



REQUEST FOR QUALIFICATIONS (RFQ) 2017-017

DESIGN SERVICES FOR EAST WASTEWATER TREATMENT PLANT UPGRADE
ENGINEERING

FOR THE DEPARTMENT OF ENVIRONMENTAL AND ENGINEERING SERVICES

CITY OF MARGATE
5790 MARGATE BLVD
MARGATE, FL 33063
(954) 935-5346

PROPOSAL SUBMISSION DATE: July 11, 2017

PROPOSAL SUBMISSION TIME: 3:00 P.M., LOCAL TIME

**ALL PROPOSALS MUST BE RECEIVED BY THE PURCHASING DIVISION PRIOR TO THE
DATE AND TIME SPECIFIED ABOVE**

CITY OF MARGATE
DESIGN SERVICES
EAST WASTEWATER TREATMENT PLANT UPGRADE ENGINEERING
RFQ NO 2017-017

I. PURPOSE:

Pursuant to this Request for Qualifications ("RFQ") package and in compliance with the Consultant's Competitive Negotiation Act ("CCNA"), Florida Statutes Section 287.055, the City of Margate ("City") is requesting sealed Qualifications Statements from Professional Engineering firms for design and construction administration services for a proposed East Wastewater Treatment Plant ("WWTP") upgrade to be built at the current location of 6630 NW 9th St, Margate, FL 33063.

II. SCOPE OF SERVICES:

Services for this project shall include providing professional engineering services resulting in the creation of biddable specifications, design, drawings, and contract management for the upgrade of the East WWTP.

The desired design will include modifications to the East WWTP to reduce the load on the West WWTP by increasing the treatment capacity of the East WWTP. Technical Memorandum No. 1 (TM-1), provided in the **Appendix** as **Exhibit 1**, provides an overview of the existing East WWTP facility. TM-1 also describes modifications required to upgrade the existing process to an integrated fixed-film activated sludge (IFAS) process. The City is not limiting the design services to the IFAS process. Alternative solutions will be considered.

OPERATIONAL ELEMENTS

III. THE SUBMITTAL PACKAGE

The City has prepared the following compilation of instructions for this RFQ in order to minimize costs and response time and to ensure that the RFQ response is designed to provide the necessary information about the firm. Each submittal must include the attached checklist labeled "Exhibit A." This checklist must appear immediately after the cover letter. To ensure that all submittals can be evaluated on an equitable basis, the RFQ requires each respondent to provide the requested information in a prescribed format and organization that excludes supplemental materials. Any supplemental information included with the response must appear **after** the required materials and tabbed "Additional RFQ Information," or under separate cover. The submittal package should be organized as listed below with one tab for each item.

The submittal package must be organized in the following manner:

1. Cover Letter (please address firm's resources, personnel availability and commitment in cover letter)
2. Checklist (Exhibit A)
3. Firm/Team organizational chart that includes:
 - a. Individual's Name and Position
 - b. Name of Firm
 - c. Clear designation of one person who will be the main contact for the respondent
4. Firm description (Qualification Statement)
5. "Key Staffing" (name, title and years with firm only.) **Do not include a resume here.** All resumes, if included, should be included under "Additional RFQ Information" tab.
6. Project Management
 - a. Describe project management approaches to address: communication needs of the team, how key decisions will be made, how conflicts will be resolved, how coordination will be handled with other entities (government, utilities, etc.), and how schedule and budget will be managed.
 - b. Describe the firm's specific experience and expertise in the area of Engineering Services and Construction Management, particularly as related to treatment plant upgrades. Include dates and specifics such as project size and scope.
7. Offeror's Certification and Non-Collusive Affidavit Form
8. SF 330 Forms

IV. SUBMISSION REQUIREMENTS

1. The City's Purchasing Division will accept sealed Qualification Proposals until 3:00 PM, local time, Tuesday, July 11, 2017. RFQ packets will be received in the Office of the Purchasing Division, City of Margate, City Hall, Finance Department, Second Floor, 5790 Margate Boulevard, Margate, Florida 33063. Proposals received prior to the date and time above will be considered. Proposals received after the date and time will not be considered and will be returned to the firm(s) unopened.

2. Interested firms shall submit one (1) original and five (5) copies of the qualifications proposal (**NO THREE (3) RING BINDERS**), as well as an electronic copy (flash drive or disk – do not send via e-mail) of the complete submittal, no later than the date and time stated above. The original and five (5) copies must be bound on 8.5" x 11" white paper with tabbed/identified sections as stated in Section III – The Submittal Package. The proposal packages shall be sealed and clearly marked on the outside "RFQ 2017-017 East Wastewater Treatment Plant Upgrade" and addressed to the Purchasing Division at the

address above. Respondents desiring to submit a proposal should carefully review the instructions and other related sections of the RFQ. Compliance with all requirements shall be solely the responsibility of the Respondent.

3. By submitting a proposal, the Proposer certifies that they have fully read and understood the proposal method and have full knowledge of the scope, nature, and quality of work to be performed.

4. **NO FAXED OR ELECTRONICALLY SUBMITTED PROPOSALS WILL BE ACCEPTED.** It shall be the sole responsibility of the Proposer to have their proposal delivered to the City of Margate Purchasing Division, Finance Department, Second Floor, City of Margate City Hall, 5790 Margate Boulevard, Margate, FL 33063 prior to the date and time specified.

5. Proposers may withdraw their proposals by notifying the Purchasing Division in writing at any time prior to the scheduled opening. Proposers may withdraw their proposals in person or through an authorized representative. Proposers and/or authorized representative(s) must disclose their identity and provide a receipt for the proposal. Proposals, once opened, become the property of the City and will not be returned to the Proposers.

6. The Offeror's Certification form shall be signed by an authorized company representative.

In accordance with the American with Disabilities Act ("ADA"), this document may be requested in an alternate format.

V. ADDENDA, ADDITIONAL INFORMATION:

All questions and requests for additional information in connection with this RFQ shall be directed in writing or by email to Spencer Shambray, Purchasing Manager, 5790 Margate Boulevard, Margate, FL 33063. Fax number (954) 935-5258. Email purchase@margatefl.com.

Any addenda or answers to written questions supplied to participating proposers shall become part of the RFQ and the resultant contract.

If you have received this RFQ packet from a source other than directly from the City of Margate Purchasing Division, you are not registered. All interested parties must register with the City of Margate Purchasing Division office (address for submission of qualifications) in order to receive any changes, additions, addenda or other notices concerning this project. Contact the Purchasing Division at (954) 935-5346 or by email to purchase@margatefl.com.

Include in the subject line "RFQ 2017-017 – East Wastewater Treatment Plant Upgrade."

No negotiations, decisions or actions shall be initiated by the Proposer as a result of any discussions with a City employee. Only those communications which are in writing from the Purchasing Division may be considered as a duly authorized expression of the City. Also, only communications from Proposers that are signed and submitted in writing will be recognized by the City as duly authorized expressions on behalf of the Proposer. It is the Proposer's responsibility to contact the Purchasing Division at (954) 935-5346 (prior to the date and time for submission) to determine if any addenda have been issued.

VI. INSURANCE REQUIREMENTS:

The awarded Proposer shall procure and maintain, at its own expense, and keep in effect during the full term of the contract a policy or policies of insurance which shall be determined by the City prior to contract. Additionally, any subcontractor hired by the awarded Proposer for this contract shall provide insurance coverage as well.

The City shall be named an "additional insured" under the appropriate policies. Awarded Proposer agrees to provide CITY a Certificate(s) of Insurance evidencing that all coverage, limits and endorsements required are maintained and in full force and effect, and shall include all required endorsement(s). The Certificate(s) of Insurance shall include a minimum of thirty (30) calendar days to notify the City of any cancellation or non-renewal of coverage.

The Certificate Holder address shall read:

1. City of Margate
Purchasing Division
5790 Margate Boulevard
Margate, FL 33063
Re: RFQ 2017-017

2. The required insurance coverage shall be issued by an insurance company, duly authorized, and licensed to do business in the State of Florida, with the following minimum qualifications in accordance with the latest edition of A.M. Best's Insurance Guide:

Financial Stability to A+

3. Insurance Companies selected must be acceptable to City. All of the policies of insurance so required to be purchased and maintained shall contain a provision or endorsement that the coverage afforded shall not be canceled, materially changed or renewal refused until at least thirty (30) calendar days written notice has been given to the City by certified mail.

VII. EVALUATION AND SCORING:

Selection of the Successful Proposer will be in accordance with the Consultant's Competitive Negotiations Act, as amended, Section 287.055, Florida Statutes. The selection process consists of evaluation and scoring by the Selection Committee. Each category will be scored and when the scores awarded for all categories are totaled, the scores will be tabulated and added to achieve the Total Points awarded to each firm. The evaluation totals will be used to rank each firm one, two, three, etc. The ranking of each firm will be tabulated from each Committee Member and combined with other Committee Members to determine the total score for the firm. The Evaluation categories include:

1. Firm's project-related experience.
2. Firm's personnel qualifications.
3. Firm's governmental experience.
4. Firm's understanding of the project, and its approach to project management.
5. Firm's resources, personnel availability, and commitment.

Failure to respond to all the categories listed above will result in a lower overall score and may hinder a firm's chance of being selected.

The Scoring Criteria is made up of the categories listed above that collectively represent a Grand Total Point Value of 100 points, as described herein. The points indicated below as "Points Possible" are the maximum that can be allocated for each category. The point value shall be the basis for establishing a finalist list of the top ranking RFQ submittals.

Firm Project Related Experience: The firm will be expected to demonstrate its experience with projects similar to that described in the Statement and Scope of Work sections. Particular attention should be given to projects completed with Southeast Florida governmental agencies. List references of similar scope and size to this project. Each reference shall include project name, dates, amount and owner contact information. Failure to provide complete references may deem your firm non-responsive. This information must be included on SF 330 form.

Firm’s Personnel Qualifications: The firm shall name the actual Project Manager assigned to the City and other key staff to be assigned to projects, describe their ability and experience and indicate the function of each individual within the organization and their proposed role on City projects. Include current resumes under “Additional RFQ Information”, tab. This information must be included on SF 330 form.

Firm’s Governmental Experience: The firm shall detail its experience with other governmental agencies. This information must be included on SF 330 form.

Firm’s Understanding of the Project and Approach to Project Management: The firm shall provide a detailed narrative of its understanding of the project to be undertaken, and the approach to be utilized in managing the project, including but not limited to coordination with other governmental agencies and other utility companies.

Firm’s Resources, Personnel Availability, and Commitment: The firm shall demonstrate a commitment to completing projects on time and within budget. Firm must also demonstrate flexibility to complete projects per client’s specifications.

Firm’s Certified Minority Business Enterprise (MBE) Status: The firm shall provide certificates and any pertinent documentation necessary to demonstrate certification (local, state, etc.) as a minority business enterprise.

EVALUATION CATEGORIES	POINTS POSSIBLE
1. Firm’s <u>project related</u> experience	30
2. Firm’s personnel qualifications	20
3. Firm’s governmental experience	20
4. Firm’s understanding of the project, and its approach to project management	20
5. Firm’s resources, personnel availability and commitment	8
6. Firm’s certified Minority Business Enterprise (MBE) status	2
 GRAND TOTAL OF POINTS	 100 POINTS

VIII. AWARD OF CONTRACT:

Based on final rankings resulting from the above described process, the Selection Committee will make a recommendation to the City Commission for permission to negotiate a contract with one (1) firm, which will be followed by a subsequent recommendation to award the negotiated contract.

The contract shall be awarded to the most qualified Proposer whose proposal is determined to be the most advantageous to the City and who agrees to provide the required services at compensation which the City determines is fair, reasonable and competitive.

IX. WORKING PAPER RETENTION AND ACCESS TO WORKING PAPERS:

All working papers and reports must be retained in accordance with requirements and procedures set forth by the General Records Schedule for Local Government Agencies as promulgated by the Division of Archives, History and Records Management (a division of the Florida Department of State) at the firm's expense, unless the firm is notified in writing by the City of the need to extend the retention period. The firm will be required to make working papers available, upon request, to the following parties or their designees:

- City of Margate
- U.S. General Accounting Office ("GAO") and local Office of Inspector General ("OIG")
- Parties designated by federal or state governments or by the City as part of an audit quality review process.

In addition, the firm shall respond to the reasonable inquiries of auditors and allow successor auditors to review working papers relating to matters of continuing accounting significance.

X. TIME REQUIREMENTS:

A. PROPOSAL CALENDAR, NOTIFICATION AND CONTRACT DATES

The schedule of events, relative to the procurement shall be as follows:

Event	Date (on or by)
1. Issuance of RFQ	June 19, 2017
2. Receipt of RFQ	July 11, 2017
3. Proposal Evaluations	Week of July 17, 2017
4. Oral Presentations with short listed firms	Week of July 24, 2017
5. Recommendation to City Commission	August 23, 2017
6. Negotiations	Week of August 28, 2017
7. Contract Award	September 6, 2017

Be advised that the City anticipates awarding a single contract, but is prepared to award multiple contracts if deemed to be in the best interest of the City. The City reserves the right to change and/or delay scheduled dates.

As the best interest of the City may require, the right is reserved to reject any and all proposals or waive any minor irregularity or technicality in proposals received.

The successful proposer shall be required to execute a contract with the City covering the scope of services to be provided and setting forth the duties, rights and responsibilities of the parties.

B. Oral Presentations

During the evaluation process, the Selection Committee may, at its discretion, short-list some firms to proceed to oral presentations either in person, by phone, or by internet. Such presentations will provide firms with an opportunity to answer any questions the Selection Committee may have on a firm's proposal. **Not all firms may be short-listed to proceed to the oral presentations and final ranking stage.**

C. Final Selection

The City will select/award the firm which best meets the interests of the City. The City shall be the sole judge of its own best interests, the proposals, and the resulting negotiated agreement. The City's decision will be final.

XI. SUMMARY OF PROVIDED DOCUMENTS TO BE SUBMITTED WITH PROPOSALS:

Samples of the following documents (except certificate of insurance and SF 330 Forms) are attached and shall be executed as a condition of this offer:

- (a) Offeror's Certification
- (b) Offerors's Qualifications Statement
- (c) Exhibit A
- (d) Non-Collusive Affidavit Form
- (e) SF 330 Forms

XII. GENERAL CONDITIONS:

A. PUBLIC ENTITY CRIMES INFORMATION STATEMENT: "A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a 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 s. 287.017 for CATEGORY

TWO for a period of 36 months from the date of being placed on the convicted vendor list.”

B. DISCRIMINATORY VENDOR LIST: An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid, proposal, or reply on a contract to provide goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not award or perform work as a contractor, supplier, subcontractor, or consultant under contract with any public entity, and may not transact business with any public entity.

C. EXPENSES: All expenses for making the proposal to the City are borne by the Proposer.

D. WITHDRAWAL OF PROPOSAL: Any proposal may be withdrawn up until the date and time set forth for the opening proposals. Any proposal not withdrawn shall constitute an irrevocable offer for a period of 90 days or until one or more of the proposals have been duly accepted and a contract is awarded. No guarantee or representation is made herein as to the time between the proposal opening and subsequent award.

E. APPLICABLE LAWS: All applicable laws and regulations of the U.S. Government, State of Florida, Broward County, and City ordinances and regulations will apply to any resulting award of a contract.

F. FORM OF AGREEMENT: Any agreement or contract resulting from the acceptance of a proposal shall be on forms either supplied by or approved by the City and shall contain, at a minimum, applicable provisions of the RFQ. The City reserves the right to reject any agreement that does not conform to the RFQ and any City requirements for agreements and contracts.

G. CONFLICT OF INTEREST: For purposes of determining any possible conflict of interest, all Proposers must indicate if any City employee or elected official is an owner, corporate officer, or employee of their business. If such relationship(s) exist, the Proposer must file a statement with the Supervisor of Elections, pursuant to Florida Statutes Section 112.13.

H. COPYRIGHTS AND PATENT RIGHT: Proposer warrants that there has been no violation of copyrights or patent rights in manufacturing, producing and/or selling the item(s) ordered or shipped as a result of this proposal, and the Successful Proposer agrees to hold the City harmless from any and all liability, loss or expense resulting from any such violation.

I. TAXES: The City is exempt from payment of any taxes imposed by the State and Federal Governments. Exemption certificates will be provided upon request.

J. RETENTION OF RECORDS AND RIGHT TO ACCESS CLAUSE: The Successful Proposer shall preserve and make available all financial records, supporting documents, statistical records and any other documents pertinent to this contract for a period of ten (10) years after termination of this contract; or if an audit has been initiated and audit findings have not been resolved at the end of these ten (10) years, the records shall be retained until resolution of audit finding.

K. NON-COLLUSIVE STATEMENT: By submitting this proposal, the Proposer affirms that this proposal is without previous understanding, agreement, or connection with any person, business, or corporation submitting a proposal for the same materials, supplies, service, or equipment, and that this proposal is in all respects fair, and without collusion or fraud. Refer to "Non-Collusive Affidavit" form attached.

L. ASSIGNMENT: Successful Proposer may not assign or transfer this contract in whole or part without prior written approval of the City.

M. TERMINATION FOR CONVENIENCE OF CITY: Upon thirty (30) calendar days' written notice delivered by certified mail, return receipt requested, to the Successful Proposer, the City may without cause and without prejudice to any other right or remedy, terminate the agreement for the City's convenience whenever the City determines that such termination is in the best interest of the City. Where the agreement is terminated for the convenience of the City, the notice of termination to the Successful Proposer must state that the contract is being terminated for the convenience of the City under the termination clause and the extent of the termination. Upon receipt of such notice, the contractor shall promptly discontinue all work at the time and to the extent indicated on the notice of termination, terminate all outstanding subcontractors and purchase orders to the extent that they relate to the terminated portion of the contract, and refrain from placing further orders and subcontracts except as they may be necessary, and complete any continued portions of the work.

N. LITIGATION VENUE: The agreement resulting from this RFQ shall have been deemed to have been executed within the State of Florida. The validity, construction, and effect of this Agreement shall be governed by the laws of the State of Florida. Any claim, objection or dispute arising out of this Agreement shall be litigated only in the courts of the Seventeenth Judicial Circuit in and for Broward County, Florida.

O. CANCELLATION FOR UNAPPROPRIATED FUNDS: The obligation of the City for payment to a contractor is limited to the availability of funds appropriated in the current fiscal period, and continuation of the contract into a subsequent fiscal period is subject to appropriation of funds, unless otherwise authorized by law.

P. GOVERNMENT RESTRICTIONS: In the event any governmental restrictions may be imposed which would necessitate alteration of the material quality, workmanship, or performance of the items/services offered on the proposal prior to delivery/performance, it shall be the responsibility of the contractor to notify the City at once, indicating in its letter the specific regulation which required an alteration. The City reserves the right to accept any such alteration, including any price adjustments occasioned thereby, or to cancel the contract at no further expense to the City.

Q. CONTRACTOR NOTICES: The contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and orders of public authorities bearing on the safety of persons and property and their protection from damage, injury or loss.

R. DAMAGES OR LOSS: The contractor shall be liable for damage or loss (other than damage or loss to property insured under the property insurance provided or required by the Contract Documents to be provided by the Owner) to property at the site caused in whole or in part by the contractor, a subcontractor of the contractor or anyone directly or indirectly employed by either of them, or by anyone for whose acts they may be liable.

S. WAIVER OF JURY TRIAL: CITY AND CONTRACTOR HEREBY KNOWINGLY, IRREVOCABLY, VOLUNTARILY AND INTENTIONALLY WAIVE ANY RIGHT EITHER MAY HAVE TO A TRIAL BY JURY IN RESPECT TO ANY ACTION, PROCEEDING, LAWSUIT OR COUNTERCLAIM BASED UPON THE CONTRACT, ARISING OUT OF, UNDER, OR IN CONNECTION WITH THE WORK, OR ANY COURSE OF CONDUCT, COURSE OF DEALING, STATEMENTS (WHETHER VERBAL OR WRITTEN) OR THE ACTIONS OR INACTIONS OF ANY PARTY.

T. INDEMNIFICATION: To the extent permitted by Florida law, contractor agrees to indemnify, defend, save, and hold harmless the City, its officers and employees, from or on account of all damages, losses, liabilities, including but not limited to reasonable attorney fees and costs to the extent caused by the negligence, recklessness or intentional wrongful misconduct of the contractor and persons employed or utilized by the contractor in the performance of this Agreement. Nothing contained in the foregoing indemnification shall be construed to be a waiver of any immunity or limitation of liability the City may

have under the doctrine of sovereign immunity or Section 768.28, Florida Statutes.

U. NO WAIVER: No waiver of any provision, covenant or condition within this Agreement, or of the breach of any provision, covenant or condition within this Agreement shall be taken to constitute a waiver of any subsequent breach of such provision, covenant or condition.

OFFEROR'S CERTIFICATION
RFQ NO. 2017-017
EAST WASTEWATER TREATMENT PLANT UPGRADE
FOR THE DEPARTMENT OF ENVIRONMENTAL AND ENGINEERING SERVICES

WHEN OFFEROR IS AN INDIVIDUAL

IN WITNESS WHEREOF, the Offeror hereto has executed this Proposal Form this _____ day of _____, 201__.

By: _____
Signature of Individual

Witness

Printed Name of Individual

Witness

Business Address

City/State/Zip

Business Phone Number

State of _____
ss:

County of _____

The foregoing instrument was acknowledged before me this _____ day of _____, 201__, by _____ (Name), who is personally known to me or who has produced _____ as identification and who did (did not) take an oath.

WITNESS my hand and official seal.

NOTARY PUBLIC
State of Florida at Large

Name of Notary Public
My commission expires:

OFFEROR'S CERTIFICATION
RFQ NO. 2017-017
EAST WASTEWATER TREATMENT PLANT UPGRADE
FOR THE DEPARTMENT OF ENVIRONMENTAL AND ENGINEERING SERVICES

WHEN OFFEROR IS A SOLE PROPRIETORSHIP OR OPERATES UNDER A FICTITIOUS OR TRADE NAME

IN WITNESS WHEREOF, the Offeror hereto has executed this Proposal Form this _____ day of _____, 201__.

Printed Name of Firm

By: _____
Signature of Owner

Witness

Printed Name of Individual

Witness

Business Address

City/State/Zip

Business Phone Number

State of _____
ss:

County of _____

The foregoing instrument was acknowledged before me this _____ day of _____, 201__, by _____ (Name), who is personally known to me or who has produced _____ as identification and who did (did not) take an oath.

WITNESS my hand and official seal.

NOTARY PUBLIC
State of Florida at Large

Name of Notary Public
My commission expires:

OFFEROR'S CERTIFICATION
RFQ NO. 2017-017
EAST WASTEWATER TREATMENT PLANT UPGRADE
FOR THE DEPARTMENT OF ENVIRONMENTAL AND ENGINEERING SERVICES

WHEN OFFEROR IS A PARTNERSHIP

IN WITNESS WHEREOF, the Offeror hereto has executed this Proposal Form this _____
day of _____, 201__.

Printed Name of Partnership

By: _____
Signature of General or Managing Partner

Witness

Printed Name of Partner

Witness

Business Address

City/State/Zip

Business Phone Number

State of Registration

State of _____
ss:

County of _____

The foregoing instrument was acknowledged before me this _____ day of _____, 201__,
by _____ (Name), _____ (Title) of
_____ (Name of Company) who is personally known to me
or who has produced _____ as identification and who did (did not) take an oath.

WITNESS my hand and official seal.

NOTARY PUBLIC
State of Florida at Large

Name of Notary Public
My commission expires:

OFFEROR'S CERTIFICATION
RFQ NO. 2017-017
EAST WASTEWATER TREATMENT PLANT UPGRADE
FOR THE DEPARTMENT OF ENVIRONMENTAL AND ENGINEERING SERVICES

WHEN OFFEROR IS A CORPORATION

IN WITNESS WHEREOF, the Offeror hereto has executed this Proposal Form this _____ day of _____, 201__.

Printed Name of Corporation

Printed State of Incorporation

By: _____
Signature of President or other authorized officer

(CORPORATE SEAL)

Printed Name of President or other authorized officer

ATTEST:

Address of Corporation

By _____
Secretary

City/State/Zip

State of _____
County of _____ ss:

Business Phone Number

The foregoing instrument was acknowledged before me this _____ day of _____, 201__, by _____ (Name), _____ (Title) of _____ (Company Name) on behalf of the corporation, who is personally known to me or who has produced _____ as identification and who did (did not) take an oath.

WITNESS my hand and official seal.

NOTARY PUBLIC
State of Florida at Large

Name of Notary Public
My commission expires:

OFFEROR'S QUALIFICATION STATEMENT RFQ NO. 2017-017

The undersigned certifies under oath the truth and correctness of all statements and of all answers to questions made hereinafter:

SUBMITTED TO: City of Margate
(Purchasing Division)

ADDRESS: 5790 Margate Blvd.
Margate, FL 33063

CIRCLE ONE

SUBMITTED BY: _____

Corporation
Partnership
Individual
Other

NAME: _____

ADDRESS: _____

TELEPHONE NO.: _____

FACSIMILE NO.: _____

1. State the true, exact, correct and complete name of the partnership, corporation, trade or fictitious name under which you do business and the address of the place of business.

The correct name of the Offeror is: _____

The address of the principal place of business is:

2. If Offeror is a corporation, answer the following:

a. Date of Incorporation: _____

b. State of Incorporation: _____

- c. President's name: _____
- d. Vice President's name: _____
- e. Secretary's name: _____
- f. Treasurer's name: _____
- g. Name and address of Resident Agent: _____

3. If Offeror is an individual or a partnership, answer the following:

- a. Date of organization: _____
- b. Name, address and ownership units of all partners:

- c. State whether general or limited partnership: _____

4. If Offeror is other than an individual, corporation or partnership, describe the organization and give the name and address of principals:

5. If Offeror is operating under a fictitious name, submit evidence of compliance with the Florida Fictitious Name Statute.

6. How many years has your organization been in business under its present business name? _____

a. Under what other former names has your organization operated?

7. Indicate registration, license numbers or certificate numbers for the businesses or professions which are the subject of this Proposal. Please attach certificate of competency and/or state registration.

8. Have you ever failed to complete any work awarded to you? If so, state when, where and why?

THE OFFEROR ACKNOWLEDGES AND UNDERSTANDS THAT THE INFORMATION CONTAINED IN RESPONSE TO THIS QUALIFICATION STATEMENT SHALL BE RELIED UPON BY OWNER IN AWARDING THE CONTRACT AND SUCH INFORMATION IS WARRANTED BY OFFEROR TO BE TRUE. THE DISCOVERY OF ANY OMISSION OR MISSTATEMENT THAT MATERIALLY AFFECTS THE OFFEROR'S QUALIFICATIONS TO PERFORM UNDER THE CONTRACT SHALL CAUSE THE OWNER TO REJECT THE PROPOSAL, AND IF AFTER THE AWARD TO CANCEL AND TERMINATE THE AWARD AND/OR CONTRACT.

Signature: _____

State of _____
ss:

County of _____

The foregoing instrument was acknowledge before me this _____ day of _____, 2017, by _____, who is personally known to me or who has produced _____, as identification and who did (did not) take an oath.

WITNESS my hand and official seal.

NOTARY PUBLIC
State of Florida at large

Name of Notary Public
My commission expires:

EXHIBIT A
CONSULTANT CHECKLIST – RFQ 2017-017

NOTE:

- A) This Exhibit must be included in RFQ immediately after the cover letter.
- B) RFQ Package must be put together in order of this checklist.
- C) Any supplemental materials must appear after those listed below and tabbed “Additional RFQ Information”.

- 1. _____ Cover letter
- 2. _____ Copy of this checklist (Exhibit A)
- 3. _____ Firm/Team Organizational Chart
- 4. _____ Firm’s Description(s) (Offeror’s Qualification Statement)
- 5. _____ Key Staffing (Name, title and years with firm only. **Do not include a resume here.** All resumes, if included, should be included under “Additional RFQ Information” tab.)
- 6. _____ Project Management
- 7. _____ Offeror’s Certification and Non-Collusive Affidavit Form
- 8. _____ SF 330 Forms

APPENDIX – EXHIBIT 1: Technical Memorandum #1

(SEE ATTACHED CD)

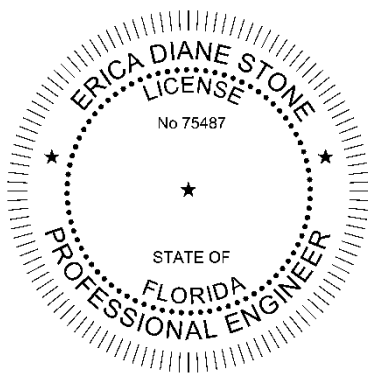


CITY OF MARGATE

**EAST WASTEWATER TREATMENT PLANT UPGRADE
USING IFAS TECHNOLOGY**

**TECHNICAL MEMORANDUM NO. 1
DATA REVIEW AND EVALUATION**

FINAL
August 2016



CITY OF MARGATE
EAST WASTEWATER TREATMENT PLANT UPGRADE USING IFAS TECHNOLOGY

TECHNICAL MEMORANDUM
NO. 1
DATA REVIEW AND EVALUATION

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DATA REVIEW AND EVALUATION

1.0 INTRODUCTION

The City of Margate currently owns and operates two parallel wastewater treatment plants (WWTPs) that straddle NW 66th Avenue. The East WWTP is an older, 2.2 million gallons per day (mgd) facility that uses a conventional activated sludge process. The West WWTP is a newer, 7.9 mgd facility that uses a rotating biological contactor (RBC) process. Both plants are designed and operated to meet secondary treatment standards. The combined treatment capacity of the East WWTP and West WWTP is 10.1 mgd. These plants receive influent flows independently from the same force main; however, there is some interconnection between the individual plants. The effluent of the East WWTP is conveyed to the West WWTP to undergo disinfection in a facility common to both plants prior to deep-well injection. Digester residuals are also pumped from the East WWTP to the West WWTP to be dewatered within the common solids handling system.

The City tasked Carollo Engineers with refining the facility modifications and cost to reduce the load on the West WWTP by increasing the treatment capacity of the East WWTP by converting it to an integrated fixed-film activated sludge (IFAS) process. This Technical Memorandum (TM) provides a summary of the data collected as well as the evaluation that provides the basis for the cost estimate.

2.0 EXISTING FACILITIES

Influent flow enters the East WWTP from a tee in the influent force main to the West WWTP. A manual flow control valve in the pipe between the force main and the East WWTP maintains a relatively constant influent flow to the East WWTP since the pressure in the force main at this location does not vary significantly. Influent flow is screened prior to entering the two aeration trains with two mechanical surface aerators each. Following aeration, mixed liquor flows by gravity to a splitter box and then on to one circular secondary clarifier where the biomass separates from the clarified effluent. The secondary clarifier effluent flows to the West WWTP where it combines with the West WWTP secondary clarifier effluent for disinfection and deep-well injection.

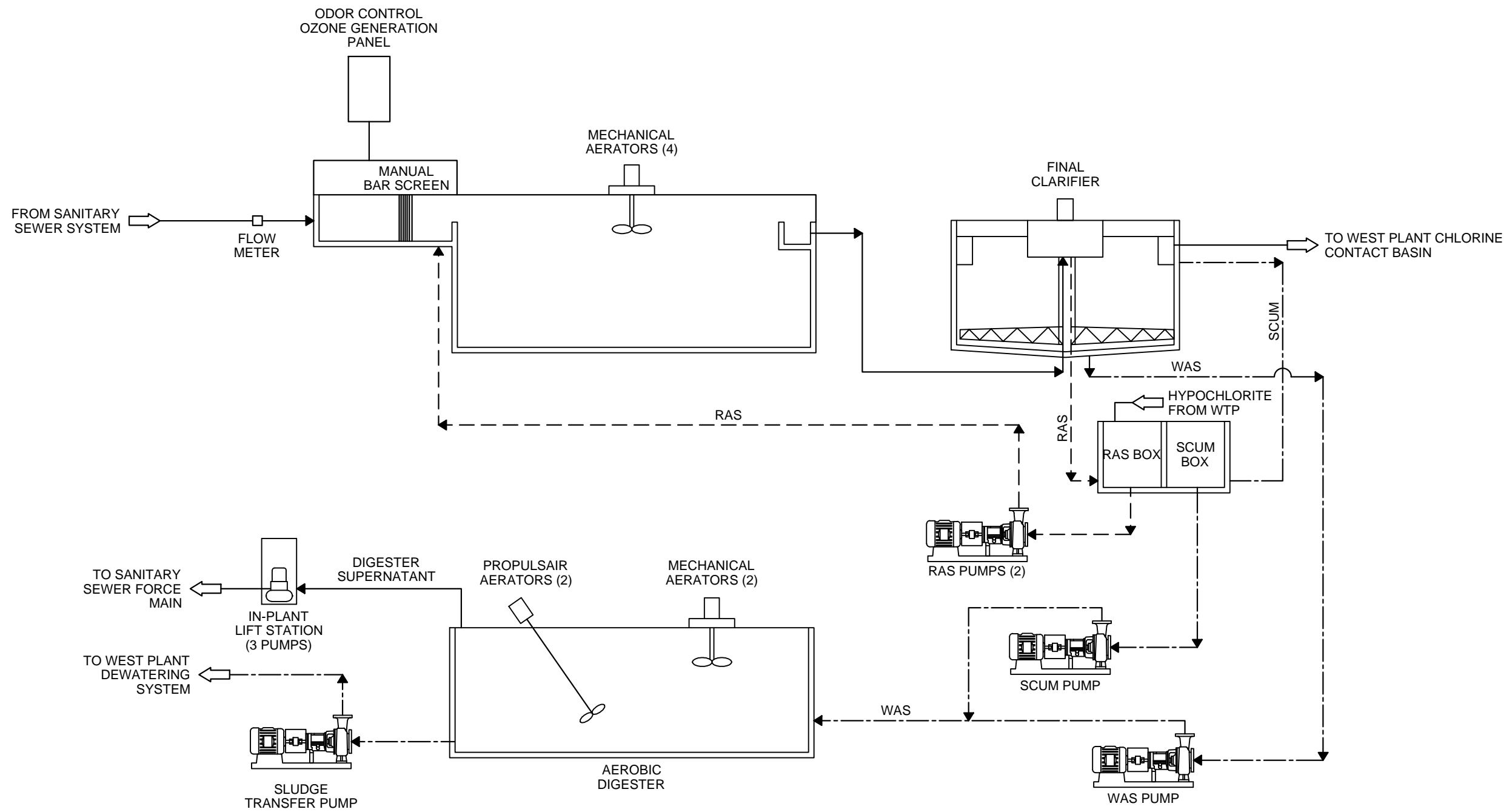
Solids separated in the East WWTP secondary clarifier are collected in a return activated sludge (RAS) box. From the RAS box, pumps can pump the sludge back to the aeration tanks (RAS) or to the aerobic digester as waste activated sludge (WAS). One aerobic digester with two mechanical surface aerators treats the solids to Class B standards. Then, sludge transfer pumps send the Class B treated sludge to the West WWTP for dewatering.

A summary of the major components of the liquid processes at the East WWTP is provided in Table 1.1, while the major components of the solids processes are provided in Table 1.2

A process flow diagram of the East WWTP is shown in Figure 1.1.

Table 1.1 Summary of Existing Liquid Process Equipment at East WWTP East WWTP Upgrade Using IFAS Technology City of Margate		
Process	Criteria	Description
Influent screening	Number	1
	Type	Rotating
	Screen opening	6 mm
Aeration basins	Number	2
	Length	92 ft
	Width	46 ft
	SWD	13 ft
	Volume, each	411,520 gal
	Volume, total	823,040 gal
Aeration system	Type	Mechanical surface aerators
	Number	4
	Motor power, each	25 horsepower (hp)
Secondary clarification	Number	1
	Type	Center feed, peripheral weir
	Sludge withdrawal	Draft tube
	Diameter	80 ft
	SWD	12 ft
	Surface area	5,027 sf
	Notes:	
(1) All data provided in this table is assumed to be correct based on information that is currently available.		

Table 1.2 Summary of Existing Solids Process Equipment at East WWTP East WWTP Upgrade Using IFAS Technology City of Margate		
Process	Criteria	Description
RAS pumps	Number	2
	Type	Self-priming centrifugal
	Capacity, each	2,200 gpm
	Motor power, each	25 hp
WAS pumps	Number	1
	Type	Self-priming centrifugal
	Capacity, each	265 gpm
	Motor power, each	5 hp
Aerobic digestion	Number	1
	Length	40 ft
	Width	80 ft
	SWD	14.3 ft
	Volume	342,285 gal
	Aeration type	Mechanical surface aerators
Sludge transfer pumps	Number	1
	Type	Positive displacement
	Capacity, each	551 gpm
	Motor power, each	40 hp
Notes:		
(1) All data provided in this table is assumed to be correct based on information that is currently available. All pump capacities should be confirmed with hydraulic testing during detailed design.		



**OVERALL TREATMENT
PROCESS FLOW SCHEMATIC**

FIGURE 1.1

CITY OF MARGATE
EAST WWTP UPGRADE
USING IFAS TECHNOLOGY

2.1 Condition Assessment

The following section summarizes the condition of the existing facilities based on a site visit and survey conducted at the East WWTP.

2.1.1 Site Survey

A site survey was conducted to verify the dimensions and elevations of the existing structures. The survey included elevations of the existing tanks, key hydraulic elements, structures, and ground surfaces as well as verification of the plan dimensions of the aerations tank, aerobic digester, and secondary clarifier. A copy of the survey is included in Appendix A.

2.1.2 Mechanical

The mechanical equipment at the existing East WWTP was evaluated during a site visit to determine the feasibility for continued use after upgrades to the IFAS system. The assessment included the influent screen, clarifier mechanism, RAS pumps, WAS pump, aerobic digester aerators, and sludge transfer pump. Existing condition and assumptions include the following:

- The influent screen does not have enough capacity for the upgrades to 4-mgd flow capacity and will be replaced as part of this project.
- The clarifier mechanism was replaced in a recently completed rehabilitation project and can remain in service following this upgrade project.
- The RAS pumps are in suitable condition and have sufficient capacity, assuming accuracy of the data presented in Table 1.2. However, the flow and head capacity of the pumps should be confirmed with hydraulic testing during detailed design due to discrepancies observed between the existing pump and system curves.
- The WAS pump is in suitable condition and has sufficient capacity, assuming the accuracy of the data presented in Table 1.2. However, the pump flow and head capacity should be confirmed with hydraulic testing during detailed design due to discrepancies observed between the existing pump and system curves.
- The aerators in the aerobic digesters are in suitable condition and can remain in service following this upgrade project.
- The sludge transfer pump is in suitable condition and has sufficient capacity, assuming accuracy of the data presented in Table 1.2. However, the pump flow and head capacity should be confirmed with hydraulic testing during detailed design due to the unavailability of an existing pump curve.

2.1.3 Structural

A visual assessment of the structural components at the East WWTP to determine feasibility for use with the IFAS upgrades project was conducted on November 19, 2015. It was determined that the existing aeration basins can be reused for the IFAS system. The cross members (that serve as walkways), however, are structural tension ties and cannot be removed. This should not affect the installation of the IFAS equipment. The existing structures appeared to be in good to excellent shape. No issues of deterioration were evident.

2.1.4 Electrical

The existing process equipment at the East WWTP obtains electric power from the City's Water Treatment Plant (WTP). This includes both the normal FPL utility power and standby generator power. The electrical equipment at the WTP for generating emergency power and for power distribution is modern and appears to be in good condition. It has ample spare capacity to supply electric power to the new process equipment proposed for the East WWTP.

The existing electrical equipment at the East WWTP, however, appears to be over 30 years old and is approaching the end of its useful life due to substantial corrosion. In addition, it does not have spare electrical capacity to supply power to the additional electrical loads associated with the system upgrades.

It is recommended that the East WWTP electrical equipment be upgraded, including the construction of an electrical room with ample climate-controlled space. However, a major rehabilitation to the electrical systems is beyond the scope of work for the process upgrades in this project, and an overall upgrade to the electrical systems in the East WWTP would require a separate engineering study to master plan the required work. Consequently, this TM only addresses the proposed additional electrical equipment necessary to supply power for the IFAS system upgrades.

2.1.5 Instrumentation and Controls

The existing panel for the supervisory control and data acquisition (SCADA) programmable logic controller (PLC) associated with the East WWTP is located in the RAS/WAS pump building. The existing building is not climate controlled. Although the SCADA PLC equipment and enclosure appear to be in functional condition, there is corrosion on the enclosure due to lack of humidity control. A future upgrade of the SCADA panel and a better building location would offer a significant improvement for the long-term reliability of the East WWTP; but again, such an upgrade is beyond the scope of this study. This TM will address the additional instruments and connections to the existing SCADA PLC equipment that will be necessary to monitor and control the proposed IFAS system.

3.0 BASIS FOR PROPOSED FACILITIES

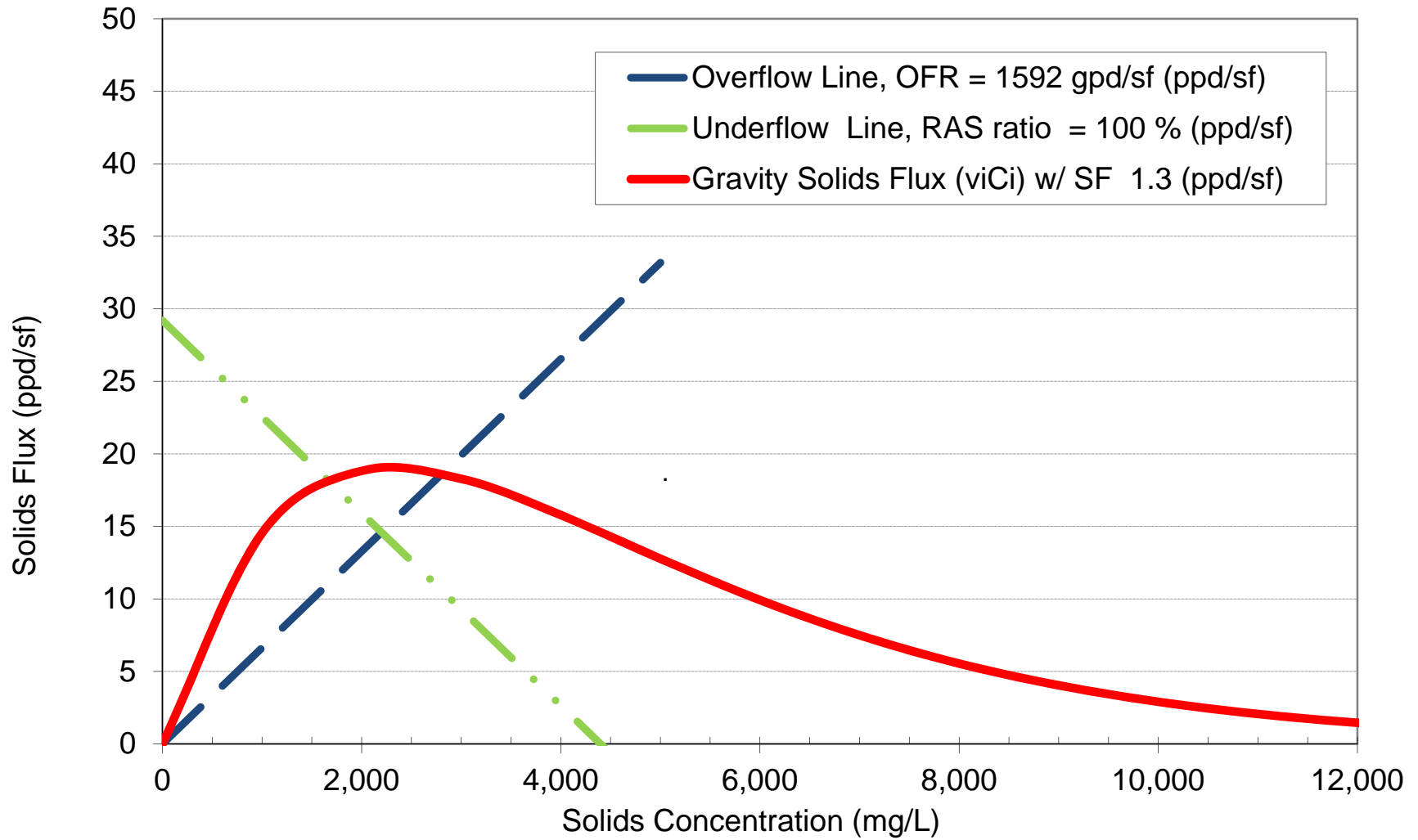
The following sections summarize the assumptions and design criteria that will be used for developing the refined cost estimate for the proposed IFAS upgrades.

3.1 IFAS System Capacity

The IFAS system design capacity was determined through a combination of the treatment capacity that can be attained with installation of IFAS media in the existing aeration tanks in combination with the capacity of the existing clarifier. The IFAS system was determined to be able to treat about 4 mgd at 2,200 mg/L mixed-liquor suspended solids (MLSS). As a check, a state-point diagram was compiled for the existing clarifier (shown in Figure 1.2).

A correlation between SVI and sludge settleability is used to estimate the solids flux curve, the bell-shaped curve in Figure 1.2, that shows the allowable solids flux (e.g., lb/d-sq ft) as a function of MLSS concentration (in mg/L). The overflow operating line, sloping upwards to the right in Figure 1.2, represents the clarifier influent flow, while the underflow operating line, sloping downwards to the right, represents the clarifier RAS flow. The intersection of the overflow and underflow operating lines is the "state point." Successful operation is predicted when the state point is under the flux curve, and the underflow operating line does not intersect the flux curve to the right of the state point. Figure 1.2 shows the state-point analyses for the existing clarifier at a peak flow of 4 mgd with a sludge volume index (SVI) of 150 mL/g. As shown, the state point is below the settling flux curve under these conditions with a safety factor of 1.3.

The hydraulic profile of the existing plant at 4 mgd was evaluated to identify any potential hydraulic constraints at the increased flow capacity. The hydraulic profile with elevations obtained from the site survey is shown in Figure 1.3. As shown, no major hydraulic constraints or concerns were identified at a flow capacity of 4 mgd.

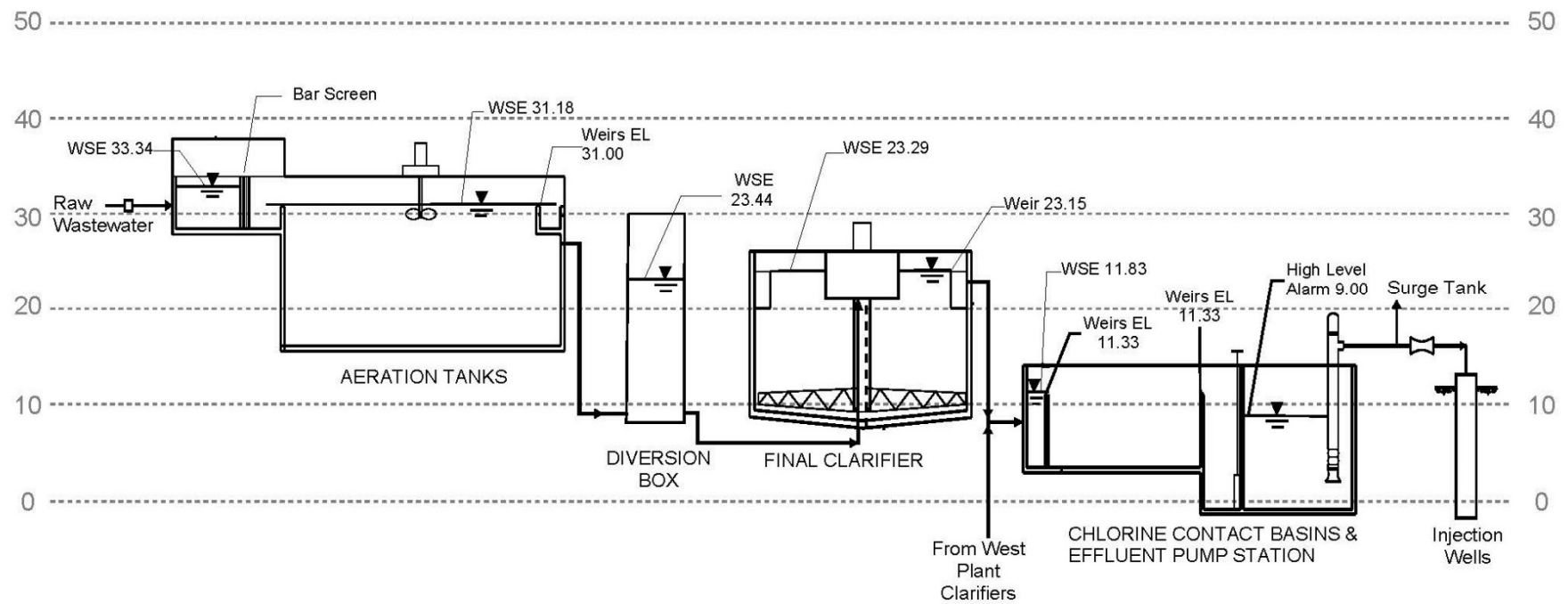


STATE POINT DIAGRAM

FIGURE 1.2

CITY OF MARGATE
EAST WWTP UPGRADE USING IFAS TECHNOLOGY





HYDRAULIC PROFILE

FIGURE 1.3

CITY OF MARGATE
EAST WWTP UPGRADE USING IFAS TECHNOLOGY

3.2 Influent, Effluent, and Process Design Criteria

Historical influent data is summarized in Table 1.3. As shown, the available influent data includes the five-day carbonaceous biochemical oxygen demand (cBOD₅) and total suspended solids (TSS) over an 11-month period in 2011. It is recommended that the final design incorporate the influent water quality data through present.

Table 1.3 Historical East WWTP Influent Water Quality East WWTP Upgrade Using IFAS Technology City of Margate		
Date	cBOD₅ (mg/L)	TSS (mg/L)
January 2011	158	193
February 2011	149	196
March 2011	146	203
April 2011	153	191
May 2011	ND	ND
June 2011	145	201
July 2011	122	169
August 2011	113	135
September 2011	96	155
October 2011	100	154
November 2011	100	132
December 2011	126	156
Average	128	171
<u>Notes:</u>		
(1) ND = no data.		

The influent design criteria assumed for the IFAS upgrades is summarized in Table 1.4 based on the historical available data in Table 1.3. The total Kjeldahl nitrogen (TKN) and temperature were assumed as typical values for influent wastewater of this type. It was assumed that no peak factor would be required for the design because flow to the East WWTP is maintained at a relatively constant rate with a manual influent control valve.

Review of the available historical flow data from 2011 suggests maximum day flows occur at about 1.4 times the average flow at the East WWTP. While higher than the design assumption used of a 1.0 peaking factor, there are several safety factors built into the design. The plant piping is sized for much larger flows than those currently observed or proposed for this project. The IFAS process is designed with a 1.5 peaking factor. The clarifier is the limiting hydraulic component and was calculated to have a clarifier solids flux

safety factor of 1.3 as shown in Figure 1.2. Assumptions used in developing Figure 1.2 include the SVI of 150 mL/g, which is a conservative estimate. The SVI of the actual mixed liquor may be significantly lower, but the actual value will not be known until the process modifications are implemented.

The two treatment train configuration will be maintained for the proposed upgrades. This limits the redundant capacity to 2 mgd each should one of the trains be placed out of service. The cost estimate assumes the treatment process will meet the effluent criteria summarized in Table 1.5 including 20 mg/L cBOD₅, 20 mg/L TSS, and 10 mg/L total nitrogen (TN). The process design criteria for the proposed upgrades are summarized in Table 1.6. The cost estimate is based on equipment pricing for AnoxKaldnes K5 IFAS media and process equipment provided by Kruger, Inc.

Table 1.4 Influent Design Criteria East WWTP Upgrade Using IFAS Technology City of Margate		
Parameter	Units	Value
Influent Flow ⁽¹⁾	mgd	4.0
BOD ₅	mg/L	150
TSS	mg/L	170
TKN	mg/L	30
Temperature (min-max)	deg. C	20-30
<u>Notes:</u>		
(1) Flow to the East WWTP is relatively constant and assumed to not have any diurnal peaks due to the valve on the split from the force main to the West WWTP.		

Table 1.5 Effluent Design Criteria East WWTP Upgrade Using IFAS Technology City of Margate		
Parameter	Units	Value
BOD ₅	mg/L	20 ⁽¹⁾
TSS	mg/L	20 ⁽¹⁾
TN	mg/L	10 ⁽²⁾
<u>Notes:</u>		
(1) Value from existing Underground Injection Control permit requirements.		
(2) Value selected to allow the City flexibility to produce reclaimed water in the future (FDEP reclaimed water standard for ground water recharge).		

Table 1.6 Process Design Criteria East WWTP Upgrade Using IFAS Technology City of Margate		
Parameter	Units	Value
MLSS concentration	mg/L	2,200
Solids retention time (SRT)	days	11
Mixed liquor recycle (MLR) flow	mgd	8
Return activated sludge (RAS) flow	mgd	2-4
Actual oxygen rate (AOR)	lbs O ₂ /d	8,800
Airflow	scfm	5,194
Sludge Production	lb/d	4,500
Sludge volume index (SVI)	mL/g	150

3.3 Ancillary Mechanical Equipment

3.3.1 Influent Screening

The existing influent screen at the East WWTP is a Raptor Fine Screen (Lakeside Equipment Corporation) with 6-mm openings designed to screen 2 mgd of flow. With the process and capacity upgrades, this screen needs to be replaced with a screen designed with 3-mm openings and 4 mgd of flow capacity.

To fit the existing channel geometry, an in-channel, rotating drum screen with angled installation is proposed. The cost estimate is based on the design of the Raptor Rotating Drum Screen (Lakeside Equipment Corporation). The screen has a 48-inch drum with a perforated plate screening basket and 2-hp drive unit. Installation of the new screen will require minor structural modifications to the existing influent channel, including removing the channel walls due to the larger diameter of the screen. A new concrete wall extension will be required. A schematic of the channel modifications is shown in Appendix B.

3.3.2 Aeration Blowers Disposition of existing mechanical aerators not mentioned. Will they be abandoned in place?

The cost estimate includes addition of two duty and one standby (2 + 1) positive displacement blowers rated for 125 hp each. The blowers will be located adjacent to the aeration basin with appropriate enclosures. Each blower will be skid mounted with an individual enclosure to meet the City noise ordinance of 55 dBA at the property line and ultimate design wind speed of 180 mph. The enclosure material will be constructed of white powder coated, carbon steel panels to resist heat and corrosion.

The blower will include a variable frequency drive (VFD) for blower speed control according to the required dissolved oxygen (DO) in the aeration basins and for energy efficiency. The blower control panel will include a wall-mounted air conditioning unit for humidity and temperature control.

3.3.3 RAS/WAS Pumping Capacity

Given the pump motor power and system hydraulics, it is assumed that the RAS and WAS pumps have enough pumping and head capacity for the proposed IFAS upgrades project. However, the pumps flow and head capacity should be confirmed with hydraulic testing during detailed design. An allowance for replacement of the pumps will be included in the cost estimate should insufficient capacity be identified during detailed design.

3.4 Structural Upgrades

Installation of the new influent screen requires structural modifications to the influent splitter box. Expansion of this box to fit the larger screens requires removal of an existing channel wall and construction of new channel walls as well as a 1-foot height extension of the perimeter concrete wall. Installation of the IFAS system will require the addition of two new dividing walls in the existing aeration trains. An on-grade slab will be poured adjacent to the aeration basins for the new blower equipment.

The cost estimate for structural upgrades includes the improvements listed here. It is assumed that the recommendations from the Digester and Aeration Basin Assessment TM (Hazen and Sawyer, 2013) will also need to be completed as part of this project; therefore, those associated costs are included as well.

3.5 Electrical Provisions for Supplying Power to Aeration Blowers

The configuration of the existing power-distribution system at the City's WTP main electrical room has two sources of power (FPL utility and a standby generator). This meets the EPA guidelines for Class 1 reliability. EPA Class 1 reliability requires that the process loads be supplied from two sources to minimize the risk of single point failures that would negatively affect the reliability of the treatment process. There is only one existing switchboard at the WTP main electrical room dedicated to supplying power to the East WWTP. This switchboard (DSB-1) has spare capacity and space to add a circuit breaker for supplying power to the proposed aeration blowers.

The proposed scheme for power distribution to the new aeration blowers is shown in Figure 1 of Appendix C. It consists of a new panelboard (BL) within a stainless steel enclosure, painted white to resist corrosion and reject sunlight heat. The panelboard will include circuit breakers for feeding power to the new aeration blowers, supplying power to the new air conditioning units for the blowers' control panel, and supplying the auxiliary 120 volt power for new instruments.

There are two existing 2-inch underground conduits from the WTP main electrical room to the vicinity of the East WWTP aeration basins. The two 2-inch conduits are routed via manhole "MH-1" and manhole "MH-4." According to information shown on the record drawings (previously designed by MWH Engineers), one of the 2-inch conduits contains No. 4/0 AWG copper cable, which supplies power to the existing aerators, and the second conduit is empty. The condition of the existing cable insulation is unknown for assuring long-term reliability; therefore, new feeder cables are recommended, unless the existing cable insulation condition is verified to be adequate for reuse.

The proposed aeration blowers will provide oxygen to the proposed IFAS process through medium bubble diffusers fastened to the bottom of the aeration tanks. The blowers will be supplied as a package system. The package will include the blower, VFD, control panel, and the sound-attenuation and corrosion-resistant enclosure. The airflow from the blowers will be controlled by varying the speed of the motors using the VFDs. Control will be either manual or automatic based on DO probe measurements within the aeration tanks. The proposed power distribution panel will be mounted on an outdoor rack located in proximity to the blowers.

3.5.1 Electric Motors

Motors will have premium energy efficiency and TEFC enclosures to prevent humidity exposure to the motor windings. Motor windings will be manufactured for inverter (or VFD) duty, and they will be provided with thermal protection and space heaters.

3.6 Instrumentation and Control Provisions for the Aeration System

The existing instrument for measuring DO will be replaced with new instruments at the aeration basins. The DO transmitter will be interconnected with the existing SCADA PLC panel located at the RAS/WAS pump building.

The existing SCADA panel appears to have space for adding a module for termination of wiring from the DO transmitter. Also, input-output modules should be added to the existing PLC panel as necessary for interconnection with the blower controllers.

Additional PLC software configuration will be required for the process control logic of the proposed aeration blowers and for transmitting equipment status to the West WWTP SCADA command center.

Additional display graphics will be required at the West WWTP SCADA command center for monitoring and controlling the aeration blowers and DO.

A conceptual process and instrumentation diagram for the proposed aeration blower system is shown Figure 2 of Appendix C.

3.7 Digester Class B Requirements

Margate currently treats its waste biosolids at the East WWTP to Class B standards by achieving an SOUR of less than 1.5 mg/hr/g in the existing digester prior to pumping the digested solids to the West WWTP for dewatering. Carollo performed both a spreadsheet model and a BioWin model to determine the adequacy of the existing digester at a flow rate of 4 mgd. The initial spreadsheet model indicated the existing digester volume would not be adequate at the lower SRT and increased waste production rates assuming textbook kinetic values. The BioWin model showed the volume could be made sufficient by thickening the WAS upstream and by installing baffles within the digester to create three tanks operating in series.

It is recommended that the City monitor the capabilities of the digester after the proposed improvements are complete and incorporate operational modifications, if required, to meet the Class B biosolids standards. Should additional retention time be required, it is recommended that the solids from the East WWTP be pumped to the digesters at the West WWTP, which have available capacity. Costs are included for the piping modifications necessary to connect the East and West digesters.

4.0 SUMMARY

The assumptions for the cost estimate were provided in this TM and agreed upon by City staff. TM 2 will present the opinion of probable cost of construction for the East WWTP upgrade using IFAS technology.

APPENDIX A – EAST WWTP SITE SURVEY

CITY OF MARGATE EAST WASTE WATER TREATMENT PLANT TOPOGRAPHIC SURVEY

SECTION 36, TOWNSHIP 48 SOUTH, RANGE 41 EAST
BROWARD COUNTY, FLORIDA



LOCATION MAP
Not to Scale

INDEX OF SHEETS

1. COVER SHEET AND LOCATION MAP
2. PLAN SHEET

CERTIFICATE OF SURVEYOR:

I HEREBY CERTIFY THAT THIS TOPOGRAPHIC SURVEY WAS MADE UNDER MY RESPONSIBLE CHARGE AND MEETS THE APPLICABLE STANDARDS OF PRACTICE FOR SURVEYS AS SET FORTH BY THE FLORIDA BOARD OF LAND SURVEYORS IN CHAPTER 5J-17.050 THROUGH 5J-17.052, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATE STATUTES.

BY: JOSE L. SANFIEL
PROFESSIONAL SURVEYOR AND MAPPER #5636
STATE OF FLORIDA

SIGNATURE DATE

SURVEYOR NOTES

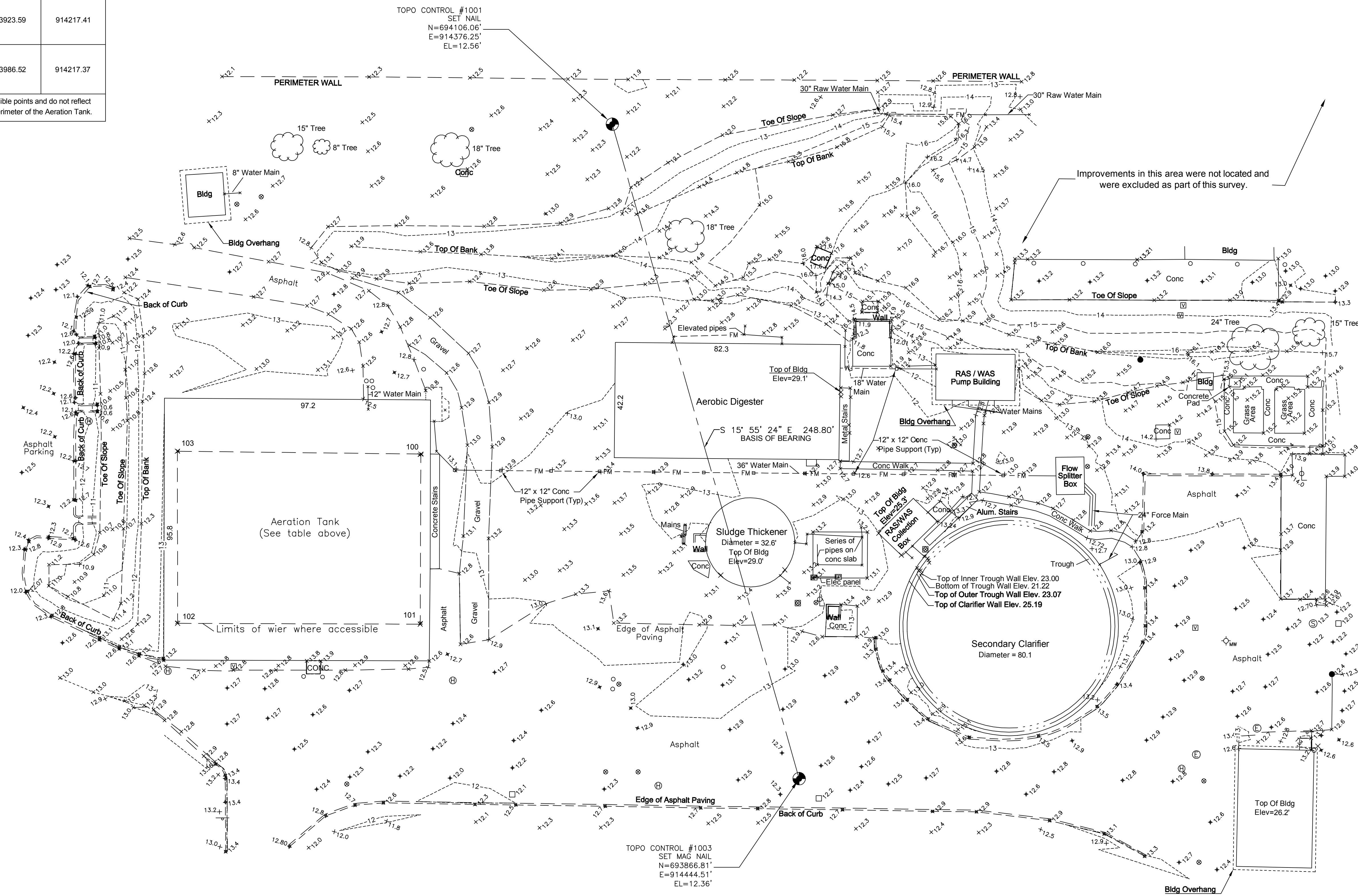
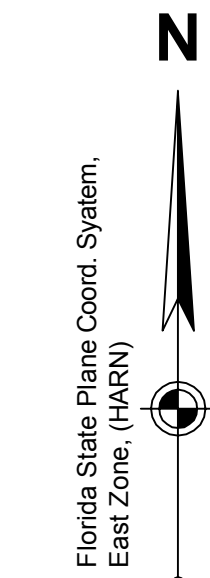
1. Survey date: 2-26-2016 thru 2-28-2016 and 4-4-16.
2. Survey map and report or the copies thereof are not valid without the signature and the original raised seal of a Florida licensed surveyor and mapper.
3. Additions or deletions to survey maps or reports by other than the signing party or parties is prohibited without written consent of the signing party or parties.
4. This survey has been prepared for the exclusive use of the entities named herein.
5. Equipment used for this survey included: a Trimble R8 GPS receivers utilizing Trimble GPS Virtual Reference System (VRS) and Real Time Kinematics (RTK) methods for horizontal positioning; and a Trimble S-6 reflectorless total station for positioning topographic details.
6. This survey exceeds the minimum horizontal accuracy requirements for a "High Risk Survey", per the State of Florida Minimum Technical Standard, of 1 foot in 10,000 feet.
7. Horizontal Control: Coordinates shown hereon refer to Florida State Plane Coordinates (East Zone), based on the North American Datum of 1983, and were established using the Trimble Virtual Reference System (VRS).
 - 7.1. Vertical Benchmark: H 665
PID: DL2201
Elevation: 12.79 feet (NAVD 88)
Data Source: NGS
8. All elevations shown hereon are based on the National American Vertical Datum (NAVD88). Vertical Accuracies are within 0.10 feet.
9. This map is intended to be displayed at a specified scale or smaller, as indicated on each sheet.
10. All measurements and distances are in feet unless otherwise noted.
11. The scope of services for this topographic survey is fully described within the subcontractor service agreement between Carollo Engineers and Woolpert, prepared for project No. 76360. The purpose of this survey was to provide a Topographic Survey for the areas depicted within the service agreement. Although every effort was made to locate all improvements in the subject site, there may have been items not limited to valves and pipes that were not readily visible to the survey crew because of debris and construction equipment located throughout the site..
12. No title search, title opinion, or abstract was performed by nor provided to this firm for the subject property. There may be deeds of record, unrecorded deeds, easements, rights-of-way, building setbacks, restrictive covenants or other instruments, which could affect the boundaries or use of the subject property. This is not a Boundary Survey, and does not reflect or determine ownership.
13. Underground utility locations are not included in this survey. Portions of above ground piping was excluded per onsite visit with Erica Stone with Carollo Engineers, Inc., on 2-26-2016.
14. The basis of bearing for this survey is the line between the two on-site control stations, having a bearing of S 15°55'24" E. The bearing was calculated by using the derived State Plane Coordinate and inverting between the two stations.

	REVISION								
PROJECT No: 076360	DATE 3-14-16	SCALE AS SHOWN	DES.	DR.	P.P.	J.S.	CKD.	No.	DATE
WOOLPERT, INC. LB No.6777 10900 NW 25th Street, Suite 100 Miami, Florida 33172 Phone: 305.418.9370 Fax: 305.418.9377									
CITY OF MARGATE EAST WWTP LOCATED WITHIN SECTION 36, TOWNSHIP 48, RANGE 41 CITY OF MARGATE, BROWARD COUNTY, FLORIDA TOPOGRAPHIC SURVEY									
SHEET NO.									
1 of 2									

AERATOR WEIR TABLE

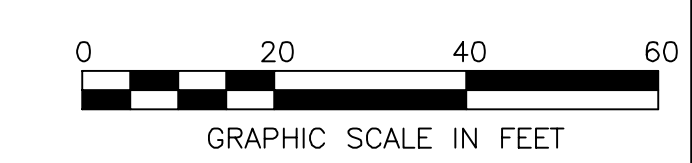
POINT #	ELEVATION	DESCRIPTION	NORTHING	EASTING
100	33.89	TOP OF WALL	693985.47	914306.29
	30.89	TOP OF WEIR		
	29.39	TOP OF WEIR PLATE		
101	33.94	TOP OF WALL	693923.28	914306.06
	31.08	TOP OF WEIR		
	29.56	TOP OF WEIR PLATE		
102	33.92	TOP OF WALL	693923.59	914217.41
	31.19	TOP OF WEIR		
	29.71	TOP OF WEIR PLATE		
103	34.00	TOP OF WALL	693986.52	914217.37
	31.04	TOP OF WEIR		
	29.49	TOP OF WEIR PLATE		

The locations of the weir shown above were only taken at accessible points and do not reflect the actual physical limits of the weir located around the inside perimeter of the Aeration Tank.



SYMBOL / LINE LEGEND

- | | |
|--------|------------------------------|
| □ | INLET |
| ⊕ | MONITOR WELL |
| ⊙ | SANITARY MANHOLE |
| ⊗ | WATER VALVE |
| ⊕ | FIRE HYDRANT |
| ⊙ | WATER METER |
| ⊕ | LIGHT POLE |
| ⊙ | ELECTRIC MANHOLE |
| ⊕ | METER VAULT |
| ⊙ | HANDHOLE |
| ⊕ | BOLLARD |
| ⊙ | SIGN |
| EP | ELECTRICAL PANEL |
| ⊕ 0.00 | SPOT ELEVATION |
| --- | FM - MAIN-FORCE OR RAW WATER |
| --- | EDGE OF PAVEMENT |
| --- | ELEVATION CONTOUR LINE |
| --- | BACK OF CURB |

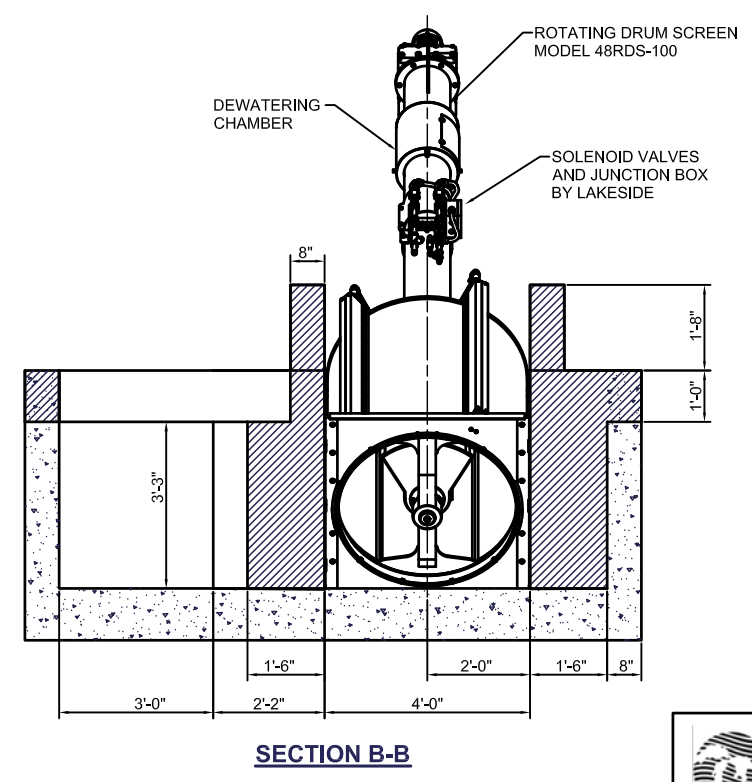
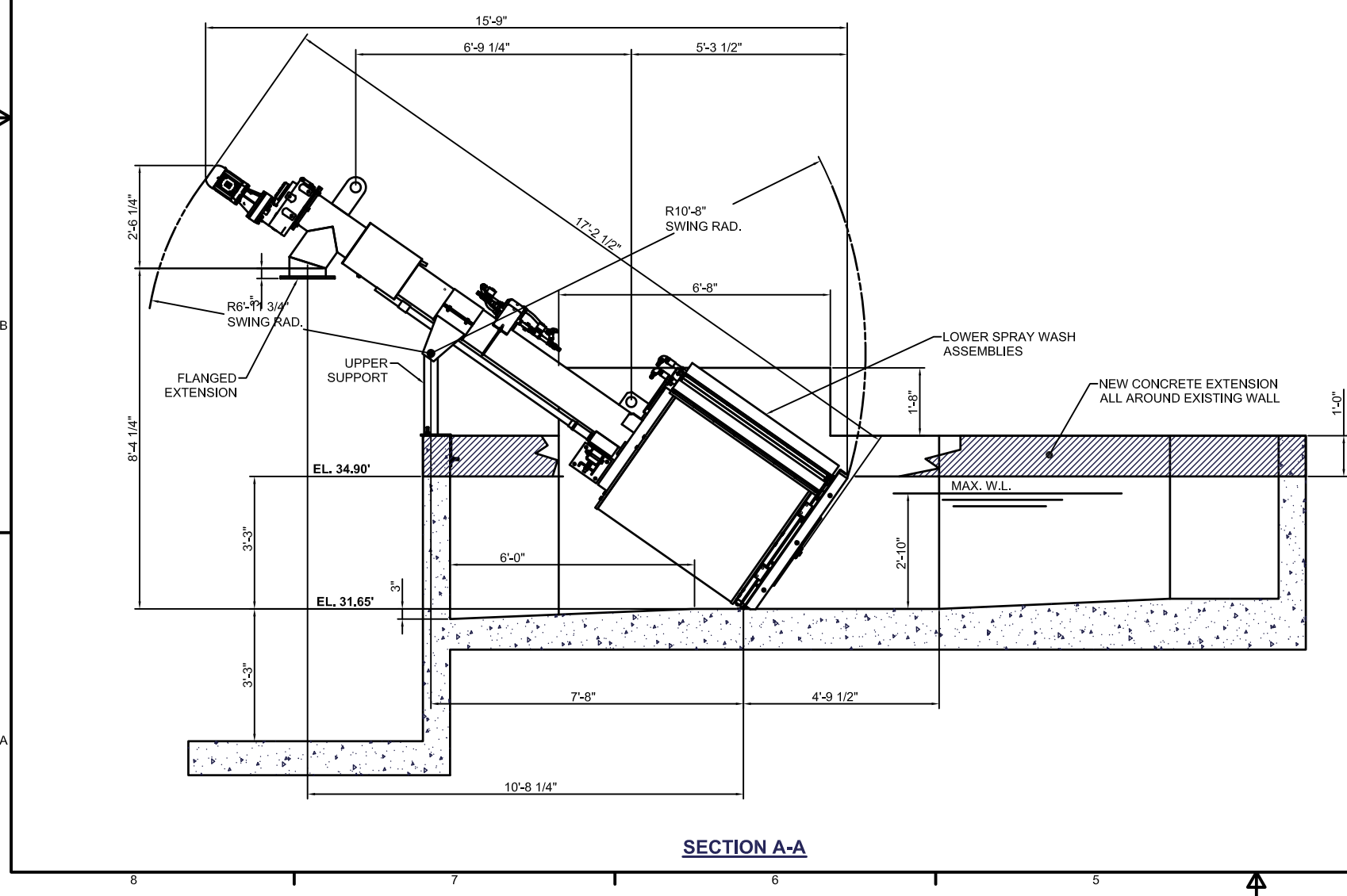
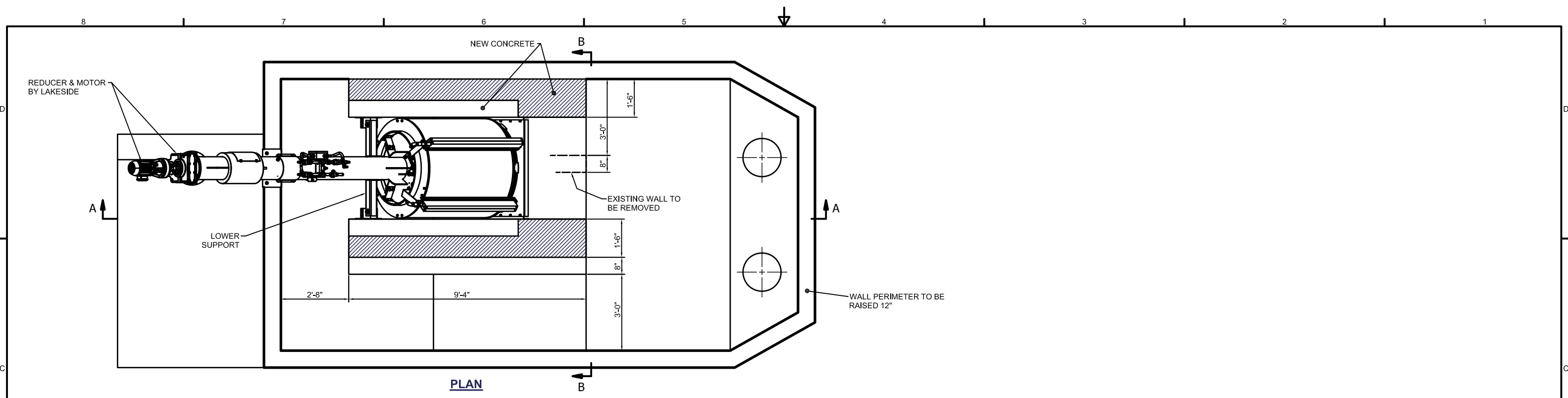



PROJECT No: 76360
 DATE: 03/14/2016
 SCALE: 1" = 20'
 DES: PP
 DR: JS
 CKD: JS

10900 NW 25TH STREET
 SUITE 100
 MIAMI, FL 33172-1922
WOOLPERT
 DESIGN ENGINEERING ARCHITECTURE
 TEL: 305.418.9370
 FAX: 305.418.9377

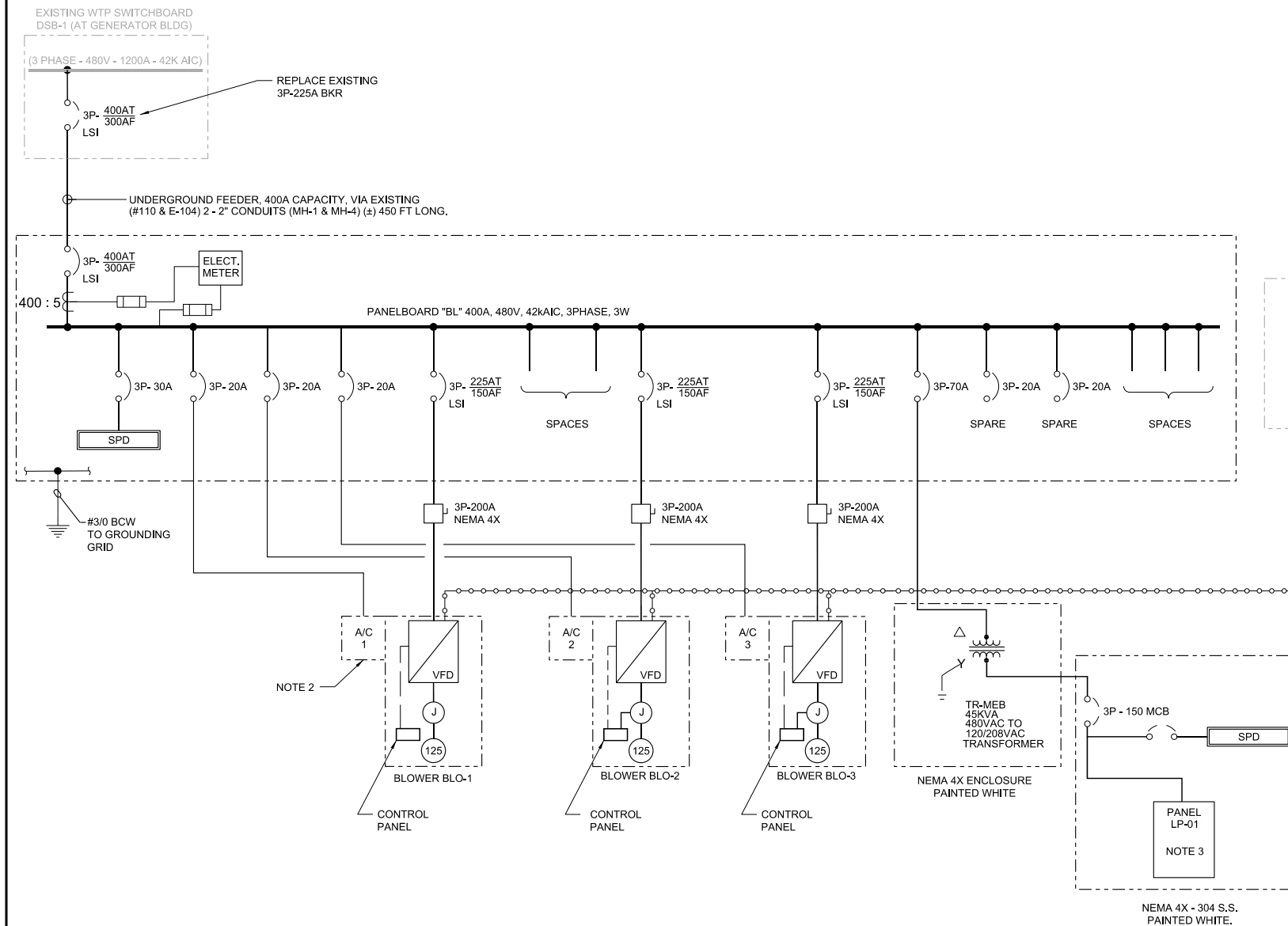
TOPOGRAPHIC SURVEY
 FOR
CITY OF MARGATE EAST WWTP
 LOCATED WITHIN
 SECTION 36, TOWNSHIP 48, RANGE 41
 CITY OF MARGATE, BROWARD COUNTY, FL.

**APPENDIX B – INFLUENT SCREEN AND CHANNEL
MODIFICATIONS**



		PROJECT		MARGATE, FL.	
		TITLE		RAPTOR® ROTATING DRUM SCREEN MODEL 48RDS	
DRAWN	RD	DATE	4/5/2016	SIZE	S.O.#
CHECKED		DATE		DWG NO	REV
SCALE			D	D98874S	
COPYRIGHT © 2016 LAKESIDE EQUIPMENT CORPORATION				FILE NO.	250

APPENDIX C – ELECTRICAL AND CONTROL SCHEMATICS



A PROPOSED PANELBOARD "BL" SINGLE LINE DIAGRAM
SCALE: NTS
FILE:

PANELBOARD "BL"
400A NEMA 4X, 316
S.S. ENCLOSURE,
PAINTED WHITE TO
REFLECT SUNLIGHT



B PROPOSED PANELBOARD "BL" ELEVATION
SCALE: NTS
FILE:

NOTES:

1. PROPOSED PANELBOARD "BL" WOULD BE LOCATED ON OUTDOOR RACK, ADJACENT TO AERATION BLOWERS.
2. BLOWER'S VFD CONTROL PANEL WITH ENCLOSURE AIR CONDITIONING MODULE.
3. PROPOSED TRANSFORMER AND PANELBOARD "LPI" WILL REPLACE EXISTING "OLD" EQUIPMENT AND SUPPLY POWER TO AERATION BASIN LIGHTING, RECEPTACLES AND INSTRUMENTS.

Figure No. 1
PROPOSED PANELBOARD "BL" SINGLE LINE DIAGRAM AND ELEVATION
MARGATE

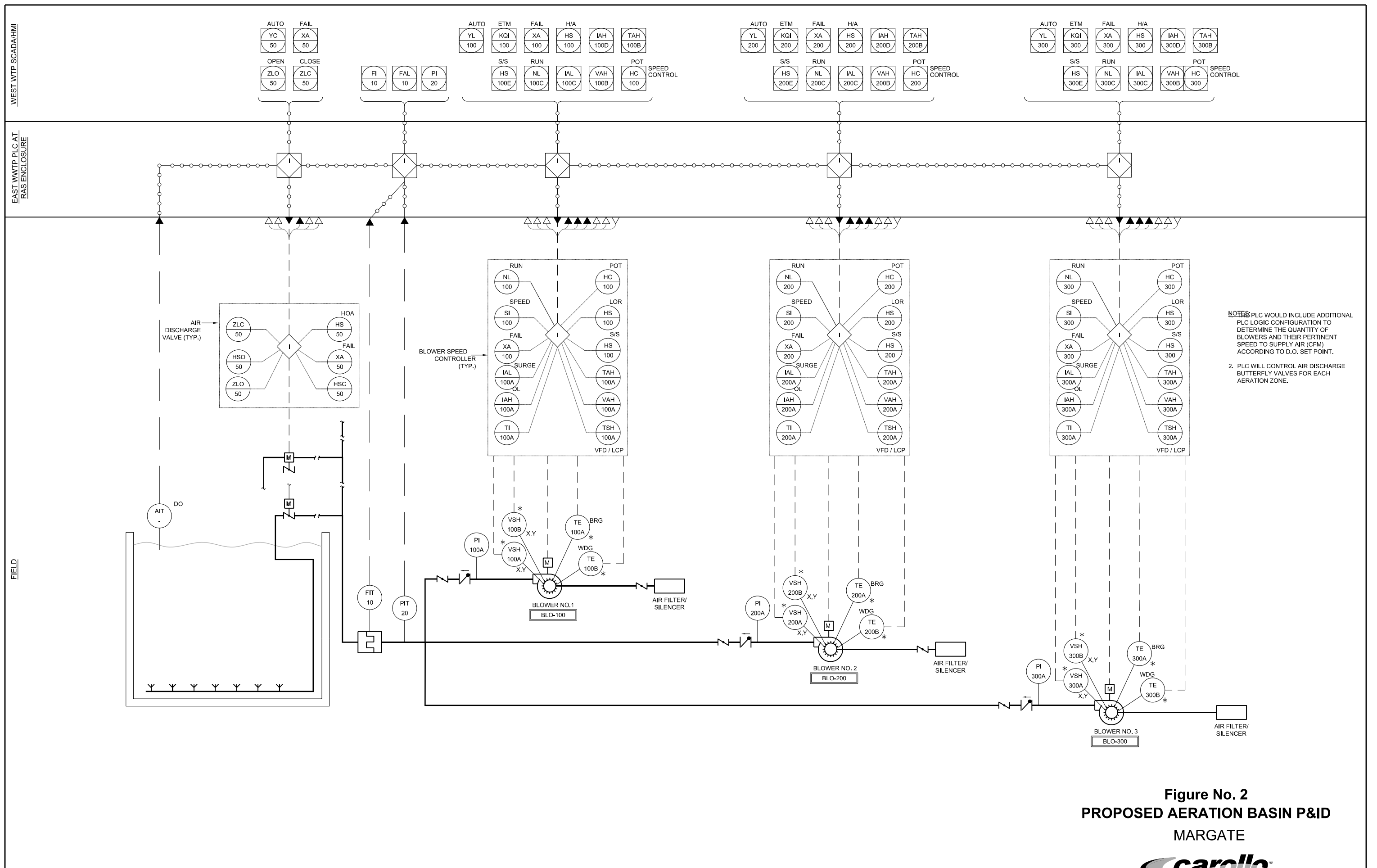


Figure No. 2
PROPOSED AERATION BASIN P&ID
MARGATE