” WM • Miami Beach 12” and 20” WM • Miami-Dade WASD 42”/48”/60” FM PS 1 and 2
 **Marlon Medina, PE** Pump Stations Engineering	• 11 years of experience • Preliminary Design, alternative analysis and feasibility studies • Detail Design of Wastewater Pump Station • Rehabilitation of existing Wastewater Pump Stations • Detail Design of distribution force mains and water mains • Inflow & infiltration Studies and SSES • Design, permitting, bidding, construction support services	• City of Sunrise LS 128 & 210 • Town of Davie LS 3 • FIU PSO 428 & 621 SSES • FIU Biscayne Bay Campus SSES • Miami-DadeWASD PS 698 • Miami-DadeWASD PS 124 • Miami-Dade WASD PS 1056 • Miami-Dade WASD PS 1058 • Miami-Dade WASD PS 494 • Miami-Dade WASD PS 870 • Miami-Dade WASD PS 105

KEY INDIVIDUAL QUALIFICATIONS AND PAST PERFORMANCE		
Key Personnel	**Qualifications**	**Projects**
 **Terrance Glunt, PE** Stormwater Engineering	• General Civil technical advisor with 42 years of experience • Preliminary Design, alternative analysis and feasibility studies • Preliminary Design, alternative analysis, feasibility studies, mater plans & Design-Builds • Principal-in-Charge for water main, force main, roadway, lighting and drainage improvement projects • Detail design for stormwater Pump Stations • Detail design for roadway and site development improvements • Extensive experience in construction management	• Palm Beach County Basin D-2 Storm Water Pump Station • City of Fort Lauderdale Terminal Stormwater Well • Delay Beach 20” WM and 24” FM • Lauderhill Basins A and B Stormwater Pump Stations • Palm Beach Sanford Avenue Drainage and Utility Improvements • Plantation 84th Avenue Transit Greenway & Mobility Enhancements • Riviera Beach Roadway Sidewalk and Pavement Assessment • Lauderhill Water Supply Well
 **Jeff Crews, PE, LEED AP** Stormwater Engineering	• 32 years of experience • Design Engineer and Project Manager on various projects in the field of structural and civil engineering • Civil experience has included the preparation of stormwater pollution prevention plans, drainage analysis, and utility relocation plans.	• Reclaimed Water Pipeline Canal Crossing • Norwood Oeffler WTP & Operations Center • Pompano Beach Drainage Basin 4-1 and 4-2 • Basin “A” and "B" Stormwater Pump Stations • NW 16th Street Water Main and Sewer Force Main
 **William Weber, PE, LEED AP, ENV SP** Civil Engineering	• 20 years of experience with environmental and geotechnical engineering projects • Large raw-water reservoirs, large earthen dams • Landfills, TSCA impoundments • Phase I and Phase II environmental assessments, environmental sampling, and spill prevention planning	• River Oaks Wastewater Treatment Plant Decommissioning Design Criteria Professional • Stormwater Treatment Area (STA) 1W - Expansion #1 • Eastside Wastewater Treatment Plant Improvements • New Production Wells for Wellfields 2, 3 and 8 (CSA 5 and 10) • Class I Deep Injection Well to 8,000 Ft. BLS • Peace River Reservoir No. 2

KEY INDIVIDUAL QUALIFICATIONS AND PAST PERFORMANCE		
Key Personnel	**Qualifications**	**Projects**
 **Carlos Herdocia, PE, LEED AP** Civil Engineering	• 32 years of experience • Project Manager and Senior Design Engineer on various roadway and drainage projects for municipalities in Miami-Dade County • Design, construction administration, and inspection of water main and sanitary sewer pipeline	• 726-730 NW 73 St 12" Water Main Extension • N.E. 19th Court 12" Water Main Extension • Morningside Park – 8" Sanitary Sewer Extension • Town of Golden Beach Capital Improvements Program • West Kendall District Park (4,600 feet of exfiltration trench, 1,000 feet of solid pipe, 31 drainage structures, over 5,000 feet of 16” water main)
 **Jarah Parke, PE, CFM, PMP** Mechanical Engineering	• 18 years of experience • Extensive experience in multiple aspects of water resources, including hydraulic analysis, water and sewer pipeline design ranging in size from 4 inches to 144 inches • Reservoir and tank design, groundwater wells, water quality, drainage, floodplain analysis, and flood control • NASSCO certified in Pipeline, Lateral and Manhole Assessment	• Systems Conveyance and Operations Program (SCOP) • Engineering Design of the Garnet Valley Water System • Pearland Surface Water Plant - Package 3 • Paradise-Whitney Interceptor Project No. 670 • Tarrant Integrated Pipeline Project • Pittman Pecos Conveyance System • Low Lake Level Pumping Station • Alta Meadows Storm Drain Project
 **Craig Kaltenbach, PE** Structural Engineering	• 25 years of experience in structural engineering • Design and construction support services for various structures ranging from the rehabilitation and retrofit of existing facilities to the design of efficient and cost effective new facilities • Water and wastewater treatment plants and collection and distribution systems	• West Palm Beach UV Structural Design • Southwest Reverse Osmosis Expansion • City of Cape Coral Facilities and Utilities Expansion Program • New Reverse Osmosis Water Treatment Plant • Hap Cremean Water Plant Rehabilitation and Upgrade Projects • Marion Water Treatment Plant Condition Assessment • MDWASD Design Services for WWTP Consent Decree

KEY INDIVIDUAL QUALIFICATIONS AND PAST PERFORMANCE		
Key Personnel	**Qualifications**	**Projects**
 **Shana Wygonik, RA, LEED AP** Architecture	• 19 years of experience in the architectural design of public works projects including water and wastewater treatment facilities • Programming, architectural design, specifications writing, permit applications, construction administration • Promotes and utilizes advanced technology and BIM	• West Palm Beach Water Treatment Plant Improvements • Miami-Dade Pump Station No 3 • Architectural and Laboratory Layout Design for the North Water Reclamation Facility Operations and Maintenance Building and ERD Building in Cape Coral • Miami Master Pump Station No 3 • Southwest Water Reclamation Facility Expansion WW-12 Operations Building
 **John Nel, A.Sc.T, PMP** Electrical Engineering	• 38 years of experience • Discipline Lead for Electrical, Instrumentation and Controls in Stantec's Water Sector • Provides design leadership and QA/QC on many of the strategic projects across North America • Electrical and I&C system design, Electrical Studies and Reports, Evaluations, Condition Assessments of existing facilities, Energy Conservation Reports and Recommendations, PLC and SCADA HMI programming, PLC training, project management, construction administration, implementation, and commissioning	• Mayakkahatchee Creek WTP Transfer and Backwash pumps • South County Regional WTP – Belt Filter Press Project • MDWASD Pump Station Rehabilitation projects • Ft. Knox Water System ISDC Projects • Pinewoods Nano Filtration Power Upgrade • City of Logan Water Treatment Plant Nano Filtration • Collier County Pump Station Rehabilitation Projects • Pinewoods Nano Filtration Power Upgrade • Siesta Key Master Pump Station
 **Brad Buchanan, PE** Instrumentation Engineering	• 7 years of experience • Projects include electrical service, generator sizing, power distribution, instrumentation and controls, electrical code compliance, preparation of specifications, drawings, and budgets • Electrical design, motor control, instrumentation and controls, standby power system design, HVAC controls, PLC, and local HMI design	• Collier County Pump Station Rehabilitation Projects • Pump Station 302.09 Relocation • Siesta Key Master Pumping Station (MPS) • Heritage Bay Inline Booster Pump Station • Permanent Canal Closures and Pump Stations (PCCP)

KEY INDIVIDUAL QUALIFICATIONS AND PAST PERFORMANCE		
Key Personnel	**Qualifications**	**Projects**
 **Savvas Savvas, PE, LEED AP** HVAC	• 35 years of experience • Design of HVAC/plumbing/fire protection systems for commercial and Industrial facilities • Energy management, energy modeling and simulation, energy conservation, clean rooms design, laboratory design, smart buildings management systems design, and facilities assessment	• Miami Dade Central Waste Water Treatment Plant, Consent Decree Improvements • West Carrolton Water Treatment Plant Membrane Facility • Miami Dade WWTP Facilities Inspection • Cape Coral Facility/Utility Expansion Program • North Lee County Water Treatment Plant • Baton Rouge South WWTP Wet Weather Improvements Phase II
 **William Vogel** BIM Design	• 44 years of experience • Director of Technology Application for Stantec Water Delivery • Responsible for the distribution and development of 3D/BIM designs using intelligent modelling technology • Autodesk and Bentley-based BIM applications • Extensive experience with the development of all types of water and wastewater treatment facilities	• North Lee County Water Treatment Plant • Hollywood Reverse Osmosis and Membrane Softening Water Treatment Plant Expansion • Sunrise Membrane Softening Water Treatment Plant • Texa Microfiltration Water Treatment Plant • Vineyard Surface Water Treatment Plant • Point Lisas Desalination Water Treatment Plant • MDWASD CDWWTP Consent Decree Improvements
 **Gabe Maul, PE** Bench and Pilot Studies	• 10 years of experience • Water utilities engineer with proven track record executing water engineering projects collaboratively with engineers, vendors, owner staff, and contractors	• West Palm Beach and Pompano Wellfield Condition Assessments • Pompano Beach Deep Injection Well Rehabilitation • Nanofiltration Element Evaluation • Well Replacement and Rehabilitation (R&R) Prioritization Tool • West Palm Beach Treatment Alternatives Analysis • Dual Media Filter Rehabilitation (WA-27 & WA-30) • West Palm Beach UV System and Related Infrastructure

KEY INDIVIDUAL QUALIFICATIONS AND PAST PERFORMANCE		
Key Personnel	**Qualifications**	**Projects**
 **Kyle Stevens** Financial Analysis	• 11 years of experience • Experience in populating and customizing long-term financial planning, cost allocation, rate design, impact fee, and miscellaneous service fee models • Experience working with large data sets and financial models for financial forecasting	• City of Fort Lauderdale Financial Services • JEA Cost of Service Study • City of Naples Financial Services • Athens Clark County Stormwater Rate Study • City of Fort Lauderdale Financial Services • City of Lake Worth Multi-Fund Financial Sustainability Analysis • Town of Gilbert Financial Services • City of Ann Arbor Cost of Service
 **James Hale, GISP** GIS and Mapping	• 19 years of experience • Leverages both GIS and CMMS technology; remote sensing, asset management, mobile applications, workflow automation, and Enterprise GIS • Provides asset management, impervious surface mapping, land use analysis, and mobile data collection	• St Petersburg Tiered Stormwater Utility and Impervious Layer Creation • Collier County Stormwater Utility Implementatio • Water and Wastewater Geodatabase Design and Implementation • Master Plan for Rehabilitation and Improvement of the Wastewater, Master Plan for Rehabilitation and Improvement of the Wastewater • GIS Sub-foot Geometric Network • City of Naples Infrastructure Geodatabase Development • Collier County Irrigation Geodatabase
 **Sean Compel, PE** Construction Manager	• 17 years of experience • Planning, design, permitting, construction management • Alternative analysis and feasibility studies • Project Construction Manager (CM), for watermains, forcemains, pump stations, SSES, electrical and telecommunications • Bidding and Procurement support • RFIs, change orders, Review of schedule and delay claims and cost analysis during construction	• CM-City of Sunrise ASR Well and Raw Water Pipeline • CM – Key Biscayne Reclaimed Water Distribution and Sanitary Sewer Replacement • CM- Village of Pinecrest Watermain Installation • CM-FIU Main Camus SSES • CM-Miami Beach Convention Center PS • CM-WASD Regional PS and 20” FM • CM-FEMA Drainage Improvements • CM – Golden Beach Overhead utilities conversion to underground

Experience with Regulatory Compliance Issues

Among the challenges facing utilities across the State of Florida is the task of complying with current and future water regulations. Stringent requirements imposed by future regulations may have a profound effect on current treatment and monitoring practices and operational protocol for many utilities. Therefore, it is imperative to thoroughly comprehend specific regulatory requirements and understand their impact on water and wastewater systems. Stantec maintains a group of professionals in the state whose sole purpose is to review all pending and current environmental legislation so that our clients can be properly advised and positioned to address these regulatory issues. Stantec has extensive background and experience in analyzing and reviewing environmental legislation and regulations. This experience coupled with our technical resources makes it possible for us to present our clients with a multitude of options and a wide range of alternatives for their regulatory compliance strategies.

Our long-term South Florida presence and extensive project experience across Florida has helped us forge sound professional relationships with the state and local government agencies. These relationships have enabled us to efficiently permit numerous wastewater collection, treatment, and disposal facilities throughout the state. We have aided utilities through compliance, expansion,and wastewater quality issues. Our knowledge of FDEP procedures and policies on Florida's east coast allows us to efficiently deal with permit preparation and compliance tasks.

We have extensive working relationships with the SFWMD, Broward County Environmental Protection and Growth Management Department (EPGMD), and Broward County Health Department have permitted numerous facilities though the Broward County Building Department in accordance with the South Florida Building Code.

8. Resumes of Key Personnel

Neil Johnson PG, PMP
Principal-in-Charge

Neil has more than 27 years combined experience as a project manager, hydrogeologist, geologist, driller, geotechnical inspector, and environmental technician. His experience includes construction oversight, testing, and rehabilitation of production wells, Underground Injection Well (UIC) Class I Injection well systems and UIC Class V Aquifer Storage and Recovery (ASR) wells; characterization of Coastal Plain sediments; development of drilling and sampling plans; monitor well installation; interpretation of hydrogeologic, geophysical, and geochemical data; quality control of construction methods and materials; regulatory coordination; and report preparation.

EDUCATION

Master of Sciences, Geology, University of Florida, Gainesville, Florida, 1996

Bachelor of Science, Geology, University of Florida, Gainesville, Florida, 1991

REGISTRATIONS

Professional Geologist #2052, State of Florida

PROJECT EXPERIENCE

Water and Reclaimed Water Treatment Plant Projects Pompano Beach, Florida
As Project Hydrogeologist, provided technical, permitting, and constructability review during the planning and design of the Reclaimed Water Rapid Infiltration Trench Project.

Permitting Class V Group 7 Potable Water ASR System, Springtree Water Treatment Plant, Sunrise, Florida
Project Manager/Lead Hydrogeologist during the final permitting phase of this Class V Group 7 Potable Water ASR System project. This is the first treated water ASR system in southeast Florida to receive a Letter of Authorization to Use (LOATU) by the Florida Department of Environmental Protection. The authorization allows the City to inject, store, and recover up to 2 MGD of treated groundwater. Neil negotiated the issuance of the LOATU with the FDEP and coordinated the final completion activities with the Broward County Health Department.

Water Treatment Plant, Broward County, Florida
Project Hydrogeologist responsible for the preliminary design of two Floridan Aquifer Test Production Wells and a Class I Injection Well System. The first phase of this project included a well-siting study, hydrogeologic characterization, permitting review, and Basis of Design Report. The project will ultimately provide raw water and disposal capabilities for a 7 MGD ROWTP Expansion of the existing Lime Softening Water Treatment Plant.

North and South Central Hillsborough County Reclaimed Water ASR, Hillsborough County, Florida
Hydrogeologist performing technical services during construction and construction management during the drilling and testing of two exploratory Class V, Group 3 ASR wells.

Sunrise General Engineering Services, Sunrise, Florida
Project Manager for the permitting of the Springtree Water Treatment Plant Class V Aquifer Storage and Recovery Well and the Sawgrass Water Treatment Plant Class I Concentrate Injection Well. Neil was the Project Manager for the construction of the Flamingo Park Wellfield (3 wells) and the Sawgrass Utility Complex Mechanical Integrity Testing. Neil acted as Project Engineer during the rehabilitation of the Sunrise Concentrate Injection Well. Neil was a Field Hydrogeologist for the Construction of the Sawgrass Concentrate Injection Well and the Arena Wellfield (6 wells).

Water Treatment Plant 9 Wellfield Expansion / Production Well Construction and Rehabilitation, Palm Beach, Florida
Lead Hydrogeologist responsible for the construction of 9 new production wells and the rehabilitation of 15 existing wells at the Palm Beach County Water Utility Department's Water Treatment Plant No. 9. He also was lead hydrogeologist for the design of nine new production wells and rehabilitation of nine existing wells for the Department's system-wide wellfield expansion, including well siting and development of technical specifications.

General Engineering Services, Palm Beach County, Florida
Project Hydrogeologist providing technical, permitting, and constructability review during the planning and design of several projects, including: New Water Treatment Plant 2, 3, and 8 Production Wells (CSA #5 & #10); Water Treatment Plant 8 Wells Rehabilitation and Replacement (CSA #6 & #11); Lake Region Water Treatment Plant Floridan Aquifer Production Well No. 8 (CSA #7); and the Pahokee Wastewater Treatment Facility Deep Injection Lower Zone Monitor Well Rehabilitation (CSA #8 & #9).

Neil Johnson PG, PMP
Principal-in-Charge

North Cape ROWTP Injection Well System Construction, Cape Coral, Florida
Project Manager responsible for the construction and testing of the North Reverse Osmosis Water Treatment Plant (ROWTP) Class I tubing and packer injection well system. Neil was also responsible for field team management, FDEP coordination, and budget and schedule management. The injection well is permitted to dispose of up to 7.4 MGD of Reverse Osmosis (RO) concentrate and WRF effluent. The well is completed with an alternative design utilizing 22-inch diameter steel final casing to 2,060 feet with a 16-inch diameter FRP tubing and cemented annulus. Neil was responsible for the construction and testing of the Southwest ROWTP Class I tubing and packer injection well system. Neil provided field team management, FDEP coordination, and budget and schedule control. The injection well is permitted to dispose of up to 8.6 mgd of RO concentrate and WRF effluent. The well is completed using an alternative design with 24-inch steel diameter final casing to 2,950 feet bls with an 18-inch diameter FRP tubing cemented in place. Neil was also responsible for the permitting, construction, and testing of the Everest WRF Class I injection well system. Neil was provided for field team management, FDEP coordination, and budget and schedule control. The injection well is permitted to dispose of up to 18.6 mgd of WRF effluent. The well is completed with 24-inch diameter steel final casing to 2,630 feet bls.

Raw Water Master Plan, Palm Beach, Florida
Project Hydrogeologist providing assistance and technical review in developing the Hydrogeologic Characterization, Alternative Water Resources, and Wellfield Testing and Evaluation Sections of the Master Plan. Neil developed the wellfield testing and evaluation criteria for the raw water supply wells. Neil reviewed the historical well rehabilitation efforts of several of PBCWUD's wells and developed a list of recommendations for future well rehabilitation.

Well Projects in Florida, Various, Florida
Neil served as a Field Hydrogeologist to provided a wide range of field services for well projects in Florida, including construction and testing of a Class I Concentrate Injection Well for the Sawgrass Water Treatment Plant and wellfield expansion for the City of Sunrise; rehabilitation alternatives for Miami-Dade Water and Sewer Department Production Wells; Class I injection well and monitor well for the Stuart Wastewater Treatment Plant; and an ASR well, Floridan monitor well, and shallow monitor well for the Fiveash Water Treatment Plant Wells in Fort Lauderdale. Responsibilities included construction observation, geophysical logging, welding inspection, coring, single and straddle packer testing, and sample collection to assist in constructing and testing a Class I concentrate injection well (tubing and packer design); investigation of rehabilitation alternatives and testing during rehabilitation of production wells; construction supervision of aquifer production wells; construction observation, welding inspection, single and straddle packer testing; and sample collection, injection testing, drilling observation, packer testing, pump testing, casing pressure testing, and well development.

Powdered Activated Carbon (PAC) Treatment System (WA-28), West Palm Beach, Florida
Senior Hydrogeologist for the design of the PAC Basin involved two serpentine channels to provide 15 minutes of contact time to ensure removal of taste and odor causing compounds from surface water sources. Subsurface vibro-replacement of soil with stone columns provided the structure bearing capacity needed to construct this new pretreatment basin in a more economical manner than conventional precast concrete columns. This project also involved the replacement of aging, below-grade influent flow meters with new mag meters which could be more easily maintained. As part of this design, hydraulic evaluation revealed one of six raw water pumps would require replacement to avoid cavitation. This project also presented the opportunity to install isolating slide gates on the settled water flume bypass channel, allowing the City to use an existing bypass to their filters. Stantec provided pilot testing, detailed design, bidding and engineering services during construction.

Stormwater Treatment Area (STA) 1W - Expansion #1 West Palm Beach, Florida
Project Manager for this accelerated constructed wetland project resulting from a consent order from EPA, Neil was responsible for coordinating the Engineering During Construction (EDC), which included providing on-site resident engineer, submittal and RFI review, test results, coordinating subconsultants and internal resources, budgeting and invoicing. The project included design of 100,300 feet of new earthen embankment; 85,600 feet of new canals; nine remotely operated, gated hydraulic structures (roller gates and slide gates); and 20 passive hydraulic structures.

Brian LaMay PE
Project Manager

Brian has 22 years of experience in the civil and environmental engineering field, with an emphasis in the detailed design of water and wastewater projects. His background includes managing and designing water and wastewater projects, including treatment plants, pump stations, pipelines, and wells. His responsibilities include design management of multidisciplinary design teams in the technical execution of design projects.

EDUCATION

Master of Engineering, Industrial and Systems Engineering, University of Florida, 2001

Bachelor of Science in Environmental Engineering, University of Florida, 1998

REGISTRATIONS

Professional Engineer #60142, State of Florida
LEED Accredited Professional, U.S. Green Building Council

PROJECT EXPERIENCE

Park City Water Main Replacement, Sunrise, Florida
Engineer of Record/Design Manager in the design of new 4-inch, 6-inch, 8-inch, 10-inch, and 12-inch PVC potable water, force main, and reclaimed water piping. The design included installation of piping, new water services, connections to existing asbestos concrete pipe, and grouting and abandoning of existing pipe. Oversaw development of detailed design drawings, developed technical specifications and construction details, and provided coordination between all the design team.

Sawgrass Water Treatment Plant Expansion, Sunrise, Florida
Mechanical/Process Project Engineer on the expansion of the Sawgrass WTP from 12 mgd to 18 mgd. Design expansion included the addition of two nanofiltration membrane trains and associated feed pumps, cartridge filters, and chemical feed systems, and new corrosion inhibitor system. Completed detailed CAD design drawings and sizing/selection of process equipment and valves. Performed permitting and engineering services during construction.

Flamingo Park Wellfield and Raw Water Transmission Main, Sunrise, Florida
Project Technical Lead and Lead Civil design engineer in the design of four raw water wells (2,600 gpm each) and approximately two miles of ductile iron pipe raw water transmission main piping with sizes ranging from 16-inches to 36-inches. The design included approximately 500 linear feet of a horizontal direction drill of 36-inch HDPE piping to cross underneath a multi-lane Broward County roadway. The design also included an 18-mgd pretreatment facility to remove sand at the Sawgrass Water Treatment Plant, portable generator tie-down modifications at an existing wellfield, and well pump upgrade modifications at an existing wellfield. Brian coordinated the development of detailed design drawings among the different design disciplines, while completing the civil design, including development of detailed design drawings and technical specifications. Brian provided technical leadership in coordinating with local City and County engineering, building, traffic, water management, and health departments to obtain all required construction permits. Following design, Brian served as the Resident Project Engineer for the construction of this $8.5 million construction project.

Conditions Assessment and Technical Evaluation of Water Treatment Plant Alternatives, West Palm Beach, Florida
As Project Engineer Brian completed a condition assessment and evaluation of treatment plant alternatives at the City's Water Treatment Plant to identify rehabilitation needs and provide a technical evaluation of treatment alternatives to meet consent order requirements. Identified long and short-term rehabilitation needs and authored technical memorandums presenting the assessment findings and recommendations. Treatment alternatives included lime softening, nanofiltration, micro filtration, reverse osmosis, magnetic ion exchange (MIEX), ozonation, and various combinations.

M-20 Lift Station Rehabilitation, Brevard County, Florida
Engineer of Record and Project Manager in the design, bidding, and engineering services during construction for this rehabilitation of an existing master lift station. Design included installation of three dry pit owner furnished pumps, new piping and valves, and owner furnished control panel.

Water and Wastewater Utility Facility Assessment, Wellington, Florida
Senior Project Engineer conducting an assessment of the Village of Wellington's Water and Wastewater

Brian LaMay PE
Project Manager

Facilities to assist the Village in developing a Renewal and Replacement (R&R) program. Brian was responsible for conducting a visual inspection and assessment of the mechanical assets at the Village's Water Treatment Plant, Wastewater Treatment Plant, and Storage Re-Pump Facilities. Brian complied and analyzed the assessment data and provided the Village with a database of inspected facilities and assets. He authored an Existing Conditions report presenting the condition of the assets, the expected replacement schedule for each asset with a planning level order of magnitude replacement cost, and general recommendations for R&R upgrades and improvements. The Village used the database and report to develop an R&R program and develop its Water and Wastewater Facility budgets.

CDWWTP Reverse Activated Sludge (RAS) Pump Station Improvements, Miami-Dade County, Florida
Project Manager and project Engineer of Record in the design of improvements to the five existing RAS Pump Stations at Plant 2 of the CDWWTP. The project included the replacement of twenty 50-hp RAS pumps; RAS pump piping, valves, and meters; RAS header piping; electrical equipment and controls, and enclosing the electrical equipment in a new environmental controlled room. Brian was responsible for overseeing all aspects of the projects, providing coordination between discipline engineers and subconsultants to develop detailed design documents to be used for bidding. Brian conducted permitting coordination for obtaining permits and approval from the City of Miami, FDEP, and the Miami Dade Department of Regulatory and Economic Resources on the behalf of WASD.

Master Pump Station No.3, Miami-Dade County, Florida
Project Technical Lead/Engineer of Record in the design of a new 29-MGD raw sewage pump station to convey flow from downtown Miami to the CDWWTP. The pump station is of a multi-level wet-well/dry configuration and includes four 300 hp variable speed vertical non-clog pumps with medium voltage motors. The station also included a generator building which houses one medium voltage generator, bulk diesel storage, and an FPL vault. Brian was the main technical interface with the WASD and was responsible for the technical execution of the project, providing coordination between technical leads and discipline engineers while developing detailed design civil and mechanical drawings and technical specifications. He conducted permitting coordination for obtaining permits and approval from the City of Miami, FDEP, and the Miami Dade Department of Regulatory and Economic Resources on the behalf of WASD. Bidding services were also provided. The project was currently under construction and Brian served as the overall project engineering, overseeing engineering services during construction and construction management services.

Design Build Criteria Package for Gravity Sewer Interceptors to Pump Station No.3, Miami-Dade County, Florida
Project Technical Lead and Engineer of Record in the development of a design-build criteria package for use by the Miami Dade Water and Sewer Department to issue a Request for Design Build Services (RDBS) to obtain the services of a Design-Builder to design and construct gravity sewer interceptors to supply the new Master Pump Station No.3. The project consists of microtunneling 30, 36, 48, and 54-inch gravity sewer piping and manholes through downtown Miami to convey flow from existing Pump Station No.8 located in Brickell Avenue to the new Pump Station No.3. The design criteria package included development of a Basis of Design Report (BODR), Geotechnical Data Report, Geotechnical Baseline Report, Technical Specifications, and development of the RDBS with selection/scoring criteria and minimum qualifications. Brian was responsible for the civil design and working with the geotechnical engineers and WASD to develop the RDBS. Brian was in responsible charge of the overall project and oversaw the coordination with the tunneling and geotechnical design team, technical experts, permitting agencies, and the WASD. The project is currently under construction with WASD's Design Build Criteria Package engineer to ensure the Design-Builder is in conformance with the RDBS documents.

Rehabilitation of High Service and Transfer Pump Evaluation and Detailed Design, Margate, Florida
Engineer of Record and Project Manager for preliminary evaluation, detailed design, bidding, and engineering services during construction for rehabilitation of an existing transfer pump station and high service pump station at the City's Water Treatment Plant. Design included replacement of five 50hp vertical turbine transfer pumps, two 125hp and three 250 hp variable speed high service pumps, piping and valves. Provided permitting services, bidding services, and engineering services during construction.

Becky Hachenberg PE, PMP
QA/QC - Water Treatment

Over the last 25 years, Becky has distinguished herself as a project engineer, engineer-of-record, program technical manager, project manager, client services manager, and stakeholder coordinator. She has managed well over 40 municipal projects in the Southeast and has regularly served as project principal for clients ranging in size from 100,000 to nearly one million customers. Becky has extensive experience in the fields of water treatment process design, water management, environmental engineering, and water quality analysis, with water resources project experience including supply, ASR, and injection wells; surface water storage, canal conveyance and constructed wetlands; permitting, pilot testing, design, and construction for water treatment systems including microfiltration, nanofiltration, brackish reverse osmosis water, and surface water treatment; and electronic operations and maintenance manuals.

EDUCATION

MS/MSc, Industrial and Systems Engineering
Florida, University of Florida, 1998

BS/BSc, Environmental Engineering
Florida, University of Florida, 1995

REGISTRATIONS

Professional Engineer #55435, State of Florida

Project Management Professional (PMP)®, Project Management Institute

PROJECT EXPERIENCE

Reuse Irrigation Facility Permit Renewal, Pompano Beach, Florida
Project Manager for a task order to Stantec's General Water and Reclaimed Water Projects contract with the City. Responsible for preparing and submitting an FDEP Domestic Wastewater Facility Permit application for renewal. Activities included field investigation of the City's Oasis facility, preparation of permit application and supporting documentation, coordination and attendance of meetings with FDEP, and response to a single RFI following the permit renewal application submittal.

Reuse Feasibility Study, Sunrise, Florida
Served as technical manager. Tasks included evaluating five reuse levels for feasibility, including design requirements, cost estimates, and permitting issues.

Water Treatment Plant Upgrade, West Palm Beach, Florida
Client Service Manager for this 47-MGD surface water treatment plant upgrade program. Becky met regularly with the client to discuss the project's progress. She made sure Stantec's project manager had the resources to complete the work within schedule and budget. The project involved evaluating multiple treatment alternatives for the City's 50-MGD WTP to meet the Health Department's Consent Order, improve drinking water quality, and expand the plant to accommodate proposed build-out capacities. We conducted pre- and post-treatment bench scale tests and a surface water membrane pilot test to evaluate treatment schemes. We also evaluated existing plant conditions to determine rehabilitation and replacement needs and what could be salvaged and incorporated in the plant upgrades to minimize costs and waste. The 18-month effort resulted in a treatment alternatives report that evaluated 22 conceptual design options using different source waters and treatment schemes, present-value life cycle costs based on construction, consumables, operations, and debt-service. Other improvements included replacing gaseous chemical systems with liquid systems, managing the automation system implementation, a new electrical generator and switchgear building, a new FPL power feed, pilot testing for MIEX progressed to permit application and procurement documents, a new mixing and metering header, drought management planning, Profibus conversion, high service pump evaluation and refurbishment, condition assessment and capital improvements planning, and design/construction of a new 50-MGD UV system.

East Water Treatment Plant, Miramar, Florida
Project Manager for 3rd party construction management services for an upgrade of the East Water Treatment Plant (lime softening, filters, hypochlorite, ancillary systems). Becky was responsible for reviewing change orders, claims, RFIs, and handling all communication between our client and the contractor.

Energy Efficiency Study for Hollywood Water Treatment Plant, Hollywood, Florida
QA/QC Manager for an energy efficiency study to evaluate the energy usage at the City's 20-mgd nanofiltration water treatment plant to determine if energy savings could be realized. The City implemented Stantec's recommendations to modify the nanofiltration feed pumps

Becky Hachenberg PE, PMP
QA/QC - Water Treatment

and piping and reduced annual power consumption of each membrane softening train by 24% (savings of approximately $85,000 per year). Becky performed field analysis, project budgeting, technical review, invoicing, and client contact.

Norwood-Oeffler Water Treatment Plant Value Engineering, North Miami Beach, Florida
Project Manager for two five-day value engineering studies. The project consisted of expanding the existing lime softening facility and adding a 13-MGD of membrane treatment, 10 new Floridan and Biscayne supply wells, raw water piping, a concentrate injection well, remote storage, high service pumping, and pressure sustaining interconnects. Responsibilities included contracting the VE facilitator, coordinating the team members, serving as a team member, and communications with the client. The City accepted and incorporated VE recommendations which reduced construction costs by approximately $8 million.

Surface Water Phase 1 Pilot and Bench Scale Study West Palm Beach, Florida
Client Service Managerfor the city update its 100-year-old, 47-MGD surface water treatment plant. As client service manager, Becky's duties included contract administration, coordination with City staff and elected officials, program manager, and technical team. The project investigated membrane options and required pre-treatment to comply with a consent order. (This project is part of Stantec's Water Treatment Plant Upgrade Program work).

Design and Construction of the Sawgrass Water Treatment Plant and Expansion, Sunrise, Florida
Design Manager for design of this 18-MGD nanofiltration facility. Becky was primarily responsible for all mechanical and process specifications, coordination between all design disciplines and subconsultants, permitting, and overall quality control coordinator. Upon completion of the design, she worked as part of the construction management team at the project site for more two years. In this role, she was responsible for addressing field issues with the contractor, processing payment applications, preparing change orders, reviewing shop drawings, and submitting building permit modifications. Becky was the Engineer of Record for the 6-MGD expansion of this plant. The project included the addition of two 3-MGD nanofiltration membrane trains, first stage feed pump, two interstage feed pumps, degasifier, chemical storage and metering pumps, transfer pump and associated appurtenances. In this capacity, she was primarily responsible for coordination between all design disciplines, contract document preparation, permitting, and overall quality control coordination. She addressed field issues with contractors, prepared change orders, and reviewed shop drawings as a member of the construction management team.

North Lee County Water Treatment Plant, Lee County, Florida
Project Manager for the Lee County reverse osmosis water treatment plant (RO WTP). The project included lower Hawthorne production well design and construction, 5-MGD RO WTP including cartridge filtration, chemical pre-treatment, degasification and odor control, post-treatment chemical addition, 5-MG ground storage tank, high service pumping station, transmission main, and injection well design, permitting and construction. Responsibilities included process design, coordination with subconsultants and four company offices, client relations, cost control. All design work was performed in 3D.

Broward County 1A Water Treatment Plant, Broward County, Florida
Client Service Manager for the 1A WTP Expansion project. This project includes design and construction of a Florida water supply test well, Floridan water supply production wells, low pressure reverse osmosis water treatment plant expansion and associated facilities, water quality blending coordination with existing lime softening plant, and concentrate injection well. Becky is responsible for making sure our project manager has the resources to complete the project within schedule and budget. She also works with the client and the project team to negotiate work order amendments as the work progresses. Well siting and Floridan test well design has been completed.

Bexar Met Water Treatment Plant, San Antonio, Texas
Project Engineer responsible for mechanical specifications and design for a design/build water treatment plant. The project consists of 9 MGD of ultrafiltration capacity including surface water intake structure, holding ponds, pretreatment systems, chemical feed, pumping, disinfection, finished water storage, and pumping and instrumentation and control systems.

Sangeeta Dhulashia PE, PMP
QA/QC - Planning

Sangeeta is a Senior Principal with 24 years of experience in water, wastewater and reuse engineering with majority of focus in integrated utility planning. Sangeeta has managed more than 16 master plans in the Tri-County area. She brings forward the ability to comprehend your utility needs with focused local knowledge. Her technical expertise encompasses utility planning, process optimization, treatment plant design for water, wastewater and reuse, regulatory compliance and permit assistance, construction management, CIP development, rate studies, impact fee updates, and bond engineering.

EDUCATION

Master of Science, Environmental Engineering, Florida International University, Miami, Florida 1999

Bachelor of Science, Chemical Engineering, Gujarat University, Ahmedabad, India, 1993

REGISTRATIONS

Professional Engineer #72284, State of Florida

Project Management Professional (PMP)®, Project Management Institute

PROJECT EXPERIENCE

City of Pompano Beach Water Master Plan - 2020 Plan, Pompano Beach, Florida
Client Manager and Technical Advisor responsible for overseeing the modeling team. The team performed model reconstruction and setup. Unaccounted demand including flushing demand were identified for demand allocation. Performed model validation for extended period of 24 hour. Simulations were then performed to determine existing system deficiencies under various scenarios. Future demands were allocated and system wide analysis was performed to identify improvements and expansion needs for 2020. Extensive fire flow evaluation and recommendations were made. Criticality analysis was performed and backup solutions were provided to the City as part of the Master Plan. Organizational assessment was also performed where future division focus and expansion areas were identified based on the Utility goals.

Water Supply Facilities Plan, Florida
Ms. Dhulashia has been Client Manager and Project Manager, led a team of talented engineers for development of several water supply facilities plan. Ms. Dhulashia provided intergovernmental coordination in addition to performing projections, identifying demand and infrastructure deficit, developing expansion/ improvement to infrastructure and developing capital improvement plan. Preparation of these plans required high level of stakeholder, and permit agency engagement, reviews and input. Some of these plans included presentation to the local government commission. Ms. Dhulashia has prepared following plans:

- City of Sunrise 2008 Plan and 2014 update.
- City of Oakland Park 2008 Plan and 2014 update.
- City of Pompano Beach 2014 update.
- City of North Miami Beach 2008 Plan and 2014 update.

City of Sunrise Water and Wastewater Capital Improvements Program, Sunrise, Florida
Technical Services Manager for the City of Sunrise Water and Wastewater Capital Improvements Program. Sangeeta provided planning and oversight of technical delivery for 50+ projects. She supplied project managers based on the project needs to augment utility staff, provided management of 5 consulting firms, technical reviews and provided a team to support full range of professional engineering services to support the City's Utilities department. Sangeeta provided planning, and concept development, for a $110M 5-year capital improvements plan for variety of projects including water, wastewater, biosolids, reuse, and pipeline projects. She provided progressive planning services to the City on an annual basis where prioritization was performed and CIP was developed annually by working with the City staff. She provided engineering efforts to develop impact fee update, rate update, revenue sufficiency studies, bond feasibility report and comprehensive plan updates as it pertained to utility engineering.

City of Sunrise Water and Wastewater Master Plan 2010, Rate Analysis support and Engineering Feasibility Report for Bond issuance, Sunrise, Florida
Project Manager responsible for leading a large team of various technical expertise for a growth, regulatory and capital driven master plan. The plan consisted of population and demand projections, reviewing existing facilities and performing condition assessment to determine replacement needs. Future process needs within the regulatory constraints were also determined. Alternatives such as water supply, biosolids, reuse, treatment and network improvements were evaluated. Phased and prioritized capital improvements were developed. Provided projected operational expenditures

Sangeeta Dhulashia PE, PMP
QA/QC - Planning

to support rate study and prepared engineering feasibility report for bond issuance along with connection fee update report. This project was delivered to the City on schedule and within budget. Schedule for this project was critical since water supply study and consumptive use permit was being prepared in parallel to this master plan.

City of Sunrise Park City Water and Wastewater System Replacement, Sunrise, Florida
As Project Manager, Sangeeta led this project from concept level to perform alternative evaluation, fire hydrant spacing and fire flow evaluation for residential and commercial areas. Once an alternative was selected a preliminary design was developed with a network model for design criteria setup. The design also included installation of new meter boxes and service piping and disconnecting the existing water service to connect the new water meter and service piping. Replacement of undersized and old AC force main piping with new 8-inch and 12-inch PVC force main piping was added to the project to avoid having to disturb the community with a separate project. Sangeeta provided permitting and bidding support services. Permit support was provided to get approvals from Town of Davie and City of Sunrise Engineering.

Water System Master Plans, Florida
Sangeeta has been project manager for various clients within Southeast Florida to perform their system-wide master plans encompassing hydraulic analysis, infrastructure capacity evaluation, CIP development and project prioritization. She has performed project manager's role for City of North Miami Beach and City of Miramar's water system master plans using hydraulic modeling. Sangeeta was an assistant Project Manager for the Water Storage, Pumping and Transmission System Modeling for the City of Sunrise. The project included updating, calibrating and developing the hydraulic model to determine water storage, high service pumping and distribution projects to meet existing and future water demands. She leaded the field calibration efforts to ensure a good quality basis for the model runs. Sangeeeta performed City of Tamarac's Water system plan to include phased improvements in conjunction with their five-year roadway improvement plan. Network analysis using Cybernet software was performed for the wastewater transmission system for build out. Critical areas for main improvements were identified based on system condition. Cost effective analysis to implement the improvements was performed as part of the final report.

Wastewater System Master Plans, Florida
Sangeeta has been project manager and project engineer for various Wastewater Master Plans. She served as technical advisor to the project manager for City of Cape Coral's Infiltration and Inflow reduction program. Sangeeta reviewed and assisted with advice on the basis of prioritization for rehabilitation, contract document development process to assure that all the technical aspects including submittal types, installation techniques as well as warranty items of the pipe lining contract were addressed and the terms and conditions were embedded appropriately within the documents to protect the City's interest. The City of Tamarac was approaching its wastewater capacity, this study assisted the City to determine the future wastewater requirements and alternative methods of meeting them. Sangeeta estimated the flow projections for build-out, evaluated different interim and future capacity measures, and performed wastewater hydraulic analysis. She evaluated the possibility of flow reduction with implementation of a sewer rehabilitation program, performed cost effective analysis of the alternatives and prepared the final report for the City. Sangeeta has performed collection system master plans for several utilities in south east Florida including City of Coral Gables, City of Hialeah, Miami Dade Water and Sewer, Broward County, City of Margate, City of Vero Beach, FGUA, and City of Cape Coral.

Consent Decree Program, Miami Dade Water and Sewer, Florida
As a Senior Principal, Sangeeta led over 15+ wastewater and stormwater projects. Developed scopes, fees, managing quality, risk, change and delivery. The design of majority of these projects were over a duration of 3 years. Projects consists of multitude of processes including headworks, biological treatment, mixing in oxygen trains, clarifiers, digesters, electrical buildings, odor control, FOG facility, and oxygen production rehabilitation. An example project is the Headworks Improvement for which Sangeeta is the Engineer of Record and Project Manager. She led the design of the oldest and largest 360 MGD peak flow capacity of the WWTP, and she delivered the design of the most critical project on the EPA consent decree within 7 months. Sangeeta led a $2.9M design project and managed a large team of over thirty professionals from five different engineering firms. The team developed and completed a 3D design with climate adaptation, resilience and sustainability considerations.

Hal Schmidt PE
QA/QC - Reclaimed Water

Hal has over 38-years of experience in the planning, permitting, design, construction management, and start-up of over $2.5B worth of wastewater capital improvement projects. His primary focus has been in the areas of advanced and high level biological nutrient removal, membranes, and reclaimed water reclamation, biosolids management, and resource recovery. His broad wastewater experience includes permitting, evaluation, and detailed design of collection and treatment systems (biological nutrient removal, membranes, etc.), water reclamation, and biosolids management (thickening, dewatering, stabilization and resource recovery).

EDUCATION

MS/MSc, Engineering, Nashville, Tennessee, Vanderbilt University, 1981

BE/BEng, Engineering, Nashville, Tennessee, Vanderbilt University, 1980

REGISTRATIONS

Professional Engineer #38819, State of Florida

Project Management Professional (PMP)®, Project Management Institute

PROJECT EXPERIENCE

City of Sunrise Wastewater Groundwater Replenishment Pilot Program, Sunrise, Florida
Technical Advisory Leader for the City's Groundwater Replenishment Pilot Program that tested emerging technologies to determine feasible reclaimed water reuse and alternative water supply options treating secondary effluent. The regulatory discharge concentrations for groundwater replenishment at this particular facility were Total Phosphates concentration of less than 10 µg/l and less than 3 mg/L of Total Nitrogen in the finished effluent.

The treatment technologies tested for their effectiveness in meeting the regulatory requirements included: membrane bioreactors, MF/UF and reverse osmosis, chemical precipitation, deep bed filtration, ballasted filtration, and ultraviolet disinfection. Samples were taken throughout the treatment process train to determine the effectiveness of these technologies either operating individually and/or in combination with other technologies listed above in treating the secondary effluent from the Southwest Regional Wastewater Treatment Plant (SWRWWTP). Based on the results of water quality data, a preliminary design was prepared that included the necessary water treatment technologies required to meet the effluent required for groundwater recharge, capital and operating costs associated with the treatment technologies, and the development of a construction phasing plan.

Zephyrhills Wastewater Treatment Facility, Zephyrhills, Florida
Project Director for the complete design and construction management services for the City of Zephyrhills Wastewater Treatment Facility (WWTF) expansion from 2.25 to 4.5 millions of gallons per day. This $16 million expansion provides additional reuse water for irrigation of the City's golf course as well as several parks and recreational areas. Different process modifications were evaluated to determine the most cost effective process to reduce the TN in the public access reclaimed water from the City's WWTF. In addition, the work for this project included FDEP permitting to expand/upgrade the City's WWTF. All of the necessary FDEP permits and supporting documentation (Capacity Analysis, O&M Performance and Preliminary Engineering Reports) were prepared and submitted for approval. We also provided complete services to obtain State Revolving Loan funding.

The expansion included a new headworks structure with fine screening and grit removal facilities, an MLE process that included two oxidation ditches with pre-anoxic tanks, two 85-feet-diameter clarifiers, sand filters, electrical building and emergency power system, sodium hypochlorite building with chemical feed system, and sludge holding and storage modifications. The successful design and construction of the WWTF resulted in follow-on work for the expansion of the City's rapid infiltration system (RIB) to dispose of the effluent that is not reused within the City's public access reclaimed water system.

Water Reuse Foundation, Washington, DC
Project Advisory Member for the development of a document that will be used as a decision support tool when evaluating satellite and regional wastewater treatment facilities producing public access quality reclaimed water quality effluent. Satellite treatment facilities can offer the advantages of advanced wastewater treatment (AWT) processes and relative nearness to potential users of reclaimed water, as well as smaller site footprints, greater automation, and shorter distribution systems. Regional wastewater treatment plants (WWTPs) may offer advantages such as, the need to only incrementally improve the quality of the existing

Hal Schmidt PE
QA/QC - Reclaimed Water

effluent in order to produce reclaimed water. This study developed a decision support document to assist utilities with the evaluation between developing a new satellite water reclamation facility (WRF) and producing reclaimed water at an existing WWTP. Treatment technologies ranging from conventional activated sludge, ballasted coagulation, membranes, etc. to accomplish this were evaluated in this study. In addition, the document included the economic and operational considerations, impacts on the regional water supply, wastewater treatment options, and control and monitoring strategies. A spreadsheet based tool to assist utilities in comparing the advantages or constructing satellite or regional WRFs that permitted users to develop and apply weights to customized ranking criteria for economic and non-economic evaluations was included as part of this study.

Evaluation of Potential Nutrient Impacts Related to Florida's Water Reuse Program, Washington, DC
Technical Advisor for a study that was a joint collaboration project with the WateReuse Research Foundation, eight utilities, and four regulatory agencies. The nitrogen and phosphorous loading into waterways from point and non-point sources is of increasing concern. The beneficial use of reclaimed water is extremely important to reduce demand on potable water consumption. However, the ecological impact to receiving water bodies from potential nutrient loading associated with reclaimed water is not adequately understood. This study identified analytical reconnaissance techniques that can assist in elucidating the origins of the nutrients contributing to the impairment of surface water and groundwater. By establishing the capability to distinguish between the sources of nutrient loadings, resources can be appropriately targeted to control nitrogen and phosphorus loading into waterways. The results of this study provided: a broad assessment of nitrogen and phosphorus levels at selected reuse facilities; assessment of potential markers for water reuse, stormwater and septic influence on waterways, and their environmental fate and characteristics from lab tests for adsorption, biodegradation and photodegradation; determined the suitability of the markers; and developed a tool to determine the source of nutrient loading in an impaired waterbody by integrating markers within a sampling assessment and data analysis scheme.

Treating Municipal Reclaimed Water for Multipurpose Industrial Reuse Applications at an Electric Utility and for Wetlands Rehydration in Florida
Hal led the Technical Advisory Committee that oversaw the WateReuse Research Foundation (WRRF) study that investigated the opportunities to reuse the reclaimed water for industrial reuse and wetlands rehydration purposes.

This project documented the findings from the bench and pilot scale studies performed for each of the treatment technologies evaluated. It also further expanded the beneficial water reuse in Florida at Power Plants, but also nationwide, fulfilled the WRRF initiatives that aim at expanding water reuse opportunities for industrial water users. This project developed a comprehensive and critical knowledge-base, which was not available in the public domain, for developing fit-for-purpose solutions for the application of municipal reclaimed water for industrial uses and for restoration of natural ecosystems.

Advanced Wastewater Treatment Plant Expansion/ Reclaimed Effluent Reuse, Edgewater, Florida
Project Director to assist the City of Edgewater with meeting the requirements of the Indian River Lagoon Act, which required that the effluent meet advanced treatment standards or 5-5-3-1 (BOD-TSS-TN-TP. In addition, the improvements had to be completed while the existing wastewater treatment facilities remained in service. Upgrades expanded the facility to treat 2.5 MGD, and included a new pretreatment structure (screening and grit removal), a dual train five-stage Bardenpho® process to remove nitrogen and phosphorus, two 80-feet diameter secondary clarifiers, deep bed effluent filters and high rate disinfection. The effluent from this facility is stored on-site in a 2.0 million gallon ground strorage tank and pumped to a public access reclaimed water system for residential reuse. Wet weather discharge when needed was permitted to discharge to the Indian River Lagoon. Residuals management facilities consist of aerobic digestion and sludge thickening prior to land application. The facility was completed without any interruption of service or permit excursions. At start-up the facility reused nearly 100% of the wastewater treated for landscape irrigation at residential homes, recreational parks and greenspace areas.

Zuhal Ozturk PhD, PE
Planning Lead

Dr. Ozturk is an environmental engineer with over 12 years of experience in water and wastewater treatment, water reuse and permitting. Her experience emphasizes coordination of complex civil/environmental engineering permitting efforts, advanced wastewater treatment processes, stormwater modeling, remediation of chlorinated solvents using permeable reactive barriers, hydrogeological modeling of solute transport and industrial wastewater treatment. Her wide technical knowledge and practical experience have proven very beneficial and critical in the successful outcomes of the permitting efforts in Florida. She has technical publications and presentations depicting her area of expertise and experience.

EDUCATION

PhD, Civil (Environmental) Engineering, Florida International University, 2006

MS, Environmental Engineering, Istanbul Technical University, 2000

B.Sc., Environmental Engineering, Istanbul Technical University,1996

REGISTRATIONS

Professional Engineer # 79757, State of Florida

PROJECT EXPERIENCE

Town of Davie Pilot Study, Town of Davie, Florida
Dr. Ozturk was responsible for the coordination of the Advanced Oxidation Process (AOP) Treatment Study for the Town of Davie Pilot Study conducted for Indirect Potable Reuse via Groundwater Aquifer Recharge. Study was designed to evaluate the feasibility of Ultrafiltration (UF), Reverse Osmosis (RO) and Ultraviolet Light (UV) and UV/Hydrogen Peroxide (UV/H2O2) for removal of both conventional water quality parameters and emerging microconstituents. Approach was proven feasible through the 6-month pilot and AOP bench scale testing. A report was prepared and submitted to the Florida Department of Environmental Protection Agency (FDEP). In addition, the result of the AOP Treatment Study was presented to the FDEP and at several local and national conferences.

Peace River Reservoir Project, Peace River, Florida
Project Engineer – Worked to secure the Environmental Resource Permit (ERP) for Peace River, FL. She conducted stormwater modeling using ICPR3 to evaluate feasibility of the design of the new improvements around the Peace River Reservoir as part of the ERP application preparation process.

City of Fort Lauderdale - Fiveash Water Treatment Plant Evaluation and GAC Pilot Testing Project, Fort Lauderdale, Florida
Assistant PM – Dr. Ozturk served as the Assistant Project Manager and Senior Engineer for this project. Her responsibilities included coordination of the team members, review of existing technical reports including City's Comprehensive Utility Strategic Master Plan (CUSMP) regarding condition assessments and scheduled rehabilitations and/or replacements both for the Fiveash WTP and Prospect Wellfield. She was also responsible for coordination of Site Visits and compilation of Site Visit observations conducted at the Fiveash WTP and Prospect Wellfield. A Technical Memorandum was prepared for the "Existing Facility Condition Assessment" which included these evaluations and recommendations for the current and anticipated future condition for the Fiveash WTP and Prospect Wellfield.

Town of Davie, Ten-Year Water Supply Facilities Work Plan (WSFWP) - 2020 Update, Town of Davie, Florida
Project Manager – Dr Ozturk is serving as the Project Manager for the Town's Ten-Year Water Supply Facilities Work Plan (WSFWP) - 2020 Update Project. She is responsible for coordination with the Client and other agencies and municipalities during the preparation of the Town's Draft and Final WSFWP. Her other responsibilities include reviewing the data, reports and applicable policies, monitoring and preparing the deliverables, addressing comments received from the South Florida Water Management District (SFWMD), preparation and submittal of the invoices and budget projections.

City of Sunrise, Ten-Year Water Supply Facilities Work Plan (WSFWP) – 2020 Update, City of Sunrise, Florida
Project Manager – Dr Ozturk is serving as the Project Manager for the City's Ten-Year Water Supply Facilities Work Plan (WSFWP) – 2020 Update Project. She is responsible for coordination with the Client and other agencies and municipalities regarding the City's Draft and Final WSFWP. Her other responsibilities include reviewing

Zuhal Ozturk PhD, PE
Planning Lead

the data, reports and policies, monitoring and preparing the deliverables, addressing comments received from the South Florida Water Management District (SFWMD), preparation and submittal of the invoices and budget projections.

City of Oakland Park, Ten-Year Water Supply Facilities Work Plan (WSFWP) - 2020 Update, City of Oakland Park, Florida
Project Manager – Dr Ozturk is serving as the Project Manager for the City's Ten-Year Water Supply Facilities Work Plan (WSFWP) – 2020 Update Project. She has been responsible for coordination with the Client in efforts to prepare the City's Draft and Final WSFWP. Her other responsibilities include reviewing the data, reports and policies, monitoring and preparing the deliverables, preparation and submittal of the invoices and budget projections.

City of Hialeah ROWTP, Hialeah, Florida
Permitting Coordinator – Dr. Ozturk was responsible for the coordination of the permitting efforts for the 10 MGD design build operate (DBO) Hialeah Reverse Osmosis Water Treatment Plant (ROWTP). Her responsibilities included coordination of the permitting staff, follow up for the permitting efforts, serve as the conduit between the Project Team and the permitting agencies.

MDWASD Transmission Water Main Project Phase I,II&III, Hialeah, Florida
Project Engineer – Dr. Ozturk served as the project engineer for MDWASD Transmission Water Main Project Phase I&II which entailed over 10,000 lf of 36-inch pipe for Finished Water Main. Responsibilities included the coordination of the environmental permitting staff to support the design team in the selection of the best possible route for the proposed transmission water main that transfer treated water from the Hialeah ROWTP. The project included a Microtunnel under I-75 and Horizontal Directional Drill (HDD) under a canal culvert.

MDWASD Miami Springs Wellfield Rehabilitation Project Step 1, 2 and 3, Miami Gardens, Florida
Deputy Project Manager/Project Engineer - Responsibilities included the coordination and preparation of the project components including permitting, design, research, regulatory compliance and bid documents. She also worked with the Construction Managers regarding coordination and review of the Shop Drawings and RFIs during the Step 1 production water well drilling phase of the project. She maintained communication with stakeholders related to the project as well as local, state and federal agencies.

City of Hialeah ROWTP, Hialeah, Florida
Project Engineer – She was responsible for the coordination of the Acceptance Test for the 10 MGD design build operate (DBO) Hialeah Reverse Osmosis Water Treatment Plant (ROWTP). Responsibilities included preparation of the Acceptance Test Plan and Schedule per the Contract requirements and applicable Operation Permits, working closely with the Acceptance Test team members to ensure all testing and operating conditions are recorded, coordination with the labs for sampling and test result reports.

City of North Miami Beach SSES Annual Report, City of NMB, Florida
Project Engineer - Prepared the City of North Miami Beach (CNMB) 2009, 2011, 2013 Sanitary Sewer Evaluation Survey (SSES) Annual Reports. Project included the review and qualification of the sanitary sewer inspection efforts and to prepare the Calendar Year 2009, 2011, 2013 Annual Reports for submittal to the Miami-Dade County Department of Environmental Resources Management (DERM) for the CNMB's wastewater collection system.

Tampa Electric Company, Tampa, Florida
Project Engineer - Served as the project engineer for Tampa Electric Company (TECO) and performed a feasibility study. A conceptual design was developed to reduce selenium levels in the discharge of the cooling water reservoir to levels within the National Pollution Discharge Elimination System (NPDES) permit constraints.

Heath Wintz PE
Water Treatment Lead

Heath has 21 years of experience providing engineering services for treatment and disinfection of potable water, as well as treatment and reuse of municipal and industrial wastewater. Heath's experience includes the design of pump stations, hydraulic structures, chemical feed and process control systems.

EDUCATION
Bachelor of Science, Environmental Engineering
Gainesville, Florida, University of Florida, 2004

REGISTRATIONS
Professional Engineer #69261, State of Florida

PROJECT EXPERIENCE
Reclaimed Water Pump Station, Hobe Sound, Florida
Project Engineer for the design of a reclaimed water pumping station consisting of horizontal pumps, concrete pad, shade structure and controls to deliver treated effluent to golf course irrigation ponds. Coordinated structural and electrical sub-consultant work for flow-paced pump system.

FPL Reclaimed Water Facility at ECRWRF, West Palm Beach, Florida
Project Engineer to conduct bench scale coagulant and disinfectant testing and collaborated on Preliminary Engineering Report for 27 million gallon/day (MGD) reclaimed water facility. Designed 600 HP vertical turbine effluent pump station, ground storage tank, alum, polymer and magnesium hydroxide chemical feed systems and reject lift station for fast track schedule and startup to supply cooling water to the FPL West County Energy Center.

Condition Assessment, West Palm Beach, Florida
Lead Process Mechanical Engineer for a mechanical assessment of surface water WTP assets. Created database to identify equipment, condition, photographs, and operation conditions to project remaining useful life and prioritize replacement needs for CIP. Coordinated with structure and electrical engineers for discipline specific investigations and assessments.

Filter Assessment & Rehabilitation, West Palm Beach, Florida
Lead Process Mechanical Engineer for a filter media condition assessment. Lead process mechanical design effort to review record drawings and prepare unit-price contract to rehabilitate 32 dual media filters including rehab of concrete walls, air scour laterals, and replacement of clay tile with HDPE underdrain block for air/water backwash.

UV System and Related Infrastructure, West Palm Beach, Florida
Lead Process Mechanical Engineer for the lead process mechanical team through the fast-track design of a 50-MGD UV treatment process building including a new transfer pump station, hypochlorite storage and feed systems, bypass of 32 filters via large diameter hot taps, line stops, and custom fabricated steel fittings. He coordinated SCADA system and fiber optic network modifications for controls. He replaced large split-case centrifugal high-service pumps while minimizing time out of service.

Treatment Alternatives Evaluation, West Palm Beach, Florida
Lead Process Mechanical Engineer for the multidiscipline engineering evaluation of treatment facility modifications for Ion Exchange, Ultrafiltration, Actiflo, PAC and UV treatment processes. Coordinated conceptual design with construction group to develop budget level capital and NPV costs based on geotechnical, structural, mechanical, electrical and control needs of each alternative.

Plant Automation, West Palm Beach, Florida
Project Engineer to develop P&IDs for existing treatment processes and collaborated with instrumentation and system integration staff to develop plans and specifications for SCADA automation of 47 MGD surface water treatment plant originally constructed in 1894. Provided operational/engineering knowledge of facility to ensure integration with projects under design as part of overall program management.

Filter Automation and Chemical System Improvements, Riviera Beach, Florida
Project Engineer to develop P&IDs, mechanical drawings and specifications for upgrade to electrically actuated filter valves and rate of flow controllers; and, pre-purchase of alum and polymer feed systems and integration of systems with existing controls for 7 MGD lime softening facility.

Heath Wintz PE
Water Treatment Lead

Finished Water Mixing and Metering, West Palm Beach, Florida
Project Engineer to conduct field testing and bench scale simulation of monochloramine disinfection. Developed plans and specifications for chemical static mixing and flow metering equipment to automate and flow pace finished water chemical dosing. Coordinated health department permitting and contractor selection for critical tie-ins.

Bulk Hypochlorite Conversion, West Palm Beach, Florida
Project Engineer to conduct bench scale monochloramine disinfection tests to determine impact of hypochlorite on turbidity, caustic usage and disinfection byproduct formation. Implemented phased approach to dose hypochlorite while existing chlorine gas building converted to bulk storage and coordinating local sub-consultants with in-house design professionals.

Vulnerability Assessment, West Palm Beach, Florida
Project Engineer for the review of water supply, treatment and distribution system security measures to identify system vulnerabilities. Prepare recommendations to reduce possible negative impact to water treatment and distribution systems.

Chemical Feed System Improvements, Stuart, Florida
Project Engineer for the designed of a polymer mixing and feed system as well as fluoride injection and monitoring system. Assisted with design, permitting and cost estimation of ground storage tank, VOC stripping tower and high service pumps.

Reverse Osmosis Improvements, Lake Worth, Florida
Project Engineer for the development of P&IDs, mechanical drawings and specifications for RO membrane skids and Clean In Place system to interface with overall WTP expansion project.

Electronic Operations Guide, West Palm Beach, Florida
Project Engineer for the reviewed of O&M manuals and interviewed facility operations group to prepare P&IDs and SOPs for unit processes including chemical dosing, flocculation, sedimentation, and disinfection. Developed web-based application to train operators & utility staff on operation and maintenance, troubleshooting and process control.

Treatment Alternatives Evaluation, West Palm Beach, Florida
Lead Process Mechanical Engineer for the multidiscipline engineering evaluation of treatment facility modifications for Ion Exchange, Ultrafiltration, Actiflo, PAC and UV treatment processes. Coordinated conceptual design with construction group to develop budget level capital and NPV costs based on geotechnical, structural, mechanical, electrical and control needs of each alternative.

Injection Well (IW-2) Wellhead Repair/Rehab, Venice Gardens East Water Reclamation Facility, Venice, Florida
Lead Engineer to prepare specifications and drawings for modifications to injection well including purge water piping and reduced pressure zone assembly to simplify sampling. Engineer of Record providing design and technical oversight in addition to preparation of permit documents for FDEP.

Design and FDEP UIC Permitting of Injection Wells at the Central District WWTP, Miami, Florida
Lead Engineer to coordinate mechanical wellhead design and siting of six new Class-I 3400-ft injection wells for disposal of AADF in order to comply with Ocean Outfall Elimination Legislation (OOL) Mr. Wintz served as the Engineer of Record providing design and technical oversight in addition to preparation of permit documents for FDEP.

Injection Well (IW-1) Modification, Pompano, Florida
Lead Engineer to preparespecifications and reviewed drawings for relining of the concentrate injection well with FRP and mechanical integrity testing. Mr. Wintz served as the Engineer of Record providing design and technical oversight in addition to preparation of permit documents for FDEP.

Dual Zone Monitoring Well (DZMW) Modification, Pompano, Florida
Lead Engineer to prepare drawings and short-form specifications for modification of the dual-zone monitoring well purge piping. Evaluated capability of existing pumps to operate with reduced pressure zone assembly. Mr. Wintz served as the Engineer of Record providing design and technical oversight in addition to preparation of permit documents for FDEP.

Jeovanni Ayala-Lugo PE
Reclaimed Water Treatment Lead

Jeovanni is a supervising engineer with over 18 years of experience focusing on wastewater and residuals treatment. His experience includes residuals master plans, design, condition assessments, construction and startup of wastewater and residuals facilities. Jeovanni has worked on preliminary and final designs, served as plant construction supervisor and design manager for a project requiring coordination between remote design groups in Denver, Cleveland, India and Pasadena. He has prepared operations manuals and standard operating procedures and as well as provided technical support during permitting efforts with EPA, FDEP and SWFWMD.

EDUCATION

BS, Chemical Engineering, San Juan, Puerto Rico, University of Puerto Rico, 2000

REGISTRATIONS

Professional Engineer #72421, State of Florida

PROJECT EXPERIENCE

City of Sunrise Water Reclamation Facility Expansion Preliminary Engineering Report, Sunrise, Florida
Project Engineer for the Preliminary Design Report for the Sunrise Water Reclamation Facility. This facility was used as a model of water reclamation and as such, included advance treatment techniques not usually found of facilities of this size. This included, fine screening of the infuent, MBR, RO and UV technologies. Responsible for establishing the design requirements for all aspects of the treatment process. Coordinated with equipment manufacturers, design centers in Cleveland, Denver, India and the Client to establish adequate layouts to minimize the plant's footprint. Equipment layout allowed for multiple types of units and adequate access for operation and maintenance of the equipment. Developed initial cost estimate for the expansion of the facility. TEC UIC Pump Systems, Mulberry, FL. Jeovanni was responsible for the design of the filtration and pumping system utilized to treat a high chloride, low pH waste stream prior to injection to via deep wells at the Polk Power Station. The project included material analysis due to waste stream characteristics, two inline pump stations, cartridge filtration, chemical injection systems and monitor well pumps. Project completed in 90 days to meet the Client accelerated schedule requirements.

Ozone Disinfection Evaluation, Cape Coral, Florida
Jeovanni is currently a project engineer for the evaluation and feasibility of ozone as a treatment alternative for hydrogen sulfide from groundwater that could be used to supplement the reclaimed water supply. The evaluation will identify capital improvements, operational requirements and costs.

West Palm Beach Water Treatment Plant Improvements West Palm Beach, Florida
Jeovanni served as part of the project design team for the design, permit and construction management service for the upgrade of a 47 mgd plant. The design included sodium hypochlorite and aqua ammonia above grade mixing, treatment process selection, IX preliminary design and permitting, mechanical, electrical and structural condition assessment, chemical feed systems and pump station modifications.

David L. Tippin Water Treatment Facility Filtration System Replacement, Tampa, Florida
Jeovanni supervised the replacement of 32 dual media filter. The work included the demolition of the existing underdrain system and replacement with new plastic underdrains. The new underdrain system was attached to the concrete structure with anchor bolts to prevent uplift during operation. In addition, the existing sand and carbon media were replaced to improve treatment capacity of the filtration systems; He was responsible for determining the optimal depth of the dual media (sand and granular activated carbon) layers required to improve the system performance.

Falkenburg Advanced Wastewater Treatment Plant Expansion, Hillsborough County, Florida
Construction Supervisor for the Falkenburg AWTP expansion from 6.0 mgd to 9.0 mgd. Prepared the operational manuals sections for biological treatment and residual solids treatment. The plant expansion included the addition of new denitrification filters, secondary effluent pumping station, final effluent pumps, new thickening/ dewatering press units, miscellaneous piping and civil works. This project also involved the addition of new reuse pumps, piping and a 5-MG storage tank. Engineering work included preliminary design, final design, and construction-phase services, permitting with FDEP/ SWFWMD, and startup and commissioning services.

Jeovanni Ayala-Lugo PE
Reclaimed Water Treatment Lead

City of Zephyrhills Wastewater Treatment Facilities Expansion, Zephyrhills, Florida
Design Engineer assisting in the development of the design requirements and drawing layouts for the pretreatment structure and the biological treatment basins. Established the requirements for the new secondary clarifiers and its ancillary equipment. Designed of the new sodium hypochlorite storage/delivery system and the conversion of the existing clarifiers into sludge holding tanks, including the new mixers and aeration blowers. Produced the project's contract documents. Conducted pre-bid meetings responded to the request for clarification.

City of Cape Coral Biosolids Treatment Facility, Cape Coral, Florida
Lead Process/Mechanical Engineer for the mechanical and process engineer for this project and as such, established the technical elements (residuals production estimates, dewatering equipment size, thermal dryer equipment size, and building and equipment layout) for the new Biosolids Treatment Facility (BTF) in the City of Cape Coral. The scope included sludge centrifuges, sludge storage and processing, thermal drying, pelletizing and final product storage and delivery systems. Jeovanni developed the specification requirements for the thermal dryer and dewatering equipment that allowed the City to pre-purchase the equipment and save approximately $1 M in taxes. Responsible for the coordination between all the design disciplines involved including designers and engineers in Denver, Cleveland, India and Pasadena.

Hillsborough County Residual Management Plan/ Northwest Class A Sludge Processing Facility Hillsborough County, Florida
Project Engineer to estimate residual production for the County facilities. Developed tools to determine hauling cost, equipment sizing and system requirements according to residual productions. Established the technical elements; dewatering equipment size, thermal dryer equipment size for the project. Designed the layout of the thermal dryers and building to minimize equipment footprint while maximizing access to frequently maintained units. Performed inspections during the construction phase as a part time resident engineer and was the expert witness for the County during the performance test of the equipment. Provided initial troubleshooting, light repairs and also provided suggestions on operational parameters to optimize the performance of the thermal dryers. Developed a preventive maintenance calendar with reminders to maximize the operation time of the equipment. Coordinated all warranty work for equipment provided in this project.

Mayaguez Regional Wastewater Treatment Plant * Mayaguez, Puerto Rico
Project/Commissioning Engineer responsible for startup and operation of a 22.5-MGD secondary wastewater treatment plant and residuals facilities in Mayaguez, PR. He coordinated equipment inspections and training for the utility operators and mechanics. He also redacted and executed equipment-testing procedures as well as the overall facility operation/maintenance manuals. In addition, Jeovanni supervised eight employees operating the plant. This included all laboratory work required ensuring the plant was complied with EPA, JCA regulations, the operation and preventive maintenance of the wastewater facility equipment, the operation of the residuals treatment equipment and monthly reporting to EPA and JCA. The startup process had duration of 12 months after which the plant operations were turned over to the utility.

WASD CDWWTP & SDWWTP Thickening and Dewatering System Replacement, Miami, Florida
Mechanical Lead for two teams assigned to develop design criteria documents for the new thickening and dewatering facilities of WASD's SDWWTP (115 mgd) and CDWWTP (143 MGD). Jeovanni and his teams analyzed the biosolids production for the CDWWTP and SDWWTP. Evaluated between five thickening technologies and four dewatering technologies to recommend alternatives best suited for the department needs. The Stantec team then developed a BIM model (Revit) of the proposed of the new facilities and the design criteria (specifications, drawing and BODR) documents to allow the department to issue request for design-build services document. The 7 consent decree projects encompassing the WORK were combined into a single project with estimated construction cost of $150 million dollars.

Rick Cowles PG

Water Supply and Deep Injection Wells Lead

Rick is a Senior Hydrogeologist with 29 years of experience in groundwater supply development and other environmental issues. He works within the regulatory framework related to environmental and construction issues including development of permits and plans for submittal to regulatory agencies. Rick has designed and installed numerous production wells for drinking water supply, groundwater recovery, water quality issues, and gradient control, and conducted aquifer testing to evaluate well efficiency, well field yield, determine recovery well capture zone and to determine aquifer coefficients. He utilized electromagnetic conductance (EM) and resistivity geophysical methods to identify new well field sites, and to determine the limits of waste placement and areas of leachate generation and migration at landfills.

EDUCATION

Bachelor of Science in Geology, Alliance, Ohio, Mount Union College, 1991

Graduate Studies in MS Hydrogeology & Geophysics Dayton, Ohio, Wright State University, 1993

REGISTRATIONS

Professional Geologist #2656, State of Florida

PROJECT EXPERIENCE

Deep Injection Well Design and CA Services, Hollywood, Florida
As project manager, Rick oversaw the development of design documents, permitting activities with FDEP-UIC, and bidding services for selection of a drilling contractor. The City of Hollywood needed to construct a deep injection well (DIW) and dual zone monitoring well (DZMW) system for disposal of RO concentrate and provide backup disposal for wastewater effluent. The next phase of work was to be the installation of the DIW and DZMW system. We provided construction management and full time field services during the installation of the DIW system.

Deep Injection Well Design and Permitting, Sunrise, Florida
Project Manager for the development of design documents and FDEP-UIC permit application for two deep injection wells (DIW) and one dual zone monitoring well. These are large capacity DIW designed for an average flow of greater than 13 mgd each. The wells will receive comingled RO concentrate and wastewater effluent.

Deep Inject Well IW-2, Burnt Store, Florida
Project Manager for permitting, design, and construction services for the installation of a deep injection well IW-2 at the Burnt Store facility. The contracting team provided permitting services, developed plans and specifications, and provided construction administrative and field services for the installation of one deep injection with a capacity of 9.5 mgd combined flow for wastewater and RO concentrate. The team worked closely with David Rhodes and FDEP staff to obtain a deep injection well permit. We also worked closely with CCU staff to understand future use of the DIW and to provide support during construction and operational testing of the well.

Testing of Deep Injection Well, Punta Gorda, Florida
Project Manager for MIT deep injection well project. Every five years, deep injection wells in the State of Florida need to be tested to determine if their mechanical integrity is sound. Contractor was tasked to conduct mechanical integrity tests (MITs) of deep injection wells in Charlotte County, Florida. This testing involved camera surveys, pressure testing, geophysical logging, and radioactive tracer testing of each well.

15 MGD Test Production Well Design, FPL/NextEra
Client Manager and lead for development of 15 MGD test production well design and bid documents associated with source water and wellhead construction for a deep injection well system. The project involved the construction of four source water production wells that produces 15 MGD of hypersaline water and the permitting of the DIW to receive the water. Construction oversight and oversight of a 15 MGD injection test and long-term operational testing are part of the project.

15 MGD Recovery Well System Design, FPL/NextEra
Client Manager and lead for design and construction of a 15 MGD hypersaline recovery well system. These design efforts included 9 miles of pipeline, 10 production wells, wellheads, control system, a 250-foot pipe bridge, and construction oversight. The water is pumped to an existing underground control (UIC) deep injection well (DIW).

Rick Cowles PG

Water Supply and Deep Injection Wells Lead

Biscayne Aquifer Test Production Well. FPL/NextEra
Client Manager and lead for the development of 4,600 gpm test production well design, construction oversight, and conducting of a 5-day constant rate pumping test. The results of the pumping test are being used in a three-dimensional groundwater model. This is a turnkey project that included all aspects of the production well design and construction, testing and analysis of aquifer test data.

Upper Floridan Aquifer Well, FPL/NextEra
Client Manager lead for the design of the wellhead and piping associated with an Upper Floridan Aquifer Flex Well at Turkey Point Nuclear Power Plant. The well is expected to be approximately 1300 feet deep and produce approximately 3 MGD of brackish groundwater

New Municipal Wells, Troy, Ohio
Technical Lead for the expansion of a municipal water supply well field. As part of a well field expansion project, three new production wells were planned. However, VOC contamination was threatening the well fields. Based on the results of three-dimensional modeling that showed VOC contamination would not reach the new production wells, Ohio EPA granted well site acceptance of the production well expansion and pre-design considerations for the production wells have been completed. All three production wells were installed along with pumps and pitless adaptors.

Foam Removal System Full Scale Design and Construction Services, FPL/NextEra
Client Manager and lead for the development of a full-scale foam removal system design. The design included two suction heads, a support bridge, vacuum system, and conveyance piping to the existing deep injection well.

Water Supply Development, DUKE Energy, Florida
Client Manager and lead for the development of two water supply wells for the Suwannee Power Plant. This project involved the design of the wells, requesting a modification of the water use permit, construction of the wells, and testing. In addition, an evaluation of the existing production wells was made to determine if rehabilitation would restore yield to the wells. The project was canceled shortly after the production wells were sited and designed, and the permit modification was submitted to the district for review.

Design of Biscayne Aquifer Replacement Production Wells, Sunrise Florida
Project Manager for the design of eight replacement Biscayne Aquifer production wells. Each well is anticipated to produce around two MGD with minimal drawdown. Test borings were installed at each well location to confirm assumed hydrogeologic conditions. Two 24-hour constant rate tests were conducted to determine aquifer coefficients and to aid in the siting of additional wells in the well field.

Florida Biscayne Aquifer Well Field Rehabilitation, Sunrise Florida
Project Manager for the development of a well field performance plan, conducting of 15 production well performance tests, development of a basis of design report, and development of specifications for the rehabilitation of 15 public water supply wells. The city of Sunrise has observed a substantial reduction in capacity of one of their Biscayne Aquifer well fields from 24 mgd to 16 mgd. As part of our investigation, we determined that the reduction in capacity was the result of poor performance of some wells and from leaking check valves. Based on the results of the investigation, it was determined that at least four production wells need to be replaced, 6 production wells are producing large quantities of sand and may need to be replaced, 9 check valves need to be replaced and 8 flow meters need to be replaced. Current work is focusing on the rehabilitation of the production wells. The next phase of work included the development of design specifications for the installation of replacement production wells, pump replacement, and wellhead upgrades.

Broward County Well Evaluation and Biscayne Aquifer Replacement, Broward County, Florida
Project Manager for the evaluation and development of design documents for the replacement of two Biscayne Aquifer projection wells in the County's 2A well field. Based on well performance testing, it was determined that the performance of existing wells No. 8 and No. 9 could not be improved by rehabilitation. As a result, design documents were prepared to replace the production wells utilizing the existing casings and vaults. This involved increasing the size the wells final casings and deepening the wells. New pumps and motors were also designed.

Dave Clarke PE, CFM

Pipeline and Pump Station Design Lead

Dave has 18 years of experience on numerous public infrastructure projects which includes coordination and design of water and wastewater utilities for major projects, including urban arterials, limited access facilities, for City of Sunrise, Town of Davie, Miami-Dade County Water and Sewer Department (M-D WASD), and design-build projects for Florida Department of Transportation (FDOT), and Florida Turnpike through Joint Project Agreements (JPAs). He has extensive permitting experience with many of the regulatory agencies including the Florida Department of Environmental Protection Department (FDEP), South Florida Water Management District (SFWMD), Department of Health (DOH), and numerous Public Works Department in Broward and Miami-Dade County.

EDUCATION

Master of Science in Civil Engineering, Florida International University, Miami Beach, Florida, 2008

Bachelor of Science in Civil Engineering, Florida International University, Miami Beach, Florida, 2002

REGISTRATIONS

Professional Engineer #66553, State of Florida

Certified Floodplain Manager #US-12-06737, State of Florida

PROJECT EXPERIENCE

West River Interceptor Overflow Pump Station and Force Main, City of Tampa, Florida
QA/QC for the detail design and permitting for over 9,800 linear feet of 20-inch PVC and Fusible-PVC force main and a pump station Design-Build Project. There was a total of ten Horizontal Directional Drills (HDD) that totaled approximately 7,700 linear feet; the longest HDD was 2,000 linear feet. The project also included a new emergency diversion pump station at the west river interceptor crossing. The purpose of the diversion was to redirect wastewater during periods of high flows thus reducing the risks of sanitary sewer overflows to the adjacent river. The project began at the river crossing located at the existing Perry Pump Station site with the force main going through the Riverside Heights community and connecting to an existing force main at N. Central Avenue / Floribraska Avenue. The City of Tampa approached Stantec and the Contractor to perform the work on this project as a Design Build with the goal of completing the project before the start of rainy season, which was accomplished.

City of Sunrise ASR Well Raw and Reuse Water Mains Sunrise, Florida
Engineer of Record in Construction for the installation of approximately 30,000 linear feet (LF) of new mains for 1) a new reuse distribution system and 2) for a new Aquifer Storage and Recovery (ASR) well system. The portion of the work related to new reuse distribution system consists of approximately 23,000 (LF) of ductile iron pipe (DIP), valves and fittings ranging in size between 4-inches and 36-inches in diameter to be installed along NW 2nd Street, NW 136th Avenue, Sawgrass Corporate Parkway, International Parkway, NW 146th Avenue and NW 8th Street. The portion of the work related to the new raw water transmission main for the Sawgrass ASR Well System Design includes approximately 7,000 LF of 16-in HDPE, valves and fittings, connecting the ASR booster pump station within the Sawgrass Utility Complex and the SGF-1 ASR well along NW 8th Street. The proposed raw water main will continue along International Parkway towards NW 146th Avenue and include a future connection to SGF-2 ASR well.

City of Sunrise, JPA Relocation 8-inch Water Main, Broward County Florida
Project Manager for this project for which the City of Sunrise Utilities Department owns and maintains an existing distribution 8-inch Polyvinyl Chloride (PVC) portable Water Main (WM) facility which currently serves residents and businesses along SR 84 EB between Pine Island and University Drive. It is necessary to relocate a portion of this WM along SR 84 EB to facilitate the proposed sound barrier wall number six (6) construction which consists of two sections along SR 84 EB. The firm is in charge of the design to relocate approximately 550 LF of the existing WM, the technical special provisions and permitting through FDOT (utility office) and Broward County Health Department.

Town of Davie JPA Relocation 4-inch Force Main, Broward County, Florida
Project Manager for this project. The Town of Davie Utilities Department owns and maintains an existing 4-inch Polyvinyl chloride (PVC) Force main (FM) facility which currently serves Bradford Marine. The existing

Dave Clarke PE, CFM
Pipeline and Pump Station Design Lead

4-inch FM ties into an existing lift station at Bradford Marine then continues to the west North of SR 84 WB, Ramp U-15 and South of Canal Drive, and diverts to the North into New River Cove Apartments, where it terminates into an existing manhole. The firm is in charge of the design to relocate approximately 942 LF of the existing FM, the Technical Special Provisions, quantities, and permitting through FDOT (utility office) and FDEP.

JPA Relocation Plans 16-inch Force Main, Broward County, Florida
Project Manager for this DBFOM project with concessionaire Dragados USA. The City of Sunrise Utilities Department owns and operates a 16-inch Ductile Iron Pipe (DIP) Force Main (FM) facility serving residents and businesses throughout the I-595 corridor and was in conflict with the I-595 Improvements. The roadway improvements required a design to relocate approximately 1,026 LF of existing FM, the technical special provisions, quantities, and permitting through FDOT (utility office) and FDEP.

JPA Relocation Plans 16-inch Water Main along NW 47th Avenue, Miami, Florida
Project Manager for the design and construction of 10,023 LF of 16" ductile iron watermain, along SR 847/NW 47th Avenue from SR 860/NW 183rd Street to North of NW 207th Drive and a 500 LF horizontal directional drill (HDD) beneath the SFWMD Snake Creek Canal. The project includes installation of new fire hydrants according to Miami-Dade Fire Department requirements, new water services and reconnections of existing stub outs within the project limits. Services provided include; conducting site investigations, utility coordination, topographic surveys, geotechnical investigation, engineering design, develop construction documents (plans & specifications), permitting and providing support services during procurement and construction.

MDWASD Design Criteria Package for 36-inch Force Main, Miami, Florida
Project Manager. As part of the Doral Area Sewer Improvements, MD-WASD intends to abandon-in-place an existing 24" force main and replace it with a 36" DIP force main along NW 107th Avenue, from a point approximately 300 feet south of NW 7th Street (Fountanbleu Blvd.) to NW 25th Street. The 36" DIP force main will cross under the CXS rail road located just north of SR 836. The new force main will connect to an existing 36" force main at the south part terminus, and to an existing 20" force main at the north part terminus. Stantec is the Design/Build Criteria Professional (DCP) for this project responsible for the development of a Design Criteria Package, Procurement Support and limited services during the Design-Build Contract period. This included gathering and reviewing background information for evaluating possible pipeline alignments and recommend the final alignment to be used for the base Design criteria, Request for Design Build Services (RDBS) Volumes I and II Package per M-D WASD requirements and procurement support.

Sanitary Sewer Evaluation Study (SSES), Medley, Florida
Project Inspector responsible for field evaluation of field investigation data by independent contractor of the city-wide collection system, including cleaning, television inspection, manhole investigation, inflow and infiltration and smoke testing. Inspector responsible for marinating progress sketches, repair quantities, and quality of work.

JPA Relocation for 8-inch Waste Water Force Main and Gravity Sewer along NW 47th Avenue, Miami, Florida
Project Manager for the construction documents for the installation of approximately 1,100 LF of 8" ductile iron waste water forcemain and 2, 500 LF of gravity sewer along SR 847/NW 47th Avenue from SR 860/ NW 183rd Street to North of NW 207th Drive. Services provided include; conducting site investigations, utility coordination, topographic surveys, geotechnical investigation, engineering design, develop construction documents (plans & specifications), opinion of probable construction cost, permitting and providing support services during procurement and construction.

SL-1B.1 66-inch Force Main to SDWWTP Phase 1, Miami, Florida, Miami, Florida
Design Manager for this project. SL-1B.1 is an MD WASD 66-inch transmission force main proposed to convey wastewater flows from the east terminus of SL-2.2 100 feet west of the intersection of SW 112TH Avenue and SW 216TH Street to the existing 60-inch pipe connection on an existing 72-inch transmission force main at the the intersection of SW 97TH Ave and SW 216TH Street near the SDWWTP. The force main has an approximate length of 8,700 linear feet. There is trenchless crossing under the Florida's Turnpike and SFWMD's Black Creek (C-1) Canal with a Mirco-tunnel. A new 90-inch steel casing will be used to accomplish the micro tunnel.

Marlon Medina PE, CFM
Pump Station Engineering

Marlon has over 12 years of experience in the design of Civil Engineering systems including drainage, paving and utilities for large scale projects. He has served as project engineer for various drainage, water, sewer, underground electrical, and industrial projects. His experience has allowed him to effectively deliver projects satisfying all owner requirements. He is proficient at various software packages including Microsoft Project, MBR (SFWMD Multi-Basin Routing Software), Flowmaster, AutoCAD, AutoTurn and EaglePoint.

EDUCATION
Bachelor of Science in Civil Engineering, Florida State University, Tallahassee, Florida, 2008

REGISTRATIONS
Professional Engineer #77052, State of Florida
Certified Floodplain Manager #US-12-06741, State of Florida

PROJECT EXPERIENCE
MD-WASD's Pump Station Improvement Program (PSIP), Miami, Florida
Project Manager and Engineer of Record for several pump stations part of the PSIP. US-EPA issued a Consent Decree to Miami Dade County requiring over 112 sewer pump stations to be brought into compliance over a period of 5 years. Stantec was selected as a consultant to provide engineering services necessary for upgrading over a dozen pump stations and bringing them into compliance with US-EPA criteria. Marlon was responsible for the development and delivery of project documents including engineering analysis and reports, project drawings, and specifications. Engineering services also included obtaining state and local permits. Stantec has met the challenge of obtaining these permits in a very short period and delivering these pump station projects expeditiously to meet critical EPA deadlines. Certification of these pump stations removed them from Moratorium and allowed for Certificates of Occupancy to be issued with permission to connect to adjacent sewer systems.

MD-WASD PSIP – Pump Station #0698, Miami, Florida
Project engineer responsible for the engineering analysis and report, design drawings, and specifications for the construction of a new triplex pump station. Existing station is a dry-pit/wet well pump station where the pumps are set below grade and the motors are installed within an at-grade operating building located above the dry well. This station normally pumps directly into the suction side of Booster Station 0522. Engineering services include the design of a new submersible pump station, (3) new 47 HP submersible pumps, variable frequency drives, magnetic flow meter, automated control valves, control panels, radio telemetry, and electrical upgrades to the station. Automated control valves are designed to direct discharge wastewater to the suction or discharge side of BS 0522, this allows for a more efficient operating condition for both BS 0522 and PS 698. Upgrades to this pump station will increase capacity and remove from Absolute Moratorium.

MD-WASD PSIP – Pump Station #0124, Miami, Florida
Engineer of Record and Project Manager responsible for the delivery of project documents and permit approvals necessary for the construction of a new pump station. PS 0124 was in moratorium with Nominal Average Pump Operating Times over 10 hours per day. Stantec provided engineering services necessary to obtain state and local permits and meet US-EPA criteria. The design included increasing pumping capacity, motor sizes, new wet well and valve vault, upgrading the power supply into the station and new force main.

MD-WASD PSIP – Pump Station #0494, Miami, Florida
Engineer of Record and Project Manager responsible for the delivery of project documents and permit approvals necessary for the upgrades of pump station 0494. This pump station services part of the Golden Beach neighborhood, Center Island. Design services included upgrades to the electrical facilities, (2) new 20 HP pumps, rectifying illegal force main, and implementing Climate change resiliency features for stations in Coastal communities. Stantec provided an outside the box design that allowed for a shorter construction time and minimized utility conflicts. configuration. The new peak flow capacity of Pump Station 0494 allows for future connections within its basin, critical in an area re-developing at a rapid pace.

MD-WASD PSIP – Pump Station #0076, Miami, Florida
Project Engineer responsible for the engineering analysis and report, design drawings, and specifications for the repair and rehabilitation of PS 0076. This pump station was comprised of a dry-pit and wet well and required the installation of (2) new dry-pit mounted submersible pumps with 54 Horsepower motors. The existing pump station

Marlon Medina PE, CFM
Pump Station Engineering

was retrofitted to accommodate the new pumps and a trolley system for removal of the pumps. The pump station meets a peak demand of 1910 gallons/minute and allows for future connections within its 0.25 square mile basin.

K8 Drainage Improvements, Key Biscayne, Florida
Engineer of Record for the study, planning, design, and permitting of this drainage basin in the center of Key Biscayne. This basin is the lowest lying area of the key and during heavy rainfall it would take days for the water to recede. Upon studying different options, it was determined that a pump station was the ultimate solution; however due to available funding the immediate project was to install two new gravity wells fitted with tideflex valves. The wells were sized and designed to allow for conversion to pressure wells in the future as funding becomes available. The completed project has demonstrated that the wells are effective in draining water quickly after heavy storm events.

Master Pump Station 104.00 Vertical Asset Hierachy Development, Collier County, Florida
Project Engineer responsible for the asset management evaluation of Master Pump Station 104.00. Services included an analysis of available project cost information necessary to assign a reasonable capital cost to each utility asset. Project data including the Construction Plans, Schedule of Values, Cost Estimate, Bid Tabulation, and Technical Specifications were broken down in the development of a final asset cost. These efforts assisted the Stantec GIS team in developing an ArcGIS based inventory that will aid Collier County in forecasting future capital costs when planning for utility improvements.

Pelican Marsh Irrigation Pump Station Improvements Collier County, Florida
Project Manager responsible for the delivery of a site improvement project at the Pelican Marsh Irrigation Pump Station. The improvements will provide appropriate vehicular and pedestrian access to the station's control building and will also remove nuisance drainage ponding in the building. Engineering Services included local permitting with Collier County, bid assistance, and Engineering Services during construction.

Picardy-Perkins Connector Storm Water Pump Station, Baton Rouge, Louisiana
Project Engineer for pre-design and detailed engineering of a storm water pump station for a new railroad underpass. The multi-disciplined project included civil, mechanical, structural, electrical, and controls design for this 35-foot deep, pre-cast concrete pump station incorporating three (2) 50-hp submersible mixed-flow pumps each with a rated capacity of 10,000 gpm, along with discharge piping and associated outfall facilities, and associated facility power and control systems.

Village of Palmetto Bay Drainage Improvements Phase V, Palmetto Bay, Florida
Project Engineer involved with street and drainage improvements. Design elements included field review of existing conditions, limited engineering survey of roadway centerline elevations and low points as needed to establish flow patterns and collection points, perform engineering analysis and design of new drainage systems or system improvements/modifications, and preparation of construction sketches sufficient for construction. Duties also included drainage report and detailed cost estimates.

Lift Station 122, 128, and 210 Rehabilitation, Sunrise, Florida
Engineer of Record responsible for the engineering analysis and report, design drawings, and specifications for the repair and rehabilitation of LS 122, LS 128, and LS 210. These three lift stations are not meeting current hydraulic demands and will be converted to submersible lift stations. A design criterion was developed and implemented to identify a new peak flow demand for each sewer basin. LS 122 will be upgraded with new 60 Horsepower pumps, variable frequency drives and an on-site natural gas generator. Engineering services will also include obtaining state and local permits, and Engineering Services during construction.

Lift Station 3 Rehabilitation, Town of Davie, Florida
Engineer of Record responsible for the delivery of project documents and permit approvals necessary for the rehabilitation of Lift Station 03. LS 03 was not functioning and in need of emergency repairs. Stantec provided engineering services necessary to obtain state and local permits and meet US-EPA criteria. The design included new skid-mounted pumps to match existing capacity, wet well improvements, and site improvements.

Terrance N. Glunt PE, SI, LEED AP
Stormwater Engineering

Tery has over 43 years of experience in the management and administration of engineering divisions responsible for all aspects of design and construction of government and agency related facilities including marina and boating access facilities, recreation complexes, urban and Interstate roadways and bridges, utility corridors, municipal public works and administration facilities, nuclear power plants, landfills and aviation facilities throughout Florida and the United States. His specific experience includes engineering design and coordination of multiple projects, construction engineering and inspection, quality control / constructability review, rigid and flexible pavement design and analysis, hydrologic evaluations, geotechnical and environmental studies, DRI and PD&E involvement, environmental and drainage permitting, preparation of grant applications and coordination of numerous miscellaneous civil and structural contracts with State, County and Municipal entities. Additionally, he has been a Resident Engineer on FDOT construction projects in numerous Districts.

EDUCATION
Bachelor of Science in Civil Engineering, Florida International University, Miami, Florida, 1985

Bachelor of Science in Environmental Sciences, Juniata College, Huntington, Pennsylvania, 1976

REGISTRATIONS
Professional Engineer #40130, State of Florida
LEED Accredited Professional, US Green Building Council

CERTIFICATIONS
Certification, Threshold Inspector, No. 0950, 2012
Certification, ACI, Level 1 Field Technician, 2012
OSHA, 40-hour Hazardous Materials Technician, HAZMAT, 2012

PROJECT EXPERIENCE
Basins “A” and “B” Stormwater Pump Stations, Lauderhill, Florida
Senior Engineer for these projects which both required two 40,000 gpm line shaft axial flow pumps with 145 hp natural gas caterpillar engines with a third pump for back-up. Pumps operate in an automatic mode and start when storm stage levels rise. The facility includes a reinforced masonry structure that houses the engines, controls generator and communications equipment.

Basin D-2 Stormwater Pump Station, Palm Beach County, Florida
Senior design engineer of a municipal stormwater pump station for the Town of Palm Beach in Palm Beach County, Florida. The project included preparation of the Engineering Design Report, Drawings and Specifications. The station has a discharge capacity of 55,500 gpm (124 cfm) into Lake Worth (Atlantic ICWW). The Station included three (3) 18,500 gpm electric submersible mixed-flow 200 hp propeller driven pumps within a large reinforced concrete below-ground wet well. The station discharges thru three (3) large diameter pipes to a discharge structure and then via a spillway into Lake Worth. The control building houses an 800 kW diesel emergency generator, Motor Control Center, the Automatic Transfer Switch (ATS), and the Station Control Panel.

Riviera Beach Citywide GIS Stormwater Atlas, Riviera Beach, Florida
Principal in Charge for this project which consisted of assembling all available Stormwater data and creating a City GIS Stormwater Atlas. The scope of work started by collecting existing data from old as-built, paper atlases and record drawings that the City collected over the years. Then the firm engineering evaluated the existing data and digitized all the structures and stormwater pipes using ArcMap software. The scope of work also includes field verification by the firm and sub-surface verification by the City. In addition to the GIS Stormwater Atlases, the firm developed a basic maintenance tracking system that was set up so staff can determine which structures have been cleaned and when. The firms also purchased ArcMap licenses for the City and assist the City by providing proper training to its staff.

Sanford Avenue Drainage & Utility Improvements, Palm Beach, Florida
Principal in Charge for the full re-design of a 2-block section of Sanford Avenue including replacement of the roadway, curbing, drainage system, water, sewer, and street lighting components. Town of Palm Beach required special low profile curb elements and new design had to conform to existing driveway profiles while still improving drainage characteristics. Design of the sanitary and water systems had to tie in to existing facilities at each end of the project, while upgrading piping and MAS structures. Project also included conduit for cable television, BellSouth and FP&L to eliminate overhead service lines.

Terrance N. Glunt PE, SI, LEED AP
Stormwater Engineering

Project required phasing to accommodate access to resident driveways.

Municipal Well No.8, Lauderhill, Florida
Senior Hydrology Engineer for the analysis and development of a 2600 gpm water supply well in Lauderhill, Florida. Evaluated soil profile and developed construction methodologies for installation of the 120 foot deep well. Coordinated with well head and treatment plant designers to incorporate design into overall project. Oversaw field testing of well flows during installation to insure capacity.

Ferndale 20" Watermain / 24'' Force Main, Delray Beach, Florida
This project included the design and permitting of a new 20-inch diameter ductile iron water main approximately 4,000 feet long, along with 200 LF of 24" Force Main. Project included two aerial canal crossings of the Lake Worth Drainage District canals and direct burial piping along Lake Ida Road. Coordination with three other projects was needed for tie-ins at those locations. Additionally, the project included detailed investigations of utilities and possible conflicts along route of the main. The project construction cost was $800,000.00. The firm also performed construction administration during construction phase and provided final certification to FDEP and PBCHD.

Waterway Park, Jupiter, Florida
Project manager for development of new boat ramp facility in northern Palm Beach County. Duties included site plan development, design, permitting and construction administration for this 30 acre natural park along Indiantown Road and the ICWW. Permitting issues included development of a gopher tortoise reserve, mangrove and seagrass mitigation, compliance with county manatee protection program, stormwater runoff and an FDOT permit for the entrance off of Indiantown Road.. The project included 4 boat ramps, concrete floating dock finger piers and staging docks, concrete seawall protection, education kiosks, picnic pavilions, restroom facilities, parking for 50 boat trailers and on site roadway and parking systems.

Plantation Midtown Drainage Study, Plantation, Florida
QA/QC officer for this study to analyze the drainage system of a 760 Acre area known as Plantation Midtown, a mixed use area with Residential, Commercial and Institutional Zoning. The purpose of the study was to provide a backbone drainage system that would allow future development and redevelopment in accordance with the Master Plan. The existing system was modeled using ICPR with information from available records and survey of the existing drainage system. Future development was also modeled in accordance to the maximum development potential of the area. The study recommends drainage improvements that would allow the future development and creates an integrated system to be easily maintained by the City. These recommendations were coordinated into current Roadway/ Landscaping Improvements Projects and future CIP projects in order to minimize construction in the area. The drainage master plan developed in the study and construction plans for specific drainage improvements were permitted through Old Plantation Water Control District, SFWMD and the City of Plantation.

Port Everglades Container Terminal Stormwater Well, Fort Lauderdale, Florida
Senior Geotechnical Engineer for the design of a 24 inch diameter stormwater well in cargo container terminal. Well was placed in pavement area with all components placed below grade. Designed and permitted through Broward County EPD and FDEP. Full scale flow testing was applied in field to adjust depth and eventually verify capacities.

Woodside Drive Drainage Study & Master Plan, Coral Springs, Florida
Principal in Charge for this project which involved an initial master plan to determine potential roadway and drainage improvements needed to eliminate standing water problems in the corridor. The design involved the replacement of the roadway, curbing, drainage system and landscaping components of the project. Three residential sub-divisions bordered the project and each had special requirements for borders and entrance features. The roadway was widened at various locations to accommodate turn lanes into these communities. Two separate drainage districts bordered the corridor and involved permitting through both agencies for storm water collection and eventual outfall into their facilities. Project required phasing to accommodate access to resident driveways.

Jeffrey S. Crews PE, LEED AP
Stormwater Engineering

Jeff, with over 32 years of experience, has been Design Engineer and Project Manager on various projects in the field of structural and civil engineering. Mr. Crews' civil experience has included the preparation of utility relocation plans, drainage analysis, development of traffic control, and stormwater pollution prevention plans. Mr. Crews also has extensive design, construction inspection, and administration experience in all types of building structures.

EDUCATION
Bachelor of Science in Civil Engineering, Cum Laude, University of Miami, Miami, Florida, 1988

REGISTRATIONS
Professional Engineer #46575, State of Florida
LEED Accredited Professional, U.S. Green Building Council
Certified, Masonry Inspector, No. SMI-74, 2012

PROJECT EXPERIENCE
NE 33rd Avenue, Fort Lauderdale, Florida
Project Manager for master planning of a neighborhood improvement program that included traffic calming and aesthetic features for an upscale neighborhood in Fort Lauderdale's Beach area. Features included traffic circles, crosswalks, median islands, paver inlays, sidewalks and bike paths.

85th Avenue Roadway Improvements, Coral Springs, Florida
Project Manager and Lead Civil Engineer responsible for improvements to a heavily traveled segment of roadway in a school zone in Coral Springs. Improvements included new sidewalks and complete pavement overlay. Project also included drainage improvements and new canal outfalls.

Coral Hills Drive Roadway Improvements, Coral Springs, Florida
Project Manager and Lead Civil Engineer responsible for a series of improvements to a mile long segment of historic roadway in Coral Springs. Improvements included new pathways and traffic calming as well as drainage improvements and new canal outfalls.

Pompano Beach Drainage Basin 4-1 and 4-2, Pompano Beach, Florida
Project Manager for this project which involved design services for the neighborhood drainage improvements in the southeast section of the City. The area is a low-lying residential neighborhood in the coastal region resulting in high ground water table. The project included the development of significant amounts of French drain along with minor utility modifications and an asphalt overlay. Services also include permitting and continued through procurement and construction.

Design Criteria for Sunset Island 3 and Sunset Island 4, Miami Beach, Florida
Design Criteria Professional and Project Manager for the preparation of design-build criteria packages including design development plans. This project was a full reconstruction project of Sunset Island 3 and 4. The islands are an exclusive and historic high-end residential neighborhood in Biscayne Bay. The scope of work includes drainage, roadway, water, landscaping, lighting, and undergrounding of utilities (FPL, ATT and Comcast). Project also includes cost estimating, maintenance of traffic, scheduling, storm water pollution prevention, permitting, and construction management.

Design Criteria for Palm Island and Hibiscus Island*, Miami Beach, Florida
Design Criteria Professional and Project Manager for the preparation of design-build criteria packages including design development plans. This project was a full reconstruction project of Palm Island, and Hibiscus Island. The islands are an exclusive and historic high end residential neighborhood in Biscayne Bay. The scope of work includes drainage, roadway, water, landscaping, lighting, and undergrounding of utilities (FPL, ATT and Comcast). Project also includes cost estimating, maintenance of traffic, scheduling, storm water pollution prevention, permitting, and construction management. The scope of work included the development of a master prototype Design Criteria Package with a new approach to the design build delivery system.

Waterway Park, Jupiter, Florida, Palm Beach County Parks and Recreational Dept.
Principal for development of new boat ramp facility. Duties included site plan development, design, permitting and construction administration for this 30-acre natural

Jeffrey S. Crews PE, LEED AP
Stormwater Engineering

park along Indiantown Road and the ICWW. Permitting issues included development of a gopher tortoise reserve, mangrove and seagrass mitigation, compliance with county manatee protection program, stormwater runoff and an FDOT permit for the entrance off of Indiantown Road. The project included 4 boat ramps, concrete floating dock finger piers and staging docks, concrete seawall protection, education kiosks, picnic pavilions, restroom facilities, parking for 50 boat trailers and on-site roadway and parking systems.

Turnpike Crossings, Lauderhill, Florida
Project Engineer for four horizontal directional drillings (HDD) beneath the Florida Turnpike. HDPE (high density polyethylene) was used for a casing pipe and carrier pipe for both water mains and force mains. These large diameter pipe lines are extremely important to the City of Lauderhill. Florida Turnpike Enterprise was rebuilding the Turnpike and the City's old transmission mains needed to be abandoned and replaced. The firm decided to design new force mains and water mains under the Turnpike with the new HDPE pipe installed via HDD (horizontal directional drill). Work was done using FDOT approved methods and materials.

Basin "A" Stormwater Pump Station, Lauderhill, Florida
Senior Civil Engineer for a 3-pump stormwater pump station project. Project required two 40,000 gpm line shaft axial flow pumps with 145 hp natural gas caterpillar engines. A third pump is provided for back ups. Pumps operate in a automatic mode and start when storm stage levels rise. The facility includes a reinforced masonry structure that houses the engines, controls generator and communications equipment.

Basin "B" Stormwater Pump Station, Lauderhill, Florida
Senior Civil Engineer for the design and specifications of a 2-pump stormwater pump station which required a 44,000 gpm line shaft axial-flow pump with a 145 hp natural gas caterpillar engine. Second pump is used as back-up. Station operates under an automatic mode. A reinforced masonry structure houses the engines, controls, generator, RTU, etc.

Reclaimed Water Pipeline Canal Crossing, Margate, Florida
Project Manager and Engineer of Record for this Design Build project for which the firm was the Engineer of Record for the construction of 2000 LF of 16" reclaimed water main. The project included a 600' segment of 18" HDPE Horizontal Direction Drilling (HDD) to cross a city canal and residential lot. The HDD required a complicated reverse curve alignment to remain within a designated easement and road right-of-way that were horizontally offset. The HDD also required unusual depth to ensure proper clearance under the canal. The project also included 1200' of direct bury installation to complete the entire alignment. The firm was responsible for all design and permitting aspects of the installation as well as field inspection during construction.

FIU Multi-Purpose Fields, Miami-Dade County, Florida
Project Manager providing consulting services for the multi-purpose practice fields on the Modesto Maidique Campus of FIU. The complex includes one artificial turf field and one prescription turf field. The complex will be the primary practice facility for the Division I football team. The University will use the complex for intramural competitions when not in use by the football team. The project includes a 3,500 SF restroom and storage building to complement the usage of the field elements. The fields are also lit for night usage with LED sports lighting that function with approximately half of the energy usage of traditional sports lighting.

Flamingo West Park, Cooper City, Florida
Project Manager and Lead Civil Engineer for the Master Planning and Development of a regional soccer park in western Broward County. The project includes 4 artificial turf soccer fields with supporting parking and concession restroom building. The park also includes a passive park with picnic facilities and trails around a lake and mitigated wetland. The land was provided by a private developer under a development order and services were provided for oversite of the preliminary site preparations. Other services include master planning, full project development and construction oversight.

William Weber PE, LEED AP, ENV SP
Civil Engineering

William has 20 years of on-the-job experience with environmental and geotechnical engineering projects including large raw-water reservoirs, large earthen dams, landfills, TSCA impoundments, Phase I and Phase II environmental assessments, environmental sampling, and spill prevention planning. Projects have involved slope stability analysis, finite element modeling for seepage evaluations, earthen embankment design, monitoring, and inspection, geotechnical investigations, AutoCAD Civil3D modeling, and stormwater management system design.

EDUCATION

Master of Engineering, Gainsville, Florida, University of Florida, 1999

Bachelor of Science in Environmental Engineering Gainesville, Florida, University of Florida, 1997

REGISTRATIONS

Professional Engineer #61875, State of Florida

LEED AP Building Design + Construction #10257768-AP-BD+C

Envision™ Sustainability Professional (ENV SP) #14900

PROJECT EXPERIENCE

River Oaks Wastewater Treatment Plant Decommissioning, Hillsborough County, Florida
Design Criteria Professional responsible for leading the preparation and execution of the civil design for, the Design Criteria Package (DCP) for the diversion of the River Oaks Advanced WWTP. The DCP constitutes the design basis of this design-build project. The decommissioning project includes the construction of approximately 3 miles of force mains for the conveyance of the wastewater currently being treated at River Oaks, approximately 2.3 miles of reclaimed water pipeline, a new associated pump station, a new complete reclaimed water outfall facility, the re-purposing of an existing reclaimed water 5 MG tank for use as wastewater surge tank and the complete demolition and re-purposing of the existing wastewater facility.

Eastside Wastewater Treatment Plant Improvements Venice, Florida
Civil Engineer of Record for aeration system and head works improvements including new diffused air system in aeration basins, new blower building and new grit removal system for head works. Managed a geographically disparate team of two civil engineers and two CAD operators. Team was responsible for site civil design including stormwater modifications, building siting, paving, grading, demolition, existing underground utility relocation and design of two new 20-in mixed liquor return pipelines. Work products included a basis of design report, pipe design, stormwater management system improvements design, permit support documents and civil construction drawings and specifications. Coordinated directly with client staff, FDEP and SWFWMD regulatory staff.

New Production Wells for Wellfields 2, 3 and 8 (CSA 5 and 10), Palm Beach County, Florida
Stantec provided a full range of services ranging from groundwater modeling and water use permit modification, detailed design, bidding support and are currently providing engineering services during construction of eight new production wells – four new wells at Haverhill Park to serve WTP 8, two new wells at WTP 2 and two new wells in a residential neighborhood development to support WTP 3.

Class I Deep Injection Well to 8,000 Ft. BLS Mulberry, Florida
Electric Company, Mulberry, FL. The deep injection well was constructed to dispose of concentrate from reverse osmosis treatment of reclaimed water for additional process water supply at the facility and facility wastewater process flows. The injection well was designed as the deepest permitted injection well in the state of Florida. Performed oversight tasks including submittal review, formation lithology evaluation, preparation and review of cement plans, hydrologic testing plans, water storage handling plans and weekly construction summaries. Provided on-site construction oversight including quality control testing and quality assurance documentation. Also responsible for collecting formation samples from the drilling cutting and describing the subsurface lithography.

William Weber PE, LEED AP, ENV SP
Civil Engineering

Stormwater Treatment Area (STA) 1W - Expansion #1
West Palm Beach, Florida
This project converted 4,700 acres of active farmland to wetlands to reduce phosphorous concentrations as part of the Everglades Restoration Projects program. The project consisted of 100,300 feet of new earthen embankments, 85,600 feet of new canals, nine remotely operated gated structures, and 20 passive hydraulic structures. Bill's responsibilities included coordination and direction of a multidisciplinary project team spread across the U.S., four sub- contractors, managing information flow and data storage, and quality management plan development and implementation. He managed hydraulic modeling using MIKE-Flood and MIKE-11 models, geotechnical investigations and analysis, site civil, structural, electrical and instrumentation design, and preparation of four milestone design reports, construction drawings, specifications and bid documents. Bill continues to provide engineering services during construction for this project.

Minot Downtown Infrastructure Improvements Project
Minot, North Dakota
Project consisted of the design/replacement of sanitary sewer, potable water main, storm sewer and streetscape elements to include street lighting, signage, benches, garbage cans and all concrete grading to include roadway, sidewalk and ramps in a 25 block area of downtown Minot, ND. Lead team of three engineers to design nearly 15,000 LF of new potable water distribution network using AutoCAD Civil3D pressure pipe design tools. Created new templates and work flows to efficiently use new tools.

Peace River Reservoir No. 2, DeSoto County, Florida
Bill provided construction management services to the PRMRWSA reservoir expansion consisting of 3.8 miles of earthen embankment, 1.3 miles of steel pipeline, and other appurtenant structures. He was responsible for coordinating the review of all contractor submittals and performing reviews of the geosynthetic, construction dewatering, and revegetation related submittals. Bill was also responsible for periodic reports and other documents required by the Environmental Resource Permit and submitted to the Florida Department of Environmental Protection. He developed a site-specific health and safety plan, a project specific construction quality assurance and quality control manual, a reservoir operations and maintenance plan, stormwater system O&M plan and a first filling plan. Stantec was selected to provide the engineering, geotechnical, environmental and construction management services for the Peace River Regional Reservoir Expansion project. The aggressive project schedule required the completed reservoir be online by the summer of 2009. This $65 million offline water supply reservoir provides approximately 6 billion gallons of raw water storage from the Peace River. The site covers approximately 800 acres with a subsurface slurry wall and engineered earthen embankment 35 feet above existing grade. Stantec's reservoir design incorporated extensive hydrology/meteorology and geotechnical investigations, yielding a reservoir that is safe, reliable, and cost-effective.

Manatee Cooling Pond Soil Cement Replacement Project
Parrish, Florida
Lead Civil Engineer responsible for all site civil work associated with the cooling pond dam including embankment ramps, roads, and miscellaneous stormwater conveyance features. Bill's responsibilities also included development of design drawings and specifications, review and approval of contractor work plans, and quality assurance review of contractor quality control activities. This design-build project consisted of design, construction, and placement of a stair-step concrete panel overlay system atop the deteriorated stair-step surfaces of the existing soil-cement revetment on the slope of the high hazard cooling pond dam. The overlay panels covered 10,000 linear-feet of embankment extend up to 23 feet from elevation 70 feet NAVD to the toe of the slope. All work was to be performed with the PMT cooling pond in normal operation.

Carlos Herdocia PE, LEED AP
Civil Engineering

Carlos has over 32 years of experience and has been Project Manager and Senior Design Engineer on various roadway and drainage projects for municipalities in Miami-Dade County. He has extensive experience in developing residential, commercial and highway roadway and drainage plans. This experience includes traffic calming, resurfacing and reconstruction plans, drainage design studies and reports, maintenance of traffic, signalization, lighting and signing and marking plans.

EDUCATION
Bachelor of Science in Civil Engineering, Florida International University, Miami, Florida, 1988

REGISTRATIONS
Professional Engineer #47660, State of Florida

LEED Accredited Professional, U.S. Green Building Council

PROJECT EXPERIENCE
726-730 NW 73 St, Miami, Florida
Engineer of Record and Project Manager for the extension of a 12-inch watermain for approximately 750 linear feet

Town of Golden Beach Capital Improvements Program, Golden Beach, Florida
Senior Civil Engineer for this comprehensive Capital Improvements Program Master Plan that focuses on several major improvement areas: town-wide drainage improvements; utilities underground relocation (electrical, telephone, cable); town-wide streetscape & traffic calming; and renovation to the Town's existing Town Hall building. The Master Plan carefully considered the each of these with respect to feasibility, cost/benefit, and design, as well as an analysis of funding options and scenarios, and schedule for phasing and implementation.

West Kendall District Park (SW 157th Avenue and SW 120th Street), Miami-Dade County, Florida
Project Manager and Senior Project Engineer (Engineer of Record) involved with proposed new roadway design and street improvements for Miami-Dade County. Design elements included over 4,600 feet of exfiltration trench, 1,000 feet of solid pipe, 31 drainage structures, over 5,000 feet of 16" water main with sub-aqueous crossing, roadway resurfacing, roadway lighting and report, new signalization with mast arm configuration of existing intersection, over 1 mile of new roadway with sub base, base and asphalt, sidewalk, guardrail, landscaped median, retaining wall, curb and gutter, pavement markings and signs and coordination with structural department for design of proposed Bridge over a canal. Services include the production of Grading and Drainage, Typical Sections, detail plans, preliminary field investigations, utility coordination, computation book, drainage report and detailed cost estimates. Other tasks included permitting through DERM, Miami-Dade Water and Sewer, Miami-Dade Fire Rescue, Florida Department of Health and acquisition of Right of Way permit through SFWMD.

Crandon Park Marina Reconstruction - Phase I, Dade County, Florida
Civil Engineer for design services and construction inspections for this Dade County Park & Recreation's Flagship Marina. Four of the existing piers shall be replaced with floating docks, new utility services are being provided for these piers and four future replacement piers, bulkhead rehabilitation, maintenance dredging, and replacement of eight boat ramp finger piers.

Carlow Park Improvements, Sweetwater, Florida
During the course of 1991 and 1992, the City of Sweetwater performed various repairs and improvements to this small, but heavily used park. Handicap accessible drinking fountains were installed, remedial site drainage improvements were constructed, tennis courts damaged by poor drainage were repaired, air-conditioning units were replaced and the playground areas were re-sodded. Project Civil Engineer provided damage investigation, design, bidding assistance, and construction management services.

De Soto Road and Sevilla Blvd Road Improvements – City of Coral Gables, Coral Gables, Florida
Project Engineer for the design of approximately 1 miles of two lane roadway resurfacing and drainage improvements. Also included in these projects are landscaping, ground marking and signage, and maintenance of traffic.

Jarah Parke PE, CFM, PMP
Mechanical Engineering

Jarah has 17 years of experience in civil/water resources engineering. He has a wide variety of experience in multiple aspects of water resources, including hydraulic analysis, water and sewer pipeline design ranging in size from 4 inches to 144 inches, reservoir and tank design, groundwater wells, water quality, drainage, floodplain analysis, and flood control. He has provided planning, final design, and post design engineering services. Jarah is a Certified Floodplain Manager (CFM), Project Management Professional (PMP) and NASSCO certified in Pipeline, Lateral and Manhole Assessment.

EDUCATION

Master of Science, Civil Engineering, University of Nevada, Las Vegas, Nevada, 2010

Bachelor of Science, Civil Engineering, University of Nevada, Las Vegas, Nevada, 2007

REGISTRATIONS

Professional Engineer #87971, State of Florida

Association of State Floodplain Managers, Certified Floodplain Manager

Project Management Institute, Project Management Professional (PMP)®

PROJECT EXPERIENCE

Systems Conveyance and Operations Program (SCOP) Reach 3 Tunnel, Las Vegas, Nevada
Design Engineer for the Reach 3 Tunnel Project, part of the Systems Conveyance and Operations Program (SCOP) to convey highly treated effluent from member agency wastewater treatment plants to Lake Mead. SCOP includes approximately 14.5 miles of overland pipeline and tunnel, a 77-mgd pump station, a power generating station, and diffuser pipelines into Lake Mead. Jarah served as Design Engineer for the Reach 3 Tunnel Project. His responsibilities included hydraulic design of 10-foot diameter pipe in a tunnel and a 100-foot drop shaft connecting the tunnel section to the upstream open cut section. The design of the drop shaft includes exploring options to fill the system while minimizing air entrainment through the drop shaft and avoiding surge pressures.

Engineering Design of the Garnet Valley Water System Las Vegas, Nevada
Jarah served as the Project Manager for a potable water system design including over fourteen miles of pipe ranging in diameter from 12 to 24 inches in diameter, three well sites, two 2 MG welded steel reservoirs, and five pressure regulating sites. He was responsible for project planning (scope, schedule, and budget), staffing resources, quality, risk, and financial management. He also led the civil design for the project including design of pipeline, site grading and drainage, access road, utility interferences, and field investigations.

Surface Water Plant - Package 3, Pearland, Texas
Jarah is the Project Technical Lead for Package 3 of the City's Surface Water Plant project. Package 3 includes two 5-million gallon ground storage tanks, a 10-mgd potable water pumping station/administrative building, site security, approximately 60,000 linear feet of potable water distribution and supply line ranging in size from 8-inch to 36-inch, and approximately 6,000 linear feet of sanitary sewer force main to serve the new surface water plant. Jarah is responsible for leading and providing technical oversight to the planning/design teams and coordinating project management, scheduling, quality control, and health and safety for the project.

Paradise-Whitney Interceptor Project No. 670 (formerly Contract 3), Las Vegas, Nevada
Jarah was Project Manager for this $40 million project, which consisted of 40,000 linear feet of gravity sewer ranging from 8 to 60 inches in diameter. Jarah managed the preparation of design drawings and specifications and coordinated potholing, CCTV, traffic control, right of way acquisition, and survey. The project included over 1,000 linear feet of 54- and 60-inch-diameter gravity sewer installed via trenchless methods and crossing under an interstate and numerous highly congested intersections. The design for the interceptor included a basis of design report;project deliverables at the 60%, 90%, and final design; and engineering services during bid and construction. Stantec also prepared the infrastructure design for a future odor control facility including the design of two access roads, asphalt paving, a 40-foot by 46-foot concrete slab for calcium nitrate tanks and scrubbers with chemical containment area, sumps, housekeeping pads, an 8-foot-high perimeter fence and gate, and site improvements.

Jarah Parke PE, CFM, PMP
Mechanical Engineering

Tarrant Integrated Pipeline Project, Fort Worth, Texas
Jarah served as Senior Technical Reviewer for a project including new and modified intakes and pump stations and 150 miles of large diameter pipeline. Stantec was selected for the largest and most complex of the eight pipeline sections (Sections 9, 10, and 11) making up the $2.3 billion project. Collectively, these three sections included 22 miles of 84-inch-diameter pipe and five miles of 120-inch pipe, which are routed through urbanized portions of the cities of Fort Worth and Mansfield, Texas requiring extensive right-of-way and permitting efforts.

Pittman Pecos Conveyance System, Henderson, Nevada
Design Engineer responsible for hydraulic analysis, design, and development of design drawings for the mainline facility, inlets, and laterals using WSPG, HEC-RAS Microstation and Inroads software. Interesting design aspects of this project were a 24-inch-high pressure gas crossing and connections to existing facilities on the up and downstream ends. Jarah performed cost analysis of the project including options to include a linear park, construct the open channel of reinforced concrete, construct the channel of concrete and linked concrete blocks, and construct the channel with dyed or stamped concrete for aesthetics. He investigated right-of-way issues and researched land ownership in the area of the project. He also coordinated with local utility agencies to locate utilities and design conveyance facilities with minimum impact to existing utilities along the alignment.

Low Lake Level Pumping Station, Las Vegas, Nevada
Phase 1: Preliminary Design (December, 2014 Start): Preliminary configuration and siting of the pumping station, analysis of future expansion to 1,200-MGD, risk management, CFD modeling of the forebay, geotechnical field work and analysis, and preliminary equipment selection.

Phase 2: In March 2015, SNWA approved Phase 2 Basis of Design Activities, Underground Design, Surface Mass Excavation Design, and Services during Bidding and Construction. A mass excavation package that entailed design and construction of the earthwork was prepared to rough grade the site pad including: Surface mass excavation on steep rock slopes of Saddle Island for construction of a future pumping station pad via drilling and blasting, material separation and placement in new fill areas of pad and production of rock riprap for slope protection, and installation of rock bolts and shotcrete to stabilize cut slope; design-bid-build construction contract documents, CMAR construction drawings and specifications for the underground portion of the project (access shaft(s), forebay, connecting tunnels, and well shafts).

Also, an underground package consisting of: a 26-foot-diameter, 528-foot-deep access shaft; 16-foot-diameter welded steel pipe bulkhead at the bottom of the shaft; riser shaft connecting to the existing Contract 070F 02 C2 stub tunnel; horseshoe-shaped forebay cavern approximately 33 feet wide by 36 feet high by 300 feet long; forebay connector tunnel for future forebay extension; and 34 steel-lined, 6-foot-finished-diameter, 500-foot-deep well shafts.

Alta Meadows Storm Drain Project, Las Vegas, Nevada
Jarah served as a Design Engineer for the design of a flood control conveyance facility designed to provide 100-year capacity and convey flows to an existing channel. The project involved the design of 1.5 miles of 8 foot-by-8-foot RCB, numerous RCP laterals up to 60 inches in diameter, drop inlets, utility relocates, and a confluence structure to the existing channel. Jarah was responsible for hydraulic analysis, design, and development of design drawings for the mainline facility, inlets and laterals using WSPG, HEC-RAS Microstation and Inroads software.

Craig Kaltenbach PE
Structural Engineering

Craig has 25 years of experience in structural engineering. His emphasis has been in the design and construction support services for various structures ranging from the rehabilitation and retrofit of existing facilities to the design of efficient and cost effective new facilities. Over the past 17 years with Stantec, he has focused his structural design on water and wastewater treatment plants and collection and distribution systems. Craig provides the design for all structural elements as needed for identified structural improvements in water, wastewater, dam, and general facilities improvement projects. Craig also provides support during bidding and construction including submittal reviews, request for information responses, and on-site inspections.

EDUCATION
BS/BSc, Civil Engineering, University of Cincinnati, Cincinnati, Ohio, 1996

REGISTRATIONS
Professional Engineer #63619, State of Florida

PROJECT EXPERIENCE
Zephyrhills WWTF, Zephyrhills, Florida
Technical Lead Structural Engineer for the structural design for the WWTF expansion from 2.25 to 4.5 MGD. Stantec provided complete design and construction management services (CMS) for the City of Zephyrhills $16 million expansion. This expansion provides additional reuse water for irrigation of the City's golf course as well as several parks and recreational areas. The expansion included a new headworks with grit removal facilities, two oxidation ditches with anoxic tanks, two 85-foot diameter clarifiers, sand filters, electrical building, emergency power system, sodium hypochlorite building with chemical feed system, and sludge holding and storage modifications. The successful design and construction of the WWTF resulted in follow-on work for the expansion of the City's RIBs, which is currently being designed by Stantec.

Southwest Reverse Osmosis Expansion
Cape Coral, Florida
Lead Structural Engineer for the expansion design and engineering services during construction of the Southwest RO WTP. This design-build project involved the expansion of the water treatment plant from 14.7 MGD to 17.8 MGD. The structural design and support provided included inspection and evaluation of two existing clearwells, structural modifications to the existing plant for the expanded capacity and the design of a new generator building.

City of Cape Coral Facilities and Utilities Expansion Program, Cape Coral, Florida
Lead Structural Engineer for the facilities and utilities expansion design and engineering services during construction. The program involved approximately $1 billion worth of work and involved all of the existing water and wastewater treatment plants, and a new reverse osmosis water treatment facility and expansion of the distribution and collection system including irrigation system.

Central District Wastewater Treatment Plant Rehabilitate, Replace and Upgrade Program, Miami, Florida
Lead Structural Quality Assurance throughout the project design phases and consultation on the feasibility of the structural design aspects. The project was a master planning and design project that involved many aspects of the facility from capital programs to optimizing the operations for both the liquid and solids processing trains. Work included the inspection and assessment of the existing processes and associated equipment to develop a prioritized schedule to upgrade the existing facilities, an energy audit, biological process and hydraulic modeling to control and optimize treatment during all flow and loading conditions, and an assessment of regulatory compliance. Based on the modeling and inspection work performed a prioritized renewal and replacement program was developed.

West Palm Beach UV Structural Design
City of West Palm Beach, Florida
Lead Structural Engineer for the structural design effort as Stantec was tasked with designing a 50-MGD UV disinfection process and related infrastructure improvements. Design for this UV treatment process involved two potential UV vendors, a new transfer pumping station, and a new sodium hypochlorite feed room. Stantec provided UV pilot testing, multi-discipline detailed design, bidding support, engineering services during construction, and construction management services.

Craig Kaltenbach PE
Structural Engineering

Stormwater Treatment Area (STA) 1W - Expansion #1 West Palm Beach, Florida
Lead Structural Engineer for this accelerated constructed wetland project resulting from a consent order from EPA, Craig was responsible for leading the structural design, which included coordination with the geotechnical engineer for each hydraulic structure foundation, hydraulic engineer to establish the overall structure sizes, locations, and mechanical requirements. Craig was responsible for the development of the Contract Documents for all the structural elements of the project including drawings, calculations, and specifications. He conformed to the client specific design criteria and standard requirements as part of the project development. The project included design of 100,300 feet of new earthen embankment; 85,600 feet of new canals; nine remotely operated, gated hydraulic structures (roller gates and slide gates); and 20 passive hydraulic structures.

Hap Cremean Water Plant Rehabilitation and Upgrade Projects, Columbus, Ohio
Structural Lead during design and as needed during construction for the structural aspects of the ozone and UV upgrades for this facility. The ozone presented a key challenge to have both water tight and gas tight concrete structures, while the UV had structural challenges related to retrofitting a new treatment process into an existing structure. Stantec prepared the master plan, preliminary designs, and detailed design drawings; obtained plan approval from the Ohio EPA; oversaw bidding; and provided engineering services during construction.

Marion Water Treatment Plant Condition Assessment Marion, Ohio
Lead Structural Engineer to perform a structural condition assessment site visit and evaluation report for the Aqua Ohio Water Treatment Plant (WTP) in Marion Ohio. The condition assessment involved a preliminary review of all available record drawings; prior condition assessments, including a prior condition assessment performed by Stantec; and a site visit to review the condition of all structures at the Aqua Ohio Marion WTP. After the information was reviewed, Craig developed a list of the conditions found at each structure including projected service life for the existing condition, or projected service life with suggested maintenance improvements. With the condition projection, Craig was able to determine which structures required repair and rehabilitation and assign an estimated construction cost for the work. The condition report is key to helping Aqua Ohio understand the projected capital improvement requirements, assign work needs to maintain the operation of the plant at capacity, and maintain the water quality Aqua Ohio's clients have come to expect. Craig's condition assessment determined that the structures are in generally good condition with only routine maintenance needed to extend the service life of the structures. There were two structures that appeared to be nearing the end of their useful service life and would require extensive rehabilitation to extend the service life of the structures.

Struthers Water Treatment Plant (WTP) Condition Assessment, Struthers, Ohio
Lead Structural Engineer to perform a structural condition assessment site visit and evaluation report for the Aqua Ohio Water Treatment Plant in Struthers, Ohio. The condition assessment involved a preliminary review of all available record drawings, prior condition assessments, including a prior condition assessment performed by Stantec, and a site visit to review the condition of all structures at the Aqua Ohio Struthers WTP. After the information was reviewed, Craig developed a list of the conditions found at each structure including projected service life for the existing condition, or projected service life with suggested maintenance improvements. With the condition projection, Craig was able to determine which structures required repair and rehabilitation, and assign an estimated construction cost for the work. The condition report is key to helping Aqua Ohio understand the projected Capital Improvement requirements, assign work needs to maintain the operation of the plant at capacity, and maintain the water quality Aqua Ohio's clients have come to expect. Craig's condition assessment identified that the West Settling Basin and the Backwash Tank were severely deteriorated and needed extensive rehabilitation to extend their service life. He also identified that the maintenance building was not in compliance with current codes and any improvement to the maintenance building would require substantial rehabilitation. Craig was also able to determine that most of the plant was in good condition and only needed routine maintenance to extend the project

Shana Wygonik RA, LEED AP
Architectural

Shana is familiar with the common architectural constraints and unique opportunities presented by public works projects, including short time frames, economic considerations, neighborhood design contexts, expansion capabilities and renovation and rehabilitation of existing facilities. She has 19 years of experience working on a variety of water and wastewater projects. Shana's professional history includes preparing architectural designs on a wide range of project types, including water and wastewater treatment facilities. Her experience includes programming, architectural design, specifications writing, permit applications, construction administration and promoting and utilizing advanced technology and BIM on projects to keep up with industry trends. She has successfully managed multi- discipline projects utilizing excellent planning, organization and problem solving skills while encouraging team building to enhance the work environment. Shana continues to build strong relationships with our client's plant and operations staff and is familiar with day-to-day operations and procedures.

EDUCATION

BA, Architecture, Ohio, Kent State University, 2001

BS/BSc, Science, Ohio, Kent State University, 2000

REGISTRATIONS

Registered Architect #AR96070, State of Florida

PROJECT EXPERIENCE

Northwest "Class A" Biosolids Treatment Facility(MWH) Hillsborough County, FL
Lead Architect to create design drawings, specifications, and details for the Northwest Class A Sludge Processing Facility. The design consisted of an administration building, electrical room, thermal dryer room, and a control room and server room on a mezzanine level. The challenge of the project was the height and area required for the dryer equipment.

Miami-Dade Pump Station No 3, Miami, FL
Provided Architectural Support and CAD Coordination, incorporating client standards to create design drawings, specifications, and details for the pump station and electrical buildings. The design incorporated architectural elements from building features particular to the Miami area such as precast banding around the building corners, horizontal windows and louvers, and a light colored stucco finish. Horizontal light fixtures were also used to accentuate the modern architectural style. A rendering was created to display the design and how the buildings blend into the site.

Architectural and Laboratory Layout Design for the North Water Reclamation Facility Operations and Maintenance Building, City of Cape Coral, FL
Project Architect providing architectural technical support for the 2nd story Operations and Maintenance Building which included a laboratory, conference and break rooms, locker rooms, offices, control room, and multiple shop areas. The support also included layouts and interior elevations, reflected ceiling plans, 3D model updates, and details. Other buildings designed by Shana include the Headworks and Odor Control Building, Membrane System, UV Building, Electrical Generator Building, and Blower Building.

Architectural and Laboratory Layout Design for the ERD Building, 2nd Floor Laboratory SWRF, City of Cape Coral, FL
Project Architect providing architectural technical support for the new 13,000 sf ERD Building as part of the $700M Water and Wastewater Infrastructure Improvement Program for the City of Cape Coral. The two story building includes office and laboratory space for the City's Environmental Resource Division. Project support included design detailing of the interior spaces of the building and 3D model updates as design progressed.

New Orleans ORDA Program, City of New Orleans
Project Manager, assisting with a leased space assessment report for the New Orleans ORDA Program. This assessment focused on various spaces used by city departments in and around the city and included location, lease dates, annual costs of rent, and the condition of the spaces. Departments included were: The Health Department, New Orleans Police Department, the City of New Orleans Property Management, and the Civil District Court-Notarial Archives.

Blue Sink MFL Pumping Station, Tampa, Florida
Shana was responsible for developing design concepts, final detailed design drawings and renderings to show the client how the building will complement the surrounding residential and commercial area. The design incorporated

Shana Wygonik RA, LEED AP
Architectural

a 1,365-SF pump station
and sustainable design principles such as glass block windows for day lighting and a permeable paved driveway on the site. Shana completed the design and is currently assisting with engineering support during construction.

Easterly Facility Plan Improvements (EFPI-1)(MWH) Ohio
Lead Architect for the Screenings EFPI-1 Project at the Eaterly WWTP. I will incorporate a design similar to that of the existing plant. I will also be working with the client to incorporate theirs standards into this project.
This project involved research of the existing buildings on site for architectural details, materials, and construction methods that could be incorporated into the design for the new Screenings Building.

Steubenville Water Treatment Plant Task 1C Final Design, Ohio
Lead Architect creating design drawings, specifications, and details for an Administration Building, Reservoir Pump Station, Treatment Building, Electrical Building, and a Backwash Pump Station. The Administration Building was constructed of brick and precast stone to match the existing Filter Building on site. The remaining building were pre-engineered buildings. I also made numberous site visits during construction to solve problems and make sure the buildings were constructed as designed. Shana was responsible for developing design and final detailed design drawings of an administration and chemical building, including a laboratory, office, control room, SCADA, locker rooms, and chemical rooms, and various auxiliary buildings for electrical equipment, pumps, treatment, and a PAC system. Her role required an analysis and code reviews for sodium hypochlorite and powder activated carbon (PAC) located on site, which included life safety analysis drawings and fire rating requirements for the chemicals. She was also responsible for shop drawing reviews and numerous field visits for documentation purposes and punch list items.

Avon Lake Pump Station and Electrical Equipment Screen Wall, Avon Lake, Ohio
Lead Architect creating the design and detailed drawings for a new pump station and screen wall. The design incorporated details and design elements similar to the historical buildings at the plant. These included a brick facade with precast concrete detail elements and ornamental fencing and complementary color schemes. These elements were presented to the client with renderings to gain approval for the building aesthetics. The project also includes construction services and working with the contractor during construction.

Facilities Upgrade PAR 1235, Commerce City, Colorado
Shana was responsible for the preliminary design for the new operations services building (OSC), new resource, recovery and reuse building (RR&R) and expansions to the warehouse maintenance building (WMB). The OSB was designed as a 14,000 sf facility to include an operator's control room, data center, operators and plant staff offices, storage and men's and women's locker room facilities for 120 people. The RR&R was designed as a 20,000 SF building for the O&M division of the plant. The WMS includes a 10,000 SF warehouse expansion and a 6,000 SF maintenance shop expansion and a 2,000 SF for expansion to the administration services.

Standby Power Improvements Project – Easterly and Southerly Wastewater Treatment Facilities(MWH) Cleveland, OH
Associate Architect to design a generator screen wall for the Easterly Wastewater Treatment Facility (SPI-2) and the switchgear building for the Southerly Wastewater Treatment Facility (SPI-4). She started the generator screen wall design with a computer image rendering of what the designed wall would look like on site. The design was based on the design, color, and detail of the adjacent blower building.

Southerly Wastewater Treatment Center (SSR-1)(MWH) Cleveland, OH
Lead Architect and responsible for designing new substations across the plant, CAD work for all design disciplines, and coordination of other disciplines and subconsultants' civil design. She also made site visits for verification and understanding of construction and worked on specifications for the project. Since the completion of the design, she maintained involvement with the bid phase and will also be involved with construction of the project.

John Nel A.Sc.T., PMP
Electrical

John is an accomplished senior electrical and instrumentation project manager with over 38 years of experience. He is Stantec's Discipline Lead for Electrical, Instrumentation and Controls in the Water Sector and as such provides design leadership and QA/QC on many of the strategic projects across North America. He is based in Florida where he manages a team of designers to support the Gulf region with electrical, controls, instrumentation and data communications design. He has been actively involved with leading edge technology in the Electrical and Controls fields and has provided services from Electrical and I&C system design, Electrical Studies and Reports, Evaluations, Condition Assessments of existing facilities, Energy Conservation Reports and Recommendations, PLC and SCADA HMI programming, PLC training, project management, construction administration, implementation, and commissioning on many projects. John has continued to keep current with today's requirements for the application and implementation of Electrical and I&C equipment for new and existing facilities.

EDUCATION

National Diploma, Instrumentation, Sasolburg Technical College, Sasolburg, South Africa, 1981

Masters Diploma (NHD), Electrical Engineering, Durban University of Technology (DUT), Durban, South Africa, 1983

REGISTRATIONS

Applied Science Technologists & Technicians of British Columbia, Technical Specialist #18808

Project Management Institute, Project Management Professional (PMP)® #525131

PROJECT EXPERIENCE

South County Regional WTP – Belt Filter Press Project, Collier County, Florida
John provided electrical and instrumentation design and construction administration services for the new Belt Filter Presses at SCRWTP Collier County. Project included power distribution, equipment hookups, controls and instrumentation to integrate these new BFP with existing facilities.

Pinewoods Nano Filtration Power Upgrade, Lee County, Florida
John is the lead electrical and instrumentation designer for this upgrade. Electrical design includes Power Distribution upgrades, Standby Power, Motor Controls utilizing VFD'. New SCADA, PLC controls and fiber telemetry was also incorporated into the design.

Franklin WTP Miscellaneous Improvements, Charlotte, NC
John is the lead electrical and instrumentation designer for these improvements which included High Service PS, Back Wash Supply PS, Potable Water Booster PS and other improvements. Electrical design included new Power Distribution, Motor Controls, PLC controls and instrumentation.

City of Logan Water Treatment Plant, Logan, Ohio
Lead Designer – Electrical, Instrumentation and Automation Systems for this new WTP incorporating Nano-Filtration includes Power distribution, Standby Power Generators, Intelligent Motor Controls, Smart Instrumentation, Telemetry to and from Well Fields and water distribution systems.

Seymour Capilano Filtration Plant Project, Vancouver, British Columbia, Canada
Lead Designer - Instrumentation and Automation Systems for the instrumentation and automation systems for this 1800 MLD water filtration plant, which at the time of commissioning was the largest drinking water facility in North America using UV disinfection. The project featured Foundation Fieldbus H1 segments for instrumentation and Devicenet for connecting with intelligent motor control centers and other smart electrical equipment. A total of 10 distributed Delta-V controllers, each configured with dual processors and communications, provide the front-end interface to the four control rooms at this plant.

Opitsaht and Ahousaht Water Treatment Plant, Opitsaht, British Columbia
Designer / Programmer responsible for the complete electrical and instrumentation design, including PLC and SCADA system programming and commissioning for both the Opitsaht and Ahousaht Water Treatment Plants. These projects made use of PLC Direct and National Lookout SCADA systems. This facility was designed with a high level of electronic instrumentation and automatic control. Also, due to the remote locations of these plants, remote

John Nel A.Sc.T., PMP
Electrical

access software was included to provide the owner with technical support directly from the Stantec offices in Vancouver.

Tussahaw Water Treatment Plant, Henry County, Georgia
Designer - Instrumentation and Automation Systems for this plant design based on Bristol Babcock ControlWave distributed RTU architecture and employs a high level of automation.

Mayakkahatchee Creek WTP Transfer and Backwash pumps, North Port Utilities Department, North Port, Florida
Lead Designer/Electrical Project Manager for this renewal and expansion project. Project includes power distribution, VFD motor controls, new instrumentation and equipment hookups, to integrate these new pumps and controls with existing facilities.

Collier County Pump Station Rehabilitation Projects Naples, Florida
Electrical & Instrumentation Design for various lift station rehabilitation projects including PS-104.05; PS-147; PS-151; PS-158 and PS-302.09. Electrical design included service upgrades, standby power, motor controls utilizing VFD's, Soft Starts and across-the-line starters. Various PLC and redundant level controls were also incorporated into the design.

Permanent Canal Closure & Pumps (Design Build), USACE New Orleans, Louisiana
Lead Instrumentation Designer for the electrical design and was the Lead instrumentation designer for the 3 large size lift stations designed to return canal water to Lake Ponchartrain during a hurricane or major storm event. Now complete, these massive drainage pumping stations and flood gates play a key role in a multi-billion-dollar hurricane risk reduction system designed to serve the community now and in the future. This project required medium voltage motor controls & VFDs to support a total of seventeen large HP pump sets moving 24,300 cubic feet of water per second to mitigate the kind of disaster experienced during hurricane Katrina. The massive pumps are powered by twenty-four, 2.6 megawatt generators backed up by six redundant units for a total of 78 megawatts across all three sites. Over 600,000 gallons of diesel fuel and other critical backup utilities are provided on-site for operating the facilities at full capacity for five days. The requirements of this station included intelligent motor controls and instrumentation using Ethernet/IP all controlled in a FactoryTalk environment.

Pinewoods Nano Filtration Power Upgrade, Lee County, Florida
Electrical & Instrumentation Design Lead for this upgrade. Electrical design includes Power Distribution upgrades, Standby Power, Motor Controls utilizing VFD'. New PLC controls and fiber telemetry was also incorporated into the design.

Clems Branch Basin and Sanitary Lift Station Improvements, Charlotte, North Carolina
Electrical & Instrumentation Design Lead for the electrical design which included new service, power distribution, standby power, motor controls utilizing VFD's. New PLC controls and redundant level controls were also incorporated into the design.

Siesta Key Master Pump Station, Sarasota County, Florida
John was the lead electrical and instrumentation designer for this new MPS. Electrical design included service upgrades, standby power, motor controls utilizing VFD-Soft combination starters, Harmonic Mitigation, Allen Bradley PLC controls and a high level of redundant instrumentation. Also included was the rehabilitation of an on site sanitary lift station and packaged odor controls. The design featured a prefabricated walk in electrical room that housed all electrical power and controls equipment. Integration with the County's fiber telemetry system was also included.

Carbon Canyon Wastewater Reclamation Facility (CCWRF) Recycled Water Pump Station Expansion, Inland Empire, California
Lead I&C Engineer responsible for the electrical controls and instrumentation design, construction management, commissioning assistance, and record drawings for the upgraded recycle water pump station and other miscellaneous electrical and control items at the Carbon Canyon facility. Pumps total 10,340 gpm. Included necessary upgrades to the station's electrical systems, power transfer, intelligent motor controls, and power monitoring. The existing Foxboro controls were replaced with new Allen Bradley PLC-based controls with direct connections to the recycled water head-end located at RP-1.

Brad Buchanan PE
Instrumentation and Controls (I&C)

Bradley has experience involving electrical service, generator sizing, power distribution, instrumentation and controls, electrical code compliance, preparation of specifications, drawings, and budgets. He has been involved with various pump station projects and site development projects. His project experience includes providing complete electrical design, motor control, instrumentation and controls, standby power system design, HVAC controls, PLC, and local HMI design.

EDUCATION
Bachelor of Science in Electrical Engineering, Central Michigan University, Michigan, 2012

REGISTRATIONS
Professional Engineer #86225, State of Florida

PROJECT EXPERIENCE
Pump Station 302.09 Relocation, Collier County, Florida
Electrical and Instrumentation & Controls Designer.
The St. Peters Apostle Catholic Church was planning to expand their parking lot beyond an existing pump station located on the property. To support the expansion Stantec provided engineering service for Collier County to relocate the pump station to a nearby location. The existing pump station remained operational until the proposed duplex pump station was energized. Responsibilities included complete electrical design, motor control, instrumentation & controls, A SCADA RTU system is included for communications between this station and the County's central monitoring.

Heritage Bay Inline Booster Pump Station, Collier County, Florida
Instrumentation and Controls Designer. In order to convey the raw sewage from new development to higher level WWTP, this station is required. The station includes electric pumps sets as well as diesel engine driven pump sets to provide the high level of redundancy for this important station. Responsibilities included complete electrical design, motor control, standby power system design, HVAC controls, instrumentation and controls, PLC and local HMI design. A SCADA RTU system is included for communications between this station and the County's central monitoring.

Siesta Key Master Pumping Station (MPS), Sarasota, Florida
Instrumentation and Controls Designer. The existing Siesta Key WWTP was decommissioned and replaced by a new MPS to move all influent to the new WWTP located on the mainland. This new station includes triple redundant electric pump sets to ensure continuous operation at all times. Also included is a new electrical service, electrical room and suitably sized standby generator. Responsibilities included complete electrical design, motor control, standby power system design, HVAC controls, instrumentation and controls, PLC and local HMI design. A SCADA RTU system is included for communications between this station and the County's central monitoring.

Collier County Pump Station Rehabilitation Projects Naples, Florida
Electrical and Instrumentation Design. Assisted in the design of the electrical and instrumentation for various lift station rehabilitation projects, including PO-104.05; PS-147; PS-151; PS-158, and PS-302-09. Electrical design included service upgrades. Standby Power Motor Controls utilizing VFD's Soft Starts and across-the-line starters. Various PLC and redundant level controls were also incorporated into the design. During construction, Brad reviewed Contractor's submittals for electrical and instrumentation and controls, responded to RFIs and assisted with developing solutions to resolve field issues during construction, and provided electrical testing and startup.

Permanent Canal Closures and Pump Stations (PCCP) New Orleans, Louisiana
Instrumentation and Controls Assistant. In order to prevent flooding due to hurricane storm surge, three pump stations were built at the end of the 17th Street, London Avenue, and Orleans Avenue outfall canals and Lake Pontchartrain. The PCCP infrastructure is one of the world's largest pumping stations and represents one of the last major pieces of the post-Katrina hurricane and storm damage risk reduction system. Through its completion, the PCCP project provides long-term measures to reduce the risk from heavy tropical rainfalls and the 100-year storm surge event. Brad's specific role was to assist with the Instrumentation and Controls design.

Savvas Savvas PE, LEED AP
HVAC

Savvas has 35 years of experience designing HVAC/ plumbing/fire protection systems for commercial and Industrial facilities, including energy management, energy modeling and simulation, energy conservation, clean rooms design, laboratory design, smart buildings management systems design, and facilities assessment. His Industrial facilities experience includes the design of the building mechanical services for water and wastewater treatment plants. Savvas' commercial facilities experience includes the design of the building mechanical services for hospitals, hotels, and high-rise buildings. His work experience also includes quality control for Stantec building mechanical services 3D modeling, project management, value engineering, feasibility studies, energy modeling and analysis, and energy conservation studies for industrial and commercial facilities.

EDUCATION

MS/MSc, Mechanical Engineering, Fairleigh Dickinson University, 1985

BS/BSc, Mechanical Engineering, Southern Illinois University, 1982

REGISTRATIONS

Professional Engineer #E-67239, State of Ohio

LEED Accredited Professional, U.S. Green Building Council

PROJECT EXPERIENCE

Miami Dade Central Waste Water Treatment Plant, Consent Decree Improvements, Miami, Florida
Lead Mechanical Engineer for the building mechanical services designs for multiple consent decree projects for the Miami Dade Central Waste Water Treatment Plant. The program includes the rehabilitation of existing facilities such as pump stations, headworks facilities, odor control facilities, digester buildings, and design of new facilities such as electrical rooms, pump stations, and chlorination facilities. Due to the very corrosive environment, the HVAC systems for all the electrical and control rooms include high efficiency water cooled air conditioning systems with FRP cooling towers and indoor water cooled heat pumps. Special filtration systems are also installed at each electrical and control room to remove the corrosive fumes which infiltrate into the conditioned spaces. The water cooled air conditioning system together with the filtration system has been adapted by the district of Miami Dade as the only method acceptable to them for Air conditioning an electrical or control room.

Cape Coral Facility/Utility Expansion Program, Cape Coral, Florida
Lead Mechanical Engineer, Protection Engineer, and Supervising Engineer, for the Building Mechanical Services design for multiple Plans for the City of Cape Coral. Key elements of the utility expansion program have included construction and maintenance of 160 miles of wastewater pipelines, 34 wastewater pump stations, 100 miles of water pipelines, and 85 miles of reclaimed water pipelines. Key elements of the facility expansion program include expansion of the two existing wastewater treatment plants (WWTP) and one water treatment plant (WTP), and design of a new WWTP and a new WTP. In 2005, the city began the facilities expansion program that includes the expansion of the Everest Parkway Wastewater Treatment Plant from 8.5 to 13.4 MAD annual average daily flow with peak flows of 30 MAD and expansion of the Southwest Wastewater Treatment Plant from 6.6 MAD to 15 MAD, with peak flows of 45 MAD. The HVAC systems included high efficiency Variable refrigerant and variable volume systems, gas fired heat, direct digital controls (DDC), and a building management system (BMS), for a new administration building, new laboratory facility, multiple electrical rooms, and multiple process areas. The process areas were ventilated with 100% outside air, via intake air louvers and exhaust fans, or 100% outside air make-up air handling units, and exhaust fans. The heating was provided via either gas fired make up air handling units or gas fired unit heaters. The electrical rooms were heated and air conditioned via high efficiency variable refrigerant and variable air volume packaged heat pumps. The plumbing design in

West Carrolton Water Treatment Plant Membrane Facility Florida
Savvas served as the Lead Building Mechanical Services Engineer for the design of the West Carrolton Water Treatment Plant Membrane facility. Design included 3D modeling, dehumidification, HVAC for process and chemical areas, plumbing, and fire protection.

Miami Dade WWTP Facilities Inspection, Miami, Florida
Lead Mechanical Engineer for the inspection of all HVAC

Savvas Savvas PE, LEED AP
HVAC

systems at the Miami Dade Waste Water Treatment Plant, providing report with recommendations for correcting existing problems and improving existing conditions. Existing systems included cooling towers and chillers for air conditioning, boilers for hot water heating, VAV air handling units, air cooled heat pumps for remote electrical room air conditioning, forced air ventilations systems for process areas ventilation requirements, and DDC temperature controls for monitoring and controlling the HVAC systems.

Corona Del Mar Water Treatment Plant Phase II Upgrades and Modifications, Goleta, California
Savvas served as Supervising Engineer and oversaw construction and QA/QC of the HVAC, plumbing, and fire protection system for the Corona del Mar Water Treatment Plant Upgrades and Modifications project. This project involved 13,200 sf of vertical construction for design-build upgrades and modifications to an existing 35-year-old, 36-mgd water treatment plant. Work included: A multi-purpose, 9,100-sf laboratory/administration-office/control building (targeting LEED®-Gold certification); a maintenance-shop building; a generator building; and a 4,600-sf chemical building, which included demolition of an existing chemical building and construction of a new chemical building.

Lake Oswego Water Treatment Plant, Portland, Oregon
Savvas served as the Lead Mechanical Engineer for the design of the building mechanical services for multiple new facilities for the Lake Oswego WTP project. The HVAC design includes a central geothermal system using plant water as the heat sink, with hydronic heat pumps for the cooling and heating needs of the plant. This system is estimated to generate energy savings and associated greenhouse gas (GHG) emission reduction to the extent of 25 – 35%. Classified areas where continuous ventilation is required were provided with energy recovery ventilators to reduce energy cost and pollution to the environment by up to 30%. A building management system provides operational energy savings to the extent of 15 - 20%, maintenance savings up to 25%, it enhances indoor air quality; and provides critical alarms and remedial actions.

Baton Rouge South WWTP Trickling Filter Improvements
Immediate Action Project, Baton Rouge, Louisiana
Savvas served as an HVAC Engineer on the Trickling Filter Improvements project. Stantec was selected in 2007 to perform engineering analysis, design and bidding services for the Trickling Filter improvements project. Stantec's design on this project consisted of a new recirculation pump station with electrical building, capable of handling a flow of 119 MAD, effluent pipelines, yard piping and structures for final settling tank influent interconnectivity, and installation of a second chamber trickling filter effluent pump station with a 15 to 119-mgd capacity. As part of this project, Stantec provided design and bid phase services documents for improvements to the trickling filter pump station, final settling tanks, and primary sedimentation effluent pump stations facilities.

Niles Waste Water Treatment Plant Improvements, Niles, Ohio
Savvas served as the Lead Mechanical Engineer for the design of the HVAC systems for the Niles WWTP improvement project. The project included HVAC upgrades to several of the existing facilities for NFPA 820 compliance, existing electrical buildings improvements, as well as new electrical buildings. The HVAC system of the existing administration building has been replaced, including the laboratory room. The project also included temperature controls improvements, plumbing and fire protection.

Aurora Conveyance System Pump Station, Aurora, Colorado
Lead HVAC Engineer for the design in 3-D for three pump stations and a maintenance facility. The design included sustainable HVAC systems with evaporative cooling with gas fired heat for the pump stations, and refrigerant cooling systems with gas fired heat for the electrical and control rooms. The design also included direct digital temperature controls, plumbing, and fire protection. Each pump station has 9,000 sq. feet of floor area and is 50 feet high. The maintenance facility has 8,000 sq. feet of floor area and is 20 feet high.

Hartford Water Pollution Control Facility, Hartford, Connecticut
Savvas was the engineer for the design of the HVAC, plumbing, and fire protection system for the Air Pollution Control Upgrade Project at Hartford Water Pollution Control Facility. The project included heating and ventilation of explosive areas and temperature controls.

William Vogel
BIM Design

Bill is currently the Director of Technology Application for Stantec Water Delivery. He has 41 years of experience, in the design and construction of various water and wastewater plant and infrastructure facilities. Bill has been responsible for the distribution and development of 3D/BIM designs using intelligent modelling technology and has guided our staff through our most recent transition to BIM design criteria as a standard operating procedure, utilizing Autodesk and Bentley-based BIM applications. In addition to his background in design technology and construction management, he has extensive experience with the development of all types of treatment facilities. These include conventional water treatment with flocculation, sedimentation and filtration; membrane softening (low pressure reverse osmosis); reverse osmosis for brackish and seawater treatment; microfiltration for surface water; submerged membranes for wastewater; various ancillary facilities for power generation, solids handling and transmission.

EDUCATION

AS, Civil Engineering Technology, Vincennes University, 1977

PROJECT EXPERIENCE

Miami-Dade Wastewater Improvement Program Miami, Florida
Lead Designer using advanced BIM applications for all of the Consent Decree projects as they are released. His responsibilities include the coordination of design development with all disciplines and engineering partners, the development of the MDWASD BIM standards for the CD projects, the development of the process mechanical models from preliminary design through 100% design and the implementation of design review and quality control for BIM projects.

Advanced Wastewater Treatment Facility, Cape Coral, FL
Lead Designer for the 18 MGD, submerged-membrane reuse facility. As lead designer, he managed the workforce utilizing 3D/BIM applications for design, design review, and approved permitted facility. All of the disciplines were coordinated through a federated model of each facility which included a headwork's, a set of aeration basins, the MBR facility, and Operations/Administration building. The Federated model was used for extensive design reviews and was imperative to optimize the plant layout on a constrained site.

Bill managed the design of a portable advanced WWTP for the oil and gas industry. The Plant was designed as constructable level of development (LOD) 400 modules that included Dissolved air flotation unit, activated carbon filter, ceramic membranes, and solids handling. The models were used to extract all information required to construct the modules which included complete piping Isometrics, line number list, and dynamic integration with the PID's for the consistency checking between the models and controls.

North Lee County Water Treatment Plant, Lee County , Florida
Design Manager responsible for the design and layout of the RO skids, feed pumps, degasification, chemical feed and storage, high service pump station, yard piping, and site development. The reverse osmosis water treatment plant has a total capacity of 10 MGD.

Panama Canal Third Set of Locks, Panama City, Panama, Panama
Lead BIM/CADD Designer for the design and construction of the Panama Canal Third Set of Locks (MWH as lead designer of joint venture). Stantec lock design specialists are delivering a system that will enable high throughput, efficient operation and maintenance, with minimal water consumption as a result of use of a state of the art water recycling system, all within the stringent technical requirements and specifications established by ACP.

Panama Canal 3rd Set of Locks - Project Set-Up, Panama
BIM/Model Manager responsible for the project set-up during pursuit and after notice to proceed. This included setting up BIM standards and processes to comply with the Contract and included project collaboration around the globe. Bill implemented model production and sharing with all stake holders.

Membrane Softening Water Treatment Plant, Montgomery County, Ohio
Design Manager for the 24 MGD membrane softening WTP, includes the design of a single building facility containing the membrane trains, chemical feed and storage, degasification, high service pumping, and operations.

William Vogel
BIM Design

Membrane Softening Water Treatment Plant, West Carrollton, Ohio
Design Manager for the 10 MGD membrane softening WTP, includes chemical feed and storage, well and membrane feed pumping, degasification, and high service pumping.

Membrane Softening Water Treatment Plant, Sunrise, Florida
Design Manager/Construction Manager for the design and construction of a 24 MGD membrane softening plant which included a chemical feed and storage facility, first and second stage membrane feed pump facility, membrane facility, ozone generation and contact, high service pumping, finished water storage, and backup power generation facility.

Texa Microfiltration Water Treatment Plant, San Antonio, Texas
Design Manager for the 9.0 MGD surface water treatment plant utilizing sedimentation, microfiltration membranes, chemical feed and storage facilities, and new raw water intake.

Vineyard Surface Water Treatment Plant, Sacramento County, California
Preliminary and Detailed Design Manager responsible for the preliminary layout of the 54 MGD Water Treatment Plant and solids handling facilities. He was also responsible for the layout and detailed design of the Centrifuge Facility.

Membrane Softening Water Treatment Plant, Ohio
Project Engineer for design of the Montgomery County Water Treatment Plant, a 18 MGD membrane softening plant and well field and was one of the first projects to be fully produced as a 3D model. Bill was responsible for model development and 3D training for the various disciplines. This project was produced as a true team effort between the SEDC, NEDC, ICE, and Cincinnatti and set the benchmark for 3D designs. As design manager he managed design for the 24 MGD membrane softening WTF, includes the design of a single building facility containing the membrane trains, chemical feed and storage, degasification, high service pumping, and operations.

Point Lisas Desalination Water Treatment Plant, Trinidad, West Indies
Civil Designer for the new 28.8 MGD membrane desalination water treatment plant that pre-treats nearly 80 MGD for feed water to reverse osmosis trains under a five-month accelerated schedule. The project included pilot plant operation, design of all structural elements, pre-treatment system, the intake and outfall, site civil works, resident engineering services, and overall project management. Filter design is 60 inches of anthracite over 30 inches of sand, clarified and filtered seawater is acidized and fed to one of five RO trains. The dual pass/dual stage RO treatment produces drinking water with less than 200mg/L chlorides, which is pH stabilized and chlorine dosed for residual. An onsite ground storage tank absorbs production demand fluctuations before system pumping. Support facilities of a chemical building, sludge thickening and dewatering, and brine discharge pumping were designed and constructed as well. This facility has now reached full production capacity, delivering an abundance of water to Point Lisas industries and residents throughout the island.

Tuas II Desolation Water Treatment Plant, Singapore
Site Design Manager for Tuas II Desolation Water Treatment Plant design-build project proposal. Teamed with local contractor to propose on the design and construction for a 60 MGD desalination WTP which required a complete 30% WTP design be completed within a six-week period. Bill utilized 3D/BIM applications and international workforce.

North East WPP, Houston, Texas
Designer. With East Design Center coordinated disciplines for the design the 40 MGD NEWPP design build project. Utilitzed advance intelligent design.

Raw Water Intake, North West , Arkansas
Designer perrforming civil and process mechanical design for a new 120 MGD raw water intake. He coordinated disciplines and utilized intelligent 3D design.

Gabe Maul PE
Bench and Pilot Studies

Gabe has been a key technical resource to deliver water and wastewater engineering solutions as part of a collaborative team. Gabe's background of water and wastewater systems, attention to detail, and clarity of communication helped deliver projects on time and on budget, providing value to clients.

EDUCATION
M.E., Environmental Engineering, University of Florida, Gainesville, Florida, 2013

B.S., Environmental Engineering, University of Florida, Gainesville, Florida, 2011

REGISTRATIONS
Professional Engineer #82382, State of Florida

PROJECT EXPERIENCE
Treatment Alternatives Analysis, West Palm Beach, Florida
Project Engineer for four water treatment plant alternatives. Gabe assembled the entire design criteria by unit process from start to finish, calculated costs by cost category (energy, chemicals, labor, etc.), and performed a 30 year economic comparison under supervisor's direction.

Water Quality Compatibility in a Regional Distribution System, Peace River Manasota Regional Water Supply Authority, Arcadia, Florida
Project Engineer for the analyzation of water quality parameters related to primary and secondary standards, corrosion strategies, and disinfection residuals from 11 utilities to assess the corrosion control effectiveness of the distribution system of each utility under supervisor's direction. Gabe presented this work at the FSAWWA 2014 conference. The project required a structured analysis approach to a large amount of data, an understanding of the interconnections of each system, and an understanding of corrosion control strategies.

UV System and Related Infrastructure, City of West Palm Beach WTP, West Palm Beach, Florida
Project Engineer during the planning phase for the creation of the protocols, operated the pilot, collected and plotted field data, and was the primary author of the pilot report. The project required coordination with the client and subcontractors in the team, training two other operations staff, troubleshooting daily issues, and interpretation of the data into useful conclusions for the full scale UV installation.

During detailed design, Gabe directed drawing development to CAD designers and coordinated design items with other disciplines for a $24.4M design of the first large-scale drinking water UV installation in Florida.

During construction, Gabe supported the team by tracking change orders, preparing meeting minutes, authoring progress reports for client invoicing. He coordinated conference calls between engineering team, contractor, and vendors, and reviewed over 40 submittals, including the UV reactor system.

Filter Rehabilitation, City of West Palm Beach WTP, West Palm Beach, Florida
Project Engineer responsible for the preparation of inspection reports for filter walls and troughs to direct contractor, oversaw installation of filter underdrain blocks with integrated air scour, and coordinated with manufacturer to ensure proper installation of underdrains. Gabe authored change orders for unexpected conditions and ensured that the change orders were carried through correctly through the pay application. Addressed multiple discrepancies in the contractor's pay application through workshops with the contractor and client to finalize pay applications.

Nanofiltration Element Evaluation, West WTP, Boynton Beach, Florida
Project Engineer for the assessment of the suitability of various membrane elements for replacement by comparing water quality from membrane software modeling scenarios to goals outlined by the City. Gabe modeled membrane element scenarios and identified three alternatives.

Well Rehabilitation Oversight, City of Lake Worth & Town of Davie, Davie, Florida
Construction Oversight during well rehabilitation milestones, Gabe ensured that contractor followed schedule, proper procedures for safety, and proper procedures for water quality testing.

Gabe Maul PE
Bench and Pilot Studies

Wellfield Condition Assessments, Palm Beach Water Utilities Department, West Palm Beach, Florida
Project Engineer, visited over 100 wells in four wellfields to assess the condition of multiple mechanical and structural components.

Capital Improvements Program, Palm Beach County Water Utilities Department, West Palm Beach, Florida
Consultant working with the program team to build a cash flow data reporting tool for the $427M CIP program with over 100 projects with distinct planning, design, and construction phases. Management utilized the tool to plan, track, and manage the CIP program by systematically tracking progress of projects, and identifying delays/ underrun projects.

Well Replacement and Rehabilitation (R&R) Prioritization Tool, Palm Beach County Water Utilities Department, West Palm Beach, Florida
Consultant responsible for the creation of a custom-made tool to help the County prioritize and budget well rehabilitation and replacement projects. This solution required extensive expertise of Excel, actively listening and adapting the project to client needs, and an understanding of wellfield operation needs. The client used this tool as an objective basis for operations and engineering to incorporate well projects into the CIP, asked for training in a computer lab, and actively use it as the key wellfield asset management and budgetary planning tool.

Sedimentation Basin Modifications, Palm Beach Resource Recovery Company, West Palm Beach, Florida
Project Engineer helping the project team to scope and price team members, subconsultants, and ODCs. Characterized municipal incinerator fly ash wastewater for settling properties, performed jar tests with coagulants and polymers, and proposed alternative physical and chemical modifications to enhance settling of fly ash particles.

Biological Nutrient Removal Bench Study – Confidential Client, Hillsboro, Oregon
Operated and performed troubleshooting on sampling-heavy sequencing batch reactor bench scale test. Organized own schedule to meet dynamic and complicated needs to prepare feed solutions, collect time-sensitive measurements, and perform system checks to ensure consistent operation and data production.

Discharge Monitoring Report Update, Main Street WRF, Gainesville Regional Utilities, Gainesville, Florida
Intern. Working closely with operators, Gabe updated the compliance spreadsheet to streamline calculations and reflect new nutrient requirements.

Regeneration of Ion Exchange with Alternative Salts, University of Florida, Gainesville, Florida. Master's Thesis
Gabe tested ion exchange regeneration in the lab with K+ and HCO3- and researched the environmental impacts of each waste stream. This work was published in Chemical Engineering Journal in October 2014.

Kyle Stevens
Financial Analysis

Kyle has extensive experience in populating and customizing long-term financial planning, cost allocation, rate design, impact fee, and miscellaneous service fee models. He has superior financial, business and analytical skills and has provided our clients with exemplary financial analysis based on application of sound financial and economic concepts. Kyle has strong Excel modeling skills and has experience working with large data sets and financial models, including our interactive model and specific user charge and assessment modules. Kyle has a high level of proficiency within our modeling system, and he has been very involved in recent engagements requiring substantial model customization and in providing ongoing support services to our clients using our financial forecasting module.

EDUCATION

Masters of Applied Economics, Florida State University, Tallahassee, Florida, United States, 2010

Bachelors in Economics, Florida State University, Tallahassee, Florida, 2010

PROJECT EXPERIENCE

City of Naples, Naples, Florida
As Lead Consultant, Kyle has worked for the past five years in assisting the City with rate revenue projections, cost of service, impact fees and utility rate design analysis. Of note is his working in helping the City quantify the fiscal impacts of expanding reclaimed service. This effort consisted of predicting which customers would elect to connect to the system and how much revenue would be lost from converting pricier potable irrigation water to reclaimed water. The results helped illuminate the areas ripe for expansion and help define the rate of expansion that the utilities revenues could support.

JEA, Jacksonville, Florida
Kyle served as the principal consultant for JEA's cost of service study. The study calculated the cost of service for JEA's water and sewer customers, utilizing JEA's extensive automated meter infrastructure (AMI). This allowed for a deep understanding of customer behavior to be attained and used in the study. The results of which notably allowed for the pricing of inclining block tiers based purely on the cost of service and system development fees to full price the level of service being provided to irrigation customers. JEA also subscribes to a one water philosophy, which was reflected in the unique cost of service by combining reclaimed service with potable water cost though a detailed mapping of functions. In this way the ultimate fees reflect the total cost cycle to deliver water in JEAs service area.

Athens Clark County, Florida
Kyle served as the lead consultant for a recent stormwater rate study for the Athens Clark County, which included a review of the revenue needs for the system, cost allocation and the fee structure. The community has a unique three part fee structure that charges each parcel a base, quantity, and quality components. Kyle performed a cost of service analysis in order to modernize the allocation of cost for the three part rate structure. Additionally, the impervious area measurements changed dramatically since the last rate study with necessitated the calculation of updated tier break points and illuminated potential equity concerns.

City of Fort Lauderdale, Florida
Kyle has served as the Project Consultant for a long-term financial modeling and sustainability analysis for the City in which he developed a common financial forecasting modeling platform that could be used for real-time evaluation and understanding for its key services, including its General Fund and seven separate major funds (Water/Sewer, Regional Wastewater, Stormwater, Sanitation, Airport, Parking, and Building funds). He customized individual models for each fund, and linked each model together to evaluate and understand a variety of decision alternatives and their current and future consequences to each fund. As part of the City's annual budget process, we perform simultaneous updates to all the models.

City of Lake Worth, Florida
Kyle is serving as the Project Consultant for a multi-fund financial sustainability analysis, during which we are individually modeling several major funds of the city, including electric, water, local sewer, regional sewer, stormwater, and sanitation, in addition to the City's General Fund. Through this process, we will be able to analyze the interconnectivity of all the funds within the City and develop a long-term sustainability plan for the future financial health of the City.

Town of Gilbert, Arizona
Kyle has served as the Project Consultant for all work for the Town, which includes revenue sufficiency

Kyle Stevens
Financial Analysis

analysis, detailed cost of service allocation, and rate structure analysis for the Water, Sewer, Reclaimed Water, Environmental Services and Stormwater Funds. Kyle was responsible for developing separate multi-year financial models for each fund, and also developed several modifications to the Town's existing rate structures, notably including a new inclining block water rate structure.

City of Tempe, Arizona
Kyle has served as the Project Consultant for the City for a water and sewer rate study. Using our financial model, he developed several alternative multi-year financial management plans and corresponding water and sewer rate revenue adjustment plans which we reviewed in interactive work sessions with City staff. He also completed a detailed cost of service allocations analysis where we reviewed test year revenue requirements, assessed billing determinants, allocated revenue requirements to functional categories, and identified customer class responsibilities for the costs of each category based upon the appropriate characteristics of each class.

City of Ann Arbor - Water, Sewer and Stormwater Cost-of-Service Studies, Ann Arbor, Michigan
Kyle served as the lead consultant for this Study. He worked with the client and stakeholder group to identify the revenue requirement of the stromwater utility. Additionally this project utilized significant scenario management in order to demonstrate the fiscal impacts of multiple programmatic enhancements that were contemplated during the study. As such staff and stakeholders were able to review the revenue implications of there collective choices in real-time. The study additionally included cost of serve and rate design aspects to round the analysis.

City of Carson City, Michigan
Kyle is serving as the Project Consultant for a Stormwater Funding and Rate Structure Analysis for the City. We are working as a sub-consultant to an engineering firm who is evaluating the asset management plan of the stormwater utility system. Kyle is developing multi-year financial forecast of the stormwater utility (currently funded out of the general fund) in order to identify existing funding sources and current cost requirements. He will then incorporate the results of the asset management plan of the system to determine the final impacts to the general fund at varying levels of implementation.

City of Columbia, Missouri
Kyle served as a Project Consultant on a recent update to a comprehensive stormwater and sewer cost of service rate studies for the City. He updated a revenue sufficiency analysis in order to develop a multi-year plan of rate revenue increases to satisfy the annual operating, debt service, and capital requirements of each utility as well as maintain adequate operating reserves. He then reviewed the rate structure (including evaluation of rates for wholesale users), and developed recommended modifications to ensure that the rates conformed to accepted industry practice and reflect a fair and equitable distribution of system costs.

Water Resources, Town of Gilbert, Arizona
Kyle has served as the Project Consultant for all work for the Town, which includes revenue sufficiency analysis, detailed cost of service allocation, and rate structure analysis for the Water, Sewer, Reclaimed Water, Environmental Services and Stormwater Funds. Kyle was responsible for developing separate multi-year financial models for each fund, and also developed several modifications to the Town's existing rate structures, notably including a new inclining block water rate structure.

City of Olathe, Olathe, Kansas
Kyle served as the lead consultant for a utility management and financial assessment of the City's utilities (water, sewer, solid waste and stormwater). As part of the assessment, Kyle completed a study to evaluate the feasibility of moving to a full stormwater utility based on impervious area.

James Hale GISP
GIS and Mapping

James is a GIS project manager with 19 years of consulting experience. His expertise lies in equipping clients with the knowledge and resources to fully leverage both GIS and CMMS technology. He has developed complex GIS programs including CMMS system integrations and GIS utility billing integrations. James is experienced in a wide range of GIS technology projects including asset management, impervious surface mapping, land use analysis, mobile data collection to name a few. He has been immersed in GIS implementations assisting local governments, school districts, public utility departments, and electric cooperatives. James successfully steers projects to incorporate the latest and most appropriate GIS technologies including Remote Sensing, Asset Management, CMMS, Mobile GIS, Workflow Automation, and Enterprise GIS. James is a Certified GIS Professional (GISP).

EDUCATION
Bachelor of Science, Geography, Appalachian State University, Boone, North Carolina, US, 1999

REGISTRATIONS
Certified Geographic Information Systems Professional (GISP) #28430

PROJECT EXPERIENCE
City of St Petersburg Tiered Stormwater Utility and Impervious Layer Creation, St. Petersburg, FL
James served as the project manager and GIS lead on a stormwater tiered rate implementation project for the City of St. Petersburg. To create the impervious surface layer, Stantec chose an area of interest to develop supervised and unsupervised image classifiers. Classes such as grass, trees, parking lot, and bare earth were extracted from 2017 aerial imagery then segmented into object groups of similar pixels based on space and spectral bands. These objects were used as training samples which created the base impervious layer, which was then manually QAQC'd. This data was fed into financial models to determine a new, fair tiered billing structure which grouped fees for most single-family homes based on square foot ranges, where smaller total square footage resulted in smaller fees. Any non-single-family parcel was billed on actual square footage of impervious area. Additionally, Stantec used ArcGIS Online Web Applications to create a web-based Customer Portal where every parcel is available for citizens to review their parcel's total impervious area and the fee they will be receiving. This interface is linked with a fee inquiry form where questions, comments, and challenges can be filed with one click – all integrated and online. The GIS served as the system of record for billing and automation was created between the geodatabase and NaviLine utility billing.

Collier County Stormwater Utility Implementation, Naples, Florida
James served as the GIS lead on a stormwater utility implemenation. Stantec utilized existing property appraiser information including parcel and planimetric data to create an ERU. Using this ERU, the project team established tiers for residential and measured service total to create a stormwater billing file. Stantec prepared a billing file to be inserted into the tax role. Finally, the project team created a GIS web portal to provide public information, details on parcel billing and a means for the public to appeal impervious measurements.

Water and Wastewater Geodatabase Design and Implementation, City of Fort Myers, Florida
GIS Manager responsible for client interaction, training, coordination, and geodatabase design. Stantec prepared as-built data conversion techniques and imposed topologic rules to ensure data integrity. Stantec also developed procedures for the City to amend their process of accepting as-built data allowing for seamless integration into GIS.

Master Plan for Rehabilitation and Improvement of the Wastewater, Sarasota, Florida
GIS Manager responsible for client interaction, training, coordination, and geodatabase design. Stantec developed a method of incorporating historic wastewater rehabilitation efforts into GIS. This allowed for a visual assessment of rehabilitation efforts and results. Results were identified by linking pump station SCADA data directly into GIS.

GIS Sub-foot Geometric Network, Naples, Florida
James developed a technique and workflow to allow for a seamless integration of conventional survey grade collected data into a complex GIS. He built a geometric network to ensure data integrity and allow for utility modeling. James presented this work at the 2011 Southeast Regional GIS Users Group.

James Hale GISP
GIS and Mapping

SR 874 Asset Tracking Database, Miami-Dade County, Florida
GIS Manager responsible for converting from MicroStation to geodatabase Miami-Dade Expressway Authority assets along SR 874 various transportation assets into an asset tracking database, including ITS, barrier, drainage and signage assets. Performed data collection in the field using a GIS mobile asset inspection tool developed for the project.

City of Naples Infrastructure Geodatabase Development, Naples, Florida
GIS Manager for the design of a geodatabase that addressed the specific needs of the City utilities and created a central repository of information. Record drawings were converted to GIS and a data Dictionary was developed allowing for sub foot accurate GPS collection. The City's geodatabase was enhanced with these improvements and geometric network was established allowing for accurate modeling.

County Public Works Geodatabase Design, Collier County, Florida
GIS Analyst responsible for producing and evaluating GIS maps and technical documents. Stantec provided geodatabase design and water, wastewater and reclaimed as-built conversion to Asset Management geodatabase, for County service areas covering 86 square miles. Services also included as-built and parcel georeferencing, and map book, CAD to geodatabase conversion model and help documentation development.

Collier County Irrigation Geodatabase, Collier County, Florida
GIS Analyst responsible for client interaction, training, coordination, and geodatabase design for Collier County. Stantec prepared field data collection techniques and imposed topologic rules to ensure data integrity. This project was awarded the ESRI special achievement in GIS.

Collier County Well Geodatabase, Collier County, Florida
GIS Analyst responsible for client interaction, training, coordination, and geodatabase design. Stantec prepared field data collection techniques and imposed topologic rules to ensure data integrity. Stantec also developed procedures for Collier County staff to amend the application process to ensure permitted wells will be accurately located in future. This project was awarded the ESRI special achievement in GIS.

Stormwater Impervious Mapping, Lee County, Florida
GIS Analyst was responsible for producing and evaluating GIS maps and technical documents. Stantec provided GIS mapping and database review/audit services of the City's impervious mapping in support of new stormwater tax ordinance. Services provided include orthophotography acquisition, geodatabase set-up, photo-interpretation, mapping and data analysis. Results of the project yielded thousands of square feet of additional impervious mapping, and hundreds of thousands of dollars of additional stormwater tax revenue annually for the City.

Bonita Springs Stormwater Utility Implementation, Bonita Springs, FL
GIS Lead serving as the GIS lead on a stormwater utility implementation project for the City of Bonita Springs. The GIS team created an impervious layer using image segmentation and classification techniques in ArcGIS Pro to establish a base layer. This layer was then supplemented with existing property appraiser information including parcels and footprints to create a billing file. Stantec coordinated with the County tax collector to add the utility fee to the tax roll.

Utility Asset GPS Location and Attribute Collection, City of Sarasota, Florida
GIS Manager responsible to provide professional services for a comprehensive approach to improve the accuracy of the water and wastewater assets within the geodatabase. Stantec developed a data dictionary and utilized sub-foot GPS technology to collect locations and attributes of the City's water, wastewater and reclaim assets.

Collier County Bike and Pedestrian Map, Collier County, Florida
GIS Manager to update the Collier County Urban Area Bicycle and Pedestrian Facilities Map. Utilized planimetric data to make updates to the sidewalk and pathways inventory. Presented updates to the Bike Safety Advisory Committee and produced high quality cartographic maps to be used for brochures consumed by the public.

Sean Compel PE, LEED AP
Construction Management Services

Sean has over 18 years of extensive experience in the planning, design, permitting and construction of civil engineering and site development projects. He has served as project construction administrator and project manager for various roadway, drainage, water, sewer, underground electrical, and industrial projects. Clients include municipalities, state agencies, educational facilities, and private businesses. His experience in construction services has allowed him to effectively deliver projects satisfying all owner requirements and goals. Responsibilities during construction include permitting, review of scheduling, and overall cost analysis.

EDUCATION
Bachelor of Science in Civil Engineering, University of Miami, Miami, Florida, 2002

REGISTRATIONS
Professional Engineer #66618, State of Florida
Envision Sustainability Professional (ENV SP)
LEED Accredited Professional, U.S. Green Building Council

PROJECT EXPERIENCE
Reclaimed Water Distribution System, Key Biscayne, Florida
Project Construction Administrator for this Civil site work including site clearing, earthwork and grading, paving, reclaimed water mains including services, valves and appurtenances, landscaping and roadway/right-of-way restoration. The reclaimed water distribution system was installed from the northern Village limits running south, primarily along Fernwood Road, to West Mashta Drive. The project included the installation of service lines and meter boxes for future use.

Key Biscayne Zones 1 & 4 Water Main and Sanitary Sewer Replacement, Key Biscayne, Florida
Construction Administrator responsible for assisting with the administration of sanitary sewers, manholes, existing pump station upgrades and modifications, lateral connections, fire hydrants, water main replacement including valves and appurtenances, and roadway/right-of-way restoration.

Key Biscayne Zones 2 & 3 Reclaimed Water & Line Replacement Sanitary Sewer, Key Biscayne, Florida
Director of Construction Services responsible for the construction administration for this project that includes the construction of sanitary sewers, manholes, existing pump station upgrades and modifications, lateral connections, fire hydrants, water main replacement including valves and appurtenances, and roadway/right-of-way restoration, and other related work as shown on the plans. In addition to observing the on-going work, digital pictures were taken at almost every visit to record the project progress.

Grove Park Phase 2: NW 18th Place, Miami, Florida
Construction Administrator for this critical area of drainage improvements. The Grove Park area just south of SR 836 has a history of flooding and low-lying homes have been in need of relief for quite some time. After studying the area, it was determined that utilizing an existing outfall as well as providing a new connection to the existing large pump station would provide the best relief. This project, though challenging during construction, was completed on time and provided the necessary drainage solution. Construction activities and lanes closures had to be coordinated with the Miami Marlins baseball home schedule due to the proximity to the stadium.

Palmetto Bay Drainage Improvements, Palmetto Bay, Florida
Project Manager and Construction Administrator for the field surveying, design, permitting, bidding, and construction of drainage improvements at various locations throughout the Village. The Village's stormwater master plan identified and prioritized areas with flooding problems. Many areas had no existing drainage. Each phase of construction included the installation of drainage structures, exfiltration trenches, connections to the existing system, and associated restoration. All phases of work were completed on schedule and under budget.

Sunset Drive Improvements (West of US 1), South Miami, Florida
Construction Administrator for this master planning project involving the development of conceptual streetscape and infrastructure improvements along Sunset Drive from the western city limits to US 1. These include delineating intersections with concrete pavers and crosswalks, redefining roadways sections, and providing new lighting and landscape design to increase public safety and appeal. In addition, a new architectural site plan for City Hall was designed incorporating

Sean Compel PE, LEED AP
Construction Management Services

surrounding public spaces and facilities to create an enhanced civic and community space. The master plan was developed substantially in accordance with the City's Hometown Plan Area 2, and evaluated proposed improvements with respect to their feasibility, cost/benefit, design, and construction. In addition, the firm held three public workshops to collect public opinions and suggestions, and ensured the Master Plan was reflective of, and sensitive to the community.

K8 Drainage Improvements, Key Biscayne, Florida
Project Manager and Construction Administrator for the study, planning, design, and permitting of this drainage basin in the center of Key Biscayne. This basin is the lowest lying area of the key and during heavy rainfall it would take days for the water to recede. Upon studying different options, it was determined that a pump station was the ultimate solution; however due to available funding the immediate project was to install two new gravity wells. The wells were sized and designed to allow for conversion to pressure wells in the future as funding becomes available. The completed project has demonstrated that the wells are effective in draining water quickly after heavy storm events.

Miami Gardens Canal Stabilization & Repairs, Miami Gardens, Florida
Construction Administrator for this design-build canal bank stabilization project for over 3000 linear feet of canal bank, 2 large culvert headwalls, reconstruction of 12 stormwater outfalls, and outfalls structures. A stabilization synthetic stacking system was used for the canal bank to reestablish the banks by preventing future erosion. Permitting included a Class III permit throughout PERA Water, Miami-Dade Public Works. The project design included a stormwater pollution prevention plan, environmental designs including manatee grates, and maintenance of traffic. Additionally, the project also included grant management.

Outfall replacement at 398 Harbor Drive, Key Biscayne, Florida
Construction Administrator for this project which involved a new 24-inch outfit to Biscayne Bay to relieve flooding on surrounding streets. The new outfall replaced an old collapsed pipe at another location and it included a duckbill type backflow preventer. The installation of the outfall required securing a 10-foot-wide easement through private property and also required close coordination and compliance with the permitting agencies including Miami Dade DERM. The Village of Key Biscayne secured a grant from FDEP and the project was successfully completed and closed out on time.

Pinecrest Watermain Master Plan and System Design, Pinecrest, Florida
roject Manager and Construction Administrator for the installation of over 12 miles of watermain infrastructure throughout the Village. This two phase project provided potable water to over 550 properties previously connected to individual private wells. This successful project also included the implementation of a system to allow each homeowner to select the best location for their new water meter. The firm also prepared the master plan that included a computerized model of the entire system and public workshops and meetings were held to inform and educate the residents of the work and cost involved in the project.

Golden Beach Canal Maintenance Study, Golden Beach, Florida, Town of Golden Beach, Florida
Project Manager for the study of three local canals adjacent to the Intracoastal Waterway (ICW). The purpose of the study was to determine the magnitude of maintenance dredging and this was accomplished with the completion of a bathymetric survey. The survey provided existing cross sections every 50' and these sections were analyzed to determine the amount of silt to be removed from the bottom of the canals. A benthic survey was also conducted to determine the environmental impacts and understand the permit implications. The presence of seagrass was documented and the composition of the slit was summarized. Finally, the study provided the Town with a range of costs to complete the maintenance dredging. The study was completed in August 2016.

Ernesto Gianella PE, PMP
Planning Support

Ernesto is a Senior Civil Engineer with extensive expertise in project management for infrastructure master planning, hydraulic modeling and water infrastructure assessment and design. He has 26 years of experience, including assignments leading and participating in projects to develop, calibrate and apply computer hydraulic models for dozens of communities. His technical experience includes the application of hydraulic models for master planning, development of operational plans, pump energy management, water age and water quality modeling, fire protection analysis, transient analysis, utilities asset management, CIP optimization, and GIS integration.

EDUCATION

MBA, Georgia Institute of Technology, Atlanta, Georgia, 1999

MS, Civil Engineering, Georgia Institute of Technology, Atlanta, Georgia, 1992

BS, Civil Engineering, Florida Institute of Technology, Melbourne, Florida, 1990

REGISTRATIONS

Professional Engineer #32810, State of Georgia

Project Management Professional (PMP)® #1793459, Project Management Institute

PROJECT EXPERIENCE

Demand Services Agreement for Planning Support Services, Gwinnett County, Georgia
Provided technical assistance in the use of the water distribution model to perform specific system analysis such as: pump energy optimization study, fire flow capacity evaluation, pressure and flow evaluation at potential future development sites, analysis of potential water interconnections with other counties; and effect of pressure reduction at High Service Pumps. Project included assistance and training to GCDWR staff in the development of an all-pipes model (120,000 pipes) and support to GCDWR staff with water and sewer modeling development issues.

Design Services for Surge Protection, Macon, Georgia
Managed all project activities related to implementation of surge protection strategy for the MWA water distribution system including: detail transient analysis to size surge protection device, preparation of design drawings and bid documents for the surge protection tanks, assistance in bidding process, and construction management services for installation of the surge tanks.

Surge Suppression System Analysis, Tampa, Florida
Responsible for evaluating the current conditions of the Tampa Bay Water South-Central Regional Wellfield with respect to potential surges and transient events, to determine if the system was vulnerable to surge, and for developing recommendations, safeguard measures and selecting surge suppression devises that can effectively protect the system form surge and the stresses from transients. The project involved: data collection and validation, hydraulic model setup and calibration, developing of modeling scenarios, surge analysis.

Water Efficiency Strategy and Energy Optimization, Henry County, Georgia
Assisted the Henry County Water and Sewerage Authority to develop a Water Efficiency Management Strategy. The project involved monitoring and evaluating existing pump curve characteristics, conducting flow and pressure monitoring, conducting a fluoride tracer field data program, calibrating a water distribution all-pipes hydraulic model, performing water quality model setup, calibration and analysis, performing surge analysis of existing facilities, performing an energy optimization system study, and developing a water efficiency management strategy action plan.

Water Quality Improvements Strategy for Water Distribution System, Valdosta, Georgia
Managed all project activities related to the collection of existing data, field investigations, monitoring, hydraulic and water quality model calibration, evaluation of alternative and development of a capital improvement program. One of the immediate purposes of the project was to prevent recurrences of the HPC hits in the distribution system by optimizing the flushing program and reduce the water age residence time. In the longer term, the intent is to improve water system operation and maintenance by instituting a comprehensive system-wide unidirectional flushing program that will provide a rational, economical approach to flushing which will preserve water quality in the distribution system.

Ernesto Gianella PE, PMP
Planning Support

Hydraulic Model Field Calibration and Pilot Study, Gwinnett County, Georgia
Managed all project activities related to the field calibration of the water distribution all-pipes hydraulic model and implementation of a pilot study. Directed the installation of 100 digital pressure loggers in county hydrants as well as all field work related to geo-referencing the monitoring sites. In charge of calibration of the all-pipes model using the recorded pressure data in addition to over 100 other SCADA records for flow, pressure, tank levels, and pump status. The calibrated model was then used to simulate the creation of District Metering Areas (DMA) in the distribution system in order to identify potential areas with high non-revenue water (NRW). The project includes a demonstration or pilot study to evaluate the benefits of GIS, modeling, and field monitoring tools on identifying and quantifying NRW in a selected sector of the water distribution system.

Business Case Evaluation of Mid-term and Long-Term Capital Improvement Program of Water Distribution System, Gwinnett County, Georgia
Assisted GCDWR in conducting a Business Case Evaluation (BCE) of mid-term and long-term Capital Improvement Programs (CIP) of the County's water distribution system. Responsible for hydraulic modeling of future demand scenarios used to identify areas that fail to meet the evaluation criteria and to develop improvement projects that resolve non-compliance issues.

Water Main Replacements, Engineering Strategies Inc., East Point, Georgia
Managed all project activities related to hydraulic modeling services provided to Engineering Strategies Inc. as part of the City of East Point Water Main Replacement Project. The assignment included evaluation of the hydraulic model developed in a previous Water Services Action Plan. The verified hydraulic model was then used to evaluate water age, minimum pressures, and fire flow conditions for all proposed new water mains.

Water Assessment Plan, Sandy Springs, Georgia
The purpose of the study was to guide the City of Sandy Springs in what it could be doing now to maintain and enhance the current levels of service and to better plan for meeting future water demands. Responsible for conducting the modeling simulations required for the alternative analysis. Worked with planners in developing future population and employment water demand scenarios and performed hydraulic modeling to evaluate the hydraulic performance of the distribution system under the future demand scenarios.

Hydraulic Model Field Calibration and Verification, Macon, Georgia
Managed field activities conducted by the MWA/Halcrow Team in performing flow and pressure data collection. In charge of all field work related to installation of 30 digital pressure loggers, data collection, and data analysis. He directed the hydraulic model calibration efforts using the newly collected pressure and flow data as well as existing SCADA records.

Hydraulic and Transient Analysis of High Service Pump Station Operation, Macon, Georgia
Managed all project activities related to the hydraulic and transient analysis of the Macon Water Authority High Service pump station in order to identify possible causes of pipe bursts and to evaluate possible solutions. The project involved: analysis and evaluation of SCADA data to identify possible areas of concern, use of hydraulic model to verify system response, and transient analysis using a transient modeling software.

Pilot Study for District Metering Area Phase 2, Gwinnett County, Georgia
Performed a pilot study to quantify non-revenue water in a District Metering Area. The project involved flow and pressure monitoring, customer meter assessment, and water balance/water audit using AWWA/IWA best practice approach.

Linear Asset Management - Data Reconciliation and Update, Atlanta, Georgia
Project Manager for tasks with City of Atlanta DWM for reconciliation and update of water distribution network data including GIS geometric network, water distribution hydraulic model, and risk-based asset management analytical tools. Provides technical assistance on water main assessment to identify small mains to be replaced as part of the Rehabilitation and Replacement (R/R) Program.

9. Office Location

Stantec has over **17,000 people in more than 350 locations worldwide. With 200 offices and 7,600+ people in the US alone, chances are there's a Stantec presence right where you need us to be. More specifically, we have 15 offices within the State of Florida** including our local Deerfield Beach office to aid in this contract, and we have a long history of serving municipal and county government clients throughout the state.

Our Deerfield Beach office (located at 800 Fairway Drive, Suite 195, Deerfield Beach, Florida) is only **10 minutes (7 miles)** from the City of Pompano Beach City Hall. We are very interested in this contract and our integrated team is committed to making it a success. This office shall be supported by staff from our other local offices in Sunrise, Coral Gables, and West Palm Beach as needed. **Our skilled professionals will work together to deliver the best possible design solutions!**

Deerfield Beach, Sunrise, West Palm Beach, and Coral Gables Staff Information	
Administrative	26
CAD Technician	13
Civil Engineer	45
Computer Programmer	1
Construction Inspector	9
Electrical Engineer	7
Environmental Engineer	2
Environmental Scientist	9
Hydrologist	2
Land Surveyor	5
Planner, Urban/Regional	5
Project Manager	7
Structural Engineer	13
Technician/Analyst	3
Transportation Engineer	10
Other	9
Total	166

Stantec Staffing Information	
Administrative	3289
Architect	995
Biologist:	254
CAD Technician	653
Civil Engineer	2390
Computer Programmer	436
Construction Inspector	273
Electrical Engineer	673
Environmental Engineer	423
Environmental Scientist	841
Geologist	220
Interior Designer	271
Land Surveyor	410
Landscape Architect	227
Mechanical Engineer	608
Planner, Urban/Regional	261
Project Manager	671
Structural Engineer	675
Technician/Analyst	1920
Transportation Engineer	250
Other	1431
Total	17,171

Office Locations

Deerfield Beach Office
800 Fairway Drive, Suite 195
Deerfield Beach, Florida 33441
(954) 481-2812

Sunrise Office
1551 Sawgrass Corporate Parkway, Suite 440
Sunrise FL 33323
(954) 851-1572

West Palm Beach Office
2056 Vista Parkway, Suite 100
West Palm Beach FL 33411
(561) 771-5345

Coral Gables Office
901 Ponce de Leon Blvd., Suite 900
Coral Gables, FL 33134
(305) 445-2900

Subconsultant Office Locations

Keith & Associates
301 East Atlantic Blvd.
Pompano Beach, FL 33060
(954) 788-3400

Craig A. Smith & Assoc.
277 Goolsby Blvd., Unit 4C
Deerfield Beach, FL 33442
(954) 782 8222

Radise International
4152 W. Blue Heron Blvd.
Suite 1114
Riviera Beach, FL 33404
(561) 841-0103

10. Local Business

REQUESTED INFORMATION BELOW IS ON LOCAL BUSINESS PROGRAM FORM ON THE BID ATTACHMENTS TAB. BIDDERS ARE TO COMPLETE FORM IN ITS ENTIRITY AND INCLUDE COMPLETED FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.

CITY OF POMPANO BEACH, FLORIDA
LOCAL BUSINESS PARTICIPATION FORM

Solicitation # & Title: E-23-20 Continuing Contract for Engineering Services for Water and Reuse Treatment Plant Projects

Prime Contractor's Name: Stantec Consulting Services Inc.

Name of Firm, Address	Contact Person, Telephone Number	Type of Work to be Performed/Materials to be Purchased	Contract Amount
Keith & Associates 301 East Atlantic Boulevard Pompano Beach, FL 33060	Alex Lazowick, PE, PMP (954) 788-3400	Surveying services, and Civil/Stormwater Engineering and Landscape Architecture support services	TBD

LOCAL BUSINESS EXHIBIT "A

LOCAL BUSINESS EXHIBIT "B"
LOCAL BUSINESS
LETTER OF INTENT TO PERFORM AS A LOCAL SUBCONTRACTOR

Solicitation Number E-23-20

TO: Stantec
(Name of Prime or General Bidder)

The undersigned City of Pompano Beach business intends to perform subcontracting work in connection with the above contract as (check below)

_____ an individual

x _____ a corporation

_____ a partnership

_____ a joint venture

The undersigned is prepared to perform the following work in connection with the above Contract, as hereafter described in detail:

civil engineering, landscape architecture, surveying

at the following price: TBD

7/22/2020
(Date)

Keith and Associates, Inc., bda KEITH
(Print Name of Local Business Contractor)

301 E. Atlantic Boulevard
(Street Address)

Pompano Beach, FL 33060
(City, State Zip Code)

BY: _____
(Signature)

IMPORTANT NOTE: Signatures on this form MUST be by an authorized employee of Subcontractor and must be uploaded to the Response Attachment Tab

LOCAL BUSINESS EXHIBIT "B"

LOCAL BUSINESS EXHIBIT "D"
GOOD FAITH EFFORT REPORT LOCAL BUSINESS PARTICIPATION **N/A**

Solicitation #__E-23-20_____

1. What portions of the contract have you identified as Local Business opportunities?

_____

_____

_____

_____

2. Did you provide adequate information to identified Local Businesses? Please comment on how you provided this information.

_____

_____

_____

3. Did you send written notices to Local Businesses?

____ Yes ____ No

If yes, please include copy of the notice and the list of individuals who were forwarded copies of the notices.

4. Did you advertise in local publications?

____ Yes ____ No

If yes, please attach copies of the ads, including name and dates of publication.

5. What type of efforts did you make to assist Local Businesses in contracting with you ?

_____

_____

7. List the Local Businesses you will utilize and subcontract amount.

_____ $_____

_____ $_____

_____ $_____

8. Other comments: _____

_____

LOCAL BUSINESS EXHIBIT "D" – Page 2

N/A

LOCAL BUSINESS EXHIBIT “D”

LOCAL BUSINESS EXHIBIT "C"
LOCAL BUSINESS UNAVAILABILITY FORM **N/A**

Solicitation # E-23-20

I,_____
(Name and Title)

of_____, certify that on the _____day of

_____, _____, I invited the following LOCAL BUSINESS(s) to bid work
(Month) (Year)

items to be performed in the City of Pompano Beach:

Business Name, Address	Work Items Sought	Form of Bid Sought (i.e., Unit Price, Materials/Labor, Labor Only, etc.)

Said Local Businesses:

___ Did not bid in response to the invitation

___ Submitted a bid which was not the low responsible bid

___ Other:_____

Name and Title: _____

Date: _____

Note: Attach additional documents as available.

LOCAL BUSINESS EXHIBIT "C"

TIER 1/TIER 2 COMPLIANCE FORM

IN ORDER FOR YOUR FIRM TO COMPLY WITH THE CITY'S LOCAL BUSINESS PROGRAM AS A TIER 1 OR TIER 2 VENDOR, BIDDERS MUST COMPLETE THE INFORMATION BELOW AND UPLOAD THE FORM TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.

TIER 1 LOCAL VENDOR

_____ My firm has maintained a permanent place of business within the city limits and maintains a staffing level, within this local office, of at least 10 % who are residents of the City of Pompano Beach.

And/Or

_____ My firm has maintained a permanent place of business within the city limits and my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 10 % of the contract value.

Or

_____ My firm does not qualify as a Tier 1 Vendor.

TIER 2 LOCAL VENDOR

_____ My firm has maintained a permanent place of business within Broward County and maintains a staffing level, within this local office, of at least 15% who are residents of the City of Pompano Beach

And/Or

__✓__ My firm has maintained a permanent place of business within Broward County and my submittal includes subcontracting commitments to Local Vendors Subcontractors for at least 20% of the contract value.

Or

_____ My firm does not qualify as a Tier 2 Vendor.

I certify that the above information is true to the best of my knowledge.

August 10, 2020
(Date)

Stantec Consulting Services Inc.
(Name of Firm)

BY: Neil Johnson, PG, PMP
(Name)

BROWARD COUNTY LOCAL BUSINESS TAX RECEIPT

115 S. Andrews Ave., Rm. A-100, Ft. Lauderdale, FL 33301-1895 – 954-831-4000

VALID OCTOBER 1, 2019 THROUGH SEPTEMBER 30, 2020

DBA:
Business Name: STANTEC CONSULTING SERVICES INC

Receipt #: 315-274235
Business Type: ENGINEER (CERTIFICATE OF AUTHORIZATION)

Owner Name: STANTEC CONSULTING SERVICES INC
Business Location: 800 FAIRWAY DR STE 195
DEERFIELD BEACH
Business Phone:

Business Opened: 01/06/2016
State/County/Cert/Reg: 27013
Exemption Code:

Rooms	Seats	Employees	Machines	Professionals
		4		

For Vending Business Only
Number of Machines: Vending Type:

Tax Amount	Transfer Fee	NSF Fee	Penalty	Prior Years	Collection Cost	Total Paid
30.00	0.00	0.00	0.00	0.00	0.00	30.00

THIS RECEIPT MUST BE POSTED CONSPICUOUSLY IN YOUR PLACE OF BUSINESS

THIS BECOMES A TAX RECEIPT WHEN VALIDATED

This tax is levied for the privilege of doing business within Broward County and is non-regulatory in nature. You must meet all County and/or Municipality planning and zoning requirements. This Business Tax Receipt must be transferred when the business is sold, business name has changed or you have moved the business location. This receipt does not indicate that the business is legal or that it is in compliance with State or local laws and regulations.

Mailing Address:

STANTEC CONSULTING SERVICES INC
11130 NE 33 PL STE 200
BELLEVUE, WA 98004

Receipt #1CP-18-00015565
Paid 09/10/2019 30.00

2019 - 2020

Business Tax Office
150 NE 2nd Ave.
Deerfield Beach, FL 33441
Phone: (954)480-4333
E-mail: web.btr@deerfield-beach.com

Deerfield Beach
Florida

Business Tax Receipt License
2019-2020

License Number: 20-00031169

Date Issued: 9/10/2019
Expires: 9/30/2020

STANTEC CONSULTING SERVICES IN
11130 NE 33RD PL
SUITE 200
BELLEVUE WA 98004

Classification: ENGINEERING SERVICES/ENGINEER
Business Location: 800 FAIRWAY DR
Service(s): ENGINEERING FIRM - SUITE 195
Control Number: 0001589

Tax Amount: $ 117.60	Add. Fees: $ 122.40	Penalty: $ 0.00	Total Amount Paid: $240.00

Notice: This Tax Receipt becomes ***NULL*** and ***VOID*** if ownership, business name, or address changed. Business owner **must** apply to Business Tax Office for Transfer.

11. Litigation

Firm Name: Stantec Consulting Services Inc. ("SCSI")

LEGAL PROCEEDINGS

Following are legal proceedings arising out of construction or design projects. We have listed all currently pending litigation against SCSI (including litigation against Stantec Consulting Inc. and Stantec Consulting Corporation. Stantec Consulting Inc. was merged into Stantec Consulting Services Inc. as of December 31, 2009; Stantec Consulting Corporation was merged into SCSI as of December 31, 2011), and all currently open litigation or litigation that has been closed since the date of acquisition of companies acquired by SCSI, namely: The Sear-Brown Group, Inc., Dufresne-Henry, Inc., Vollmer Associates, LLP., Trico Engineering, Inc., Neill & Gunter, Inc., R.D. Zande, Inc., Fuller, Mossbarger, Scott & May, Inc., Secor International Incorporated, Jacques Whitford Company, Inc., Bonestroo, Inc., ENTRAN, Inc., ABMB Engineers, Inc. Greenhorne & O'Mara, Inc., USKH Inc., Processes Unlimited, Inc., Penfield & Smith Engineers, Inc., Fay, Spofford & Thorndike, Inc. and MWH (collectively "acquired companies").

1) Currently Pending Litigation for SCSI or acquired companies

PROJECT NAME, LOCATION & OWNER	DESCRIPTION OF CONVICTIONS, FINES and LEGAL PROCEEDINGS (include caption of case, parties, location of proceeding, description of the dispute or enforcement action, dates action commenced and concluded and status and/or outcome)
DCAS – 210 Joralemon LL11 Brooklyn, NY Owner – New York City Department of Citywide Administrative Services	Fitim Shehu v. The Board of Managers of the 210 Joralemon Street Condominium, Stantec Consulting Services Inc., Stantec Architecture Inc., Ashnu International Inc., ZDG LLC, 210 Muni, LLC and United American Land, LLC; County of New York; allegations re unsafe work conditions; pending, unresolved litigation.
Modified Wastewater Pumping Station; Wastewater & Effluent Force Mains Plymouth, MA Owner – Town of Plymouth, MA	Town of Plymouth v. Veolia North America – Northeast LLC, Veolia Water North America Operating Services LLC. Veolia North America, Inc., American Home Assurance Company, Insurance Company of the State of PA. American International Group, Inc., Ace American Insurance Company, CDM Smith, Inc., P. Gioioso & Sons, Inc. and Stantec Consulting Services Inc.; United States District Court, commenced May 2016; allegation re force main sewer, pending, unresolved litigation.
Modified Wastewater Pumping Station; Wastewater & Effluent Force Mains Plymouth, MA Owner – Town of Plymouth, MA	Commonwealth of Massachusetts v. Veolia, Town of Plymouth and Town of Plymouth v. CDM Smith, Stantec Consulting Services Inc., et al.; companion case to previous Town of Plymouth v. Veolia, et al.; allegation in Massachusetts State Court, allegation re discharge of water; pending, unresolved litigation.
Quarry Naples, FL Owner - Centex Homes now Pulte	Quarry Community Association Inc., Plaintiffs vs. Centex Real Estate, Wilson Miller Inc., et al.; allegation re construction defects in common areas which were constructed by Pulte; commenced May 31, 2017; pending, unresolved litigation.
SP NO 454-02-0071, I-12 Widening D-B Amite River Bridge Baton Rouge, LA Owner - LA Department of Transportation and Development	City of Walker, City of Denham Springs, The Williamson Eye Center (APMC), Timothy John Kinchen and Shannon Farris Kinchen. v. State of LA thru State of LA Department of Transportation and Development, ABMB Engineers, et al.; allegation re concrete barrier along I-12 as part of Geaux Wider highway; commenced January 2017; pending, unresolved litigation.
Henrico Fire Station #10 Henrico County, VA Owner - County of Henrico	Murray v. County of Henrico and Haley Builders; Jewell v. County of Henrico & Haley Builders, Inc.; allegation re storm water runoff at construction site; commenced June 2016; pending, unresolved litigation.
Glendale Community College District Services Building Glendale, CA Owner - Glendale Community College District	Mallcraft, Inc v. Glendale Community College District. Mechanical system is not performing in new services building. The construction contract with the contractor was terminated during construction for default and the bonding company (Travelers Insurance) took over. Travelers brought arbitration against the College and is claiming architectural and engineering errors and omissions both as a defense to defect claims and as an affirmative source to recover their losses. Stantec performed mechanical, electrical and plumbing design and Traveler's alleges their contractor did not follow the design because it was "overdesigned." College district brought in Architect due to Contractor defenses, and Stantec brought in as a defendant by Architect. Settled, *pending closure.* (September 2019)

PROJECT NAME, LOCATION & OWNER	DESCRIPTION OF CONVICTIONS, FINES and LEGAL PROCEEDINGS (include caption of case, parties, location of proceeding, description of the dispute or enforcement action, dates action commenced and concluded and status and/or outcome)
Legacy Personal Injury Claims relating to Wolff & Munier, Inc., acquired by Fay Spofford & Thorndike of New York, Inc.	Pending lawsuits tendered to Wolff & Munier, prior insurance carrier; claims relating to alleged asbestos exposure on projects decades ago; on projects where Wolff & Munier allegedly provided services.
Pike County Manufacturing Center Improvement Project Waverly, OH Owner – Pike County	Vulgamore Farms v. Stantec Consulting Services Inc. v. Pike County Board of Commissioners, et al.; alleged conversion of earth; commenced September 2016; pending, unresolved litigation.
Hidden Canyon Estates Draper, UT Owner - DJ Investment Group	DJ Investment Group v. SCSI; Plaintiff alleges negligence and breach of contract in design of a road and culvert for a stormwater detention basin, and review of separate parcels of land for future development activities; commenced Nov. 2017; pending, unresolved litigation.
Eastside WRF Aeration System and Headworks Improvements Nokomis, FL Owner - City of Venice, FL	Antaya v. MWH Americas, Inc., MWH Global, Inc., Stantec Consulting Services Inc., et al.; wrongful death claim; allegation of negligence in provision of contract administration services; commenced January 2018; pending, unresolved litigation.
SR 347 Dunmore, PA Owner – Pennsylvania Department of Transportation	Bertocki Realty, LLC, Bertocki, J.P. Insurance Agency, Inc., Plaintiffs vs. Commonwealth of PA Dept, of Transportation a/ka/a PennDoT, Harrisburg; Commonwealth of PA Dept, of Transportation a/k/a PennDoT (Office of Attorney General, Civil Litigation Unit); Stantec Consulting Services Inc.; New Enterprise Stone & Lime Co. Inc.; McMahon & Mann Consulting Engineers, P.C., Defendants; allegation re encroachment of property; commenced July 2018; pending, unresolved litigation.
Tulloch Hydroelectric Project 3rd Unit Addition Calaveras/Tuolomne Counties, CA Owner - Tri-Dam Joint Venture	Tri-Dam Project, a cooperative venture between Oakdale Irrigation District, a public agency, and South San Joaquin Irrigation District, a public agency, v. MWH Americas, Inc. a DE corporation; MWH Global, Inc., a DE corporation; Stantec, Inc. a foreign business entity; and Does 1-100 inclusive; allegation re design error; commenced May 2017; pending, unresolved litigation.
Harrison West Harrison, NY Owner – Memorial Sloan Kettering Cancer Center	Svetlana Mironov, Plaintiff, v. Memorial Hospital for Cancer and Allied Diseases, Ewing Cole, Inc., Hunter Roberts Construction Group, L.L.C., WJL Architecture & Engineering, D.P.C., dba Ewing, Cole, Wilson Jarvis Patel Architecture & Engineering, P.C., dba Ewing, Cole, Jaros, Baum & Bolles, Inc., Jaros Baum & Bolles, Inc. Consulting Engineers, LLP, Robert Silman Associates Structural Engineers, D.P.C., Stantec Consulting Services Inc., Granary Associates, Inc., Orange County Iron Works, LLC, A-Val Architectural Metal III LLC, Port Morris Tile & Marble Corp., Imperial Woodworking Company, RE:SOURCE New Jersey, Inc. and West-Fair Electric Contractors, Inc., Defendants; allegation re personal injury, commenced September 2018; pending, unresolved litigation.
SR 836 & SR 826 Interchange Reconstruction Miami, FL Owner – Florida Department of Transportation	Jose Antonio Florez Garcia, Plaintiff vs. BCC Engineering, Inc., et al., (Stantec Consulting International, LLC, an AZ corporation); commenced December 2018; allegation re personal injury; pending, unresolved litigation.
SDS Treatment Plant Colorado Springs, CO Owner – Colorado Springs Utilities	Wildeman v. MWH Global; Stantec Inc., SimplexGrinnel, Western States Fire Company, allegations re personal injury; commenced November 2017; pending, unresolved litigation.

PROJECT NAME, LOCATION & OWNER	DESCRIPTION OF CONVICTIONS, FINES and LEGAL PROCEEDINGS (include caption of case, parties, location of proceeding, description of the dispute or enforcement action, dates action commenced and concluded and status and/or outcome)
Windy Ridge Tank Anaheim, CA Owner – City of Anaheim, CA	KANA ENGINEERING GROUP, INC., a California Corporation, Plaintiff V. CITY OF ANAHEIM, a California Municipal Corporation, Defendant V. CITY OF ANAHEIM, a California municipal corporation, Cross-Complainant V. STANTEC CONSULTING SERVICES INC., a New York corporation, for itself and as assignee of MWH AMERICAS, INC., a California corporation, Cross-Defendants; allegation by City of Anaheim re termination of contract; commenced December 2018, pending, unresolved litigation.
Four Seasons Restaurant (280 Park Avenue) New York, NY Owner - Classic Restaurants	Jame Legacy LLC d/b/a The Four Seasons Restaurant and Classic Restaurants Corp, Plaintiff v. Stantec Consulting Services Inc., Defendants; allegation re Omission of Steam Piping on Drawings re Four Seasons; commenced on March 2019, pending, unresolved litigation.
Southern Beltway Project County of Washington, Pennsylvania Owner - Pennsylvania Turnpike Commission	Gary Andreis, Jr., Plaintiff vs. Pennsylvania Turnpike Commission; Stantec Consulting Services Inc.; Joseph B. Fay Company; CDR Maguire, Inc.; Washington County Conservation District; Commonwealth of Pennsylvania, Department of Environmental Protection. Defendants; Writ of Summons fled against Stantec Consulting Services Inc. in March of 2019; pending, unresolved litigation.
Somersett Units Owner – Various Homeowners	Somersett Homeowners Association v. Somersett Development Company, Q&D Construction, Parsons Brothers Rockeries, et al. v. Stantec Consulting Inc." (third party defendant); Multiple Alleged Defects; pending, unresolved litigation.
Gleman v. MWH Americas Inc., et al.	Michael E. Gleman, Plaintiff, v. MWH Americas, Inc., Jack McDonald, Adam Ward, Stantec Consulting International, LLC, Hinterland Group and Dan Duke, Defendants filed in Circuit Court of the 15th Judicial Circuit in and for Palm Beach, FL; claim alleges defamation, tortious interference with a business relationship and negligent retention and supervision. Claim is for damages in excess of $15,000; motion to dismiss granted, appeal pending; September 2019.
Santa Barbara High School Peabody Stadium Santa Barbara, CA Owner – County of Santa Barbara, CA	AMG & Associates, Inc. vs. Stantec Consulting Services Inc., shoring piles were constructed in wrong location and had to be moved; contractor alleges Stantec surveyors incorrectly staked the piles for construction; Stantec alleges shoring plans provided by contractor contained the error; commenced May 2019; pending, unresolved litigation.
Mallory Park Del Webb, Manatee County, FL Owner – Pulte Homes @ Time of Survey	Leo Hyatt, Barbara Hyatt and Laura Mondello, Plaintiffs, v. Geopointe Surveying, Inc. and David Bouverat, Inc. d/b/a Key Appraisal Services, Inc.; allegation re property survey, commenced July 2019; pending, unresolved litigation.
Chartwell Building Expansion Congers, NY Owner – Chartwell Pharmaceuticals	Chartwell Pharmaceuticals, Plaintiff v. Stantec Consulting Services Inc., Defendant; allegation re design documents, commenced August 2019, pending, unresolved litigation.
F-395 AB88 SIRA GRP Construction Conroe, TX Owner - San Jacinto Water Authority	San Jacinto Water Authority, Plaintiff v. Texas Sterling Construction Co., Binkley & Barfield, Inc., Brown & Gay Engineers, Inc., Stantec Consulting Services Inc., Huff & Mitchell, Inc., Defendant, allegation re pipe failure of water line installed by Contractor; commenced July 2016; pending, unresolved litigation.
Cubesmart – Burbank Sewer Relocation Baton Rouge, LA Owner – Brookwood Properties	Rosehill Construction, LLC, Plaintiff vs. Ted Hebert, LLC, Defendant, Third Party Demand; allegation that Stantec failed to account for unsuitable soil conditions when designing the site sewer system for the project; commenced April 2019, pending, unresolved litigation.
9A – West Street Promenade New York, NY Owner – NYSDOT, Hugh L. Carey Battery Park City Authority & Battery Park City Parks Conservancy Corporation	ISAMAR ROSA, Plaintiff against Hugh L. Carey Battery Park City Authority and Battery Park City Parks Conservancy Corporation, Defendants; Hugh L. Carey Battery Park City Authority and Battery Park City Parks Conservancy Corporation, Third-Party Plaintiffs, Against Stantec Consulting Services Inc. and Applied Landscape Technologies Inc., Third-Party Defendant; allegation re personal injury; October 2019, pending, unresolved litigation.

PROJECT NAME, LOCATION & OWNER	DESCRIPTION OF CONVICTIONS, FINES and LEGAL PROCEEDINGS (include caption of case, parties, location of proceeding, description of the dispute or enforcement action, dates action commenced and concluded and status and/or outcome)
STARR FEMA PTS contract Tecumseh, MO Owner - FEMA	Derek Christopherson and Jennifer Christopherson, Plaintiffs, vs. Robert and Connie Jo. Bushner and Federal Emergency Management Agency (FEMA) and Stantec, Inc. and WS Atkins, PLC and The Dewberry Companies, Inc. and CoreLogic, Inc., Inez Pahlmann and Missouri Ozarks Realty, Inc., Inez Pahlman and John Doe, Defendants; allegation re floodwaters which destroyed home and personal property, July 2019; pending, unresolved litigation.
SR 286 / I-75 Express Lane Project Miami, FL Owner – Florida Department of Transportation	Mariella Barbera, Plaintiff, vs. COMMUNITY/CONDOTTE/DE MOYA, JV, LLC, a Florida Corporation, BCC ENGINEERING, INC., a Florida Corporation, STANTEC CONSULTING SERVICES INC., a Foreign Corporation, and, BOB'S BARRICADES, INC., a Florida Corporation, Defendant; allegation re personal injury; pending, unresolved litigation,
SR 286 / I-75 Express Lane Project Miami, FL Owner – Florida Department of Transportation	Manuel Enrique Rodriguez Barbera, an individual, Ehimy Doucet, an individual, Alexander Doucet, a minor and Alisha Doucet, a minor, Plaintiffs, vs. Community / Condotte / De Mayo, JV, LLC, a Florida Corporation, BCC Engineering, Inc., a Florida Corporation, Stantec Consulting Services Inc., a Foreign Corporation, Defendants; commenced October 2019; allegation re personal injury; pending, unresolved litigation.
CE&I Services for CR 41 Bridge replacement, ALDOT Project BR-0041(501), Escambia County Brewerton AL Owner – Alabama Department of Transportation	ARCH INSURANCE COMPANY, a corporation, Plaintiff, vs. STANTEC CONSULTING SERVICES, INC., a Corporation; FORTERRA PIPE & PRECAST, LLC, a Foreign Limited Liability Company; HANSON PIPE & PRECAST, INC., a Corporation; JOHN R. COOPER, in His Official Capacity as Director of the Alabama Department of Transportation (ALDOT); WINSTON J. POWE, in His Official Capacity as State Construction Engineer of ALDOT, Defendants; commenced October 2019; pending, unresolved litigation.
Loop 375 Border Highway West Extension Project Texas Owner – Texas Department of Transportation	Walter P. Moore and Associates v Stantec Consulting Services Inc. and Kellogg Brown & Root, LLC; Claims for unpaid invoices and alleged additional services performed by Moore on the Loop 375 project in El Paso, TX.
I-85/I-385 Design-Build Interchange Improvements Greenville County, SC Owner - South Carolina Department of Transportation	Flatiron-Zachry, a Joint Venture, Plaintiffs, vs. Civil Engineering Consultant Services, Inc. dba Civil Engineering Consultant Services, Inc., ECS Southeast, LLP f/k/a ECS Carolinas, LLP, Mead and Hunt, Inc.; Stantec Consulting Services, Inc.; and T.Y. Lin International, Defendants; commenced March 2019; allegation regarding delivery plans; pending, unresolved litigation.
State Road 8 (1-10) in Leon County Leon County, FL Owner – Florida Department of Transportation	Alfonso Diaz Bautista, a FL citizen and resident, Lucia P. Gutierrez, a FL citizen and resident, and Alfonso Diaz Bautista and Lucia P. Gutierrez, as Parents and Natural Guardians of Minor Child, RB, Plaintiff, vs. Carter & Burgess nka Jacobs Engineering, a Foreign Corporation, C. W. Roberts Contracting Incorporated, a FL Citizen, Resident, and Corporation, Safety Contractors, Inc., a FL Citizen, Resident and Corporation, and Greenhorne O'Mara nka Stantec, a Foreign Corporation, Defendant; commenced October 2019; allegation re personal injury; pending, unresolved litigation.
Integrated Planning and Regulatory Support Project City of Akron, OH Owner – City of Akron, OH	Stantec Consulting Services Inc., Plaintiff v. City of Akron, Ohio, Defendant; Summit County, OH; commenced September 2019; allegation regarding unpaid invoices; pending, unresolved litigation.

12. City Forms

COMPLETE THE PROPOSER INFORMATION FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE THE FORM IN ITS ENTIRITY AND INCLUDE THE COMPLETED FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.

PROPOSER INFORMATION PAGE

E-23-20 (number), Continuing Contract for Engineering Services for Water and Reuse Treatment Plant Projects (Title)

To: The City of Pompano Beach, Florida

The below named company hereby agrees to furnish the proposed services under the terms stated subject to all instructions, terms, conditions, specifications, addenda, legal advertisement, and conditions contained in the solicitation. I have read the solicitation and all attachments, including the specifications, and fully understand what is required. By submitting this proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this proposal.

Proposal submitted by:

Name (printed) Neil Johnson, PG, PMP Title Principal-in-Charge

Company (Legal Registered) Stantec Consulting Services Inc.

Federal Tax Identification Number 11-2167170

Address 800 Fairway Drive, Suite 195

City/State/Zip Deerfield Beach, Florida 33441

Telephone No. (954) 806-7106 Fax No. (954) 481-2818

Email Address neil.johnson@stantec.com

COMPLETE THE PROPOSER INFORMATION FORM ON THE ATTACHMENTS TAB IN THE EBID SYSTEM. PROPOSERS ARE TO COMPLETE THE FORM IN ITS ENTIRITY AND INCLUDE THE COMPLETED FORM IN YOUR PROPOSAL THAT MUST BE UPLOADED TO THE RESPONSE ATTACHMENTS TAB IN THE EBID SYSTEM.

VENDOR CERTIFICATION REGARDING SCRUTINIZED COMPANIES LISTS

Respondent Vendor Name: Stantec Consulting Services Inc.

Vendor FEIN: 11-2167170

Section 287.135, Florida Statutes, prohibits agencies from contracting with companies, for goods or services over $1,000,000, that are on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List. Further, Section 215.4725, Florida Statutes, prohibits agencies from contracting (at any dollar amount) with companies on the Scrutinized Companies that Boycott Israel List, or with companies that are engaged in a boycott of Israel. As the person authorized to sign electronically on behalf of Respondent, I hereby certify by selecting the box below that the company responding to this solicitation is not listed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List. I also certify that the company responding to this solicitation is not participating in a boycott of Israel, and is not engaged in business operations in Syria or Cuba. I understand that pursuant to sections 287.135 and 215.4725, Florida Statutes, the submission of a false certification may subject company to civil penalties, attorney's fees, and/or costs.

I Certify

☑

BIDDERS ARE TO COMPLETE FORM AND UPLOAD COMPLETED FORM TO THE EBID SYSTEM

EXHIBIT E

MINORITY BUSINESS ENTERPRISE PARTICIPATION

RLI #E-23-20

List all members of your team that are a certified Minority Business Enterprise (as defined by the State of Florida.) You must include copies of the MBE certificates for each firm listed with your electronic submittal.

Name of Firm	Certificate Included?
Radise International, LC	Yes *(see next page)*

State of Florida

Woman & Minority Business Certification

RADISE International, L.C.

Is certified under the provisions of
287 and 295.187, Florida Statutes, for a period from:

07/11/2019 to 07/11/2021

Jonathan R. Satter, Secretary
Florida Department of Management Services

Department of MANAGEMENT SERVICES
Office of Supplier Diversity

Office of Supplier Diversity
4050 Esplanade Way, Suite 380
Tallahassee, FL 32399
850-487-0915
www.dms.myflorida.com/osd