



Design & Post-Design Services: Waste Water Treatment Plant (WWTP) West & East Surge Tanks Rehabilitation

Request for Qualifications # PSUT-20-03

General Information		
Project Cost Estimate	\$200,000 Consultant Fee Estimate	See Section 1.6.1 / Tab 6
Estimated Project Timeline	The timeline for the consultant to complete the work would be 6 months from award of the contract.	See Section 1.6.1 / Tab 6
Evaluation of Proposals	Evaluation Committee	See Section 1.8
Non-Mandatory Pre-Bid Meeting	Not Applicable	Not Applicable
Question Due Date	February 24, 2020	See Section 1.9
Proposals will be accepted until	2:00 p.m. on March 10, 2020	See Section 1.9
Proposal Security / Bid Bond	Not Applicable	Not Applicable
Payment and Performance Bonds	Not Applicable	Not Applicable

THE CITY OF PEMBROKE PINES
PURCHASING DIVISION
8300 SOUTH PALM DRIVE
PEMBROKE PINES, FLORIDA 33025
(954) 518-9020



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- Attachment A: Contact Information Form
- Attachment B: Non-Collusive Affidavit
- Attachment C: Proposer's Qualifications Statement
- Attachment D: Sample Insurance Certificate
- Attachment E: Specimen Contract (**Professional Services Agreement - CCNA**)
- Attachment F: References Form
- Attachment G: Standard Form 330
- Attachment H: Project Photos
- Attachment I: Project Location Map
- Attachment J: Paint and Coating Conditions Reports (East & West)
- Attachment K: Paint/Coating Specifications
- Attachment L: As-Build Drawings (Tank Dimensions)



SECTION 1 - INSTRUCTIONS

1.1 NOTICE

Notice is hereby given that the City Commission of the City of Pembroke Pines is seeking sealed proposals for:

RFQ # PSUT-20-03

Design & Post-Design Services: Waste Water Treatment Plant (WWTP) West & East Surge Tanks Rehabilitation

Solicitations may be obtained from the City of Pembroke Pines website at <http://www.ppines.com/index.aspx?NID=667> and on the www.BidSync.com website.

If you have any problems downloading the solicitation, please contact the BidSync Support line at 1-800-990-9339.

If additional information help is needed with downloading the solicitation package please contact the Purchasing Office at (954) 518-9020 or by email at purchasing@ppines.com. The Purchasing Office hours are between 7:00 a.m. - 6:00 p.m. on Monday through Thursday and is located at 8300 South Palm Drive, Pembroke Pines, Florida 33025.

The City requires all questions relating to the solicitation be entered through the “Ask a Question” option tab available on the BidSync website. Responses to the questions will be provided online at www.bidsync.com. Such request must be received by the “Question Due Date” stated in the solicitation. The issuance of a response via BidSync is considered an Addendum and shall be the only official method whereby such an interpretation or clarification will be made.

Proposals will be accepted until 2:00 p.m., Tuesday, March 10, 2020. Proposals must be submitted electronically at www.BidSync.com. The sealed electronic proposals will be publicly opened at 2:30 p.m. by the City Clerk’s Office, in the City Hall Administration Building, 4th Floor Conference Room located at 601 City Center Way, Pembroke Pines, Florida, 33025.

1.2 PURPOSE

The City of Pembroke Pines is seeking qualification statements from qualified firms that are licensed in the State of Florida to provide design and post design services for the repair of the structural steel, where required, and dome connections (bearing plates) at both the West and East Surge Tanks at the Waste Water Treatment Plant located at 13955 Pembroke Road, Pembroke Pines, FL 33029, in accordance with the terms, conditions, and specifications contained in this solicitation, and in accordance with the Consultant’s Competitive Negotiation Act (C.C.N.A. – Florida Statute 287.055).



1.3 SCOPE OF WORK

1. Provide design engineering, permitting and post design services for the rehabilitation of the structural steel for both surge tanks. Work includes, but it is not limited to:
 - a. Refurbish Structural Steel
 - i. West Surge Tank, approximately 15” of the top perimeter
 - ii. East Surge Tank, approximately 12” of the top perimeter
 - b. Replacement of Bearing Plates (West and East Surge Tanks)
 - c. Perimeter Seal (West and East Surge Tanks)

1.4 TERM OF CONTRACT

The timeline for the consultant to complete the design services would be 6 months from Notice to Proceed.

1.5 PRE-QUALIFIED FIRMS AND PROSPECTIVE FIRMS

The following firms shown in **Section 1.5.2** below have been deemed qualified and were selected to be included in the City’s pool of Professional Services Providers for the specified Disciplines as outlined.

Firms that have been **deemed qualified for the specified discipline** will only be required to submit the documentation requested in **Section 1.6.1, Parts B only**. However, the City encourages all firms to submit all of the documentation requested in **Section 1.6.1 Parts A & B**, should qualifications and performance data be different than originally submitted.

Firms that have not yet been deemed qualified for the specified discipline must submit all documentation requested in **Section 1.6.1 Parts A & B**, in order to be deemed fully qualified to render the required service. After the evaluation committee has deemed the firm(s) qualified, the evaluation committee shall evaluate the current statements of qualifications and performance data on file with the pre-qualified firms, together with those the new firms that have been qualified for this project, and shall conduct discussions with, and may require public presentations by, no fewer than three firms regarding their qualifications, approach to the project, and ability to furnish the required services.

1.5.1 PROFESSIONAL SERVICE DISCIPLINES USED FOR THIS PROJECT

The following professional service disciplines will be utilized for this project:

- **Structural Engineering Services**
- **Treatment Plant Process Engineering Services**



1.5.2 EXISTING POOL OF PROFESSIONAL SERVICE PROFESSIONALS BY DISCIPLINE

#	Firm	General Civil & Environmental Engineering	Treatment Plant Process Engineering	Electrical Engineering	Geotechnical	Structural Engineering	Land Surveying	General Architectural	Landscape Architecture	Hydro-Geological	FDOT Roadway Engineering
1	3FM Engineering, Inc			X							
2	A.D.A. Engineering, Inc	X		X							X
3	AMBRO, Inc	X									
4	Avirom & Associates, Inc						X				
5	Bailey Engineering Consultants, Inc			X							
6	Baxter & Woodman, Inc. (Matthews Consulting)	X					X				
7	Biscayne Engineering Company, Inc						X				
8	Calvin, Giordano & Associates, Inc	X	X	X	X	X	X	X	X	X	X
9	Carollo Engineers, Inc		X								
10	Cartaya and Associates, P.A							X			
11	CES Consultants, Inc	X			X	X	X		X		X
12	CES Engineering Services, LLC (Consulting Engineering Services)			X							
13	Chen Moore and Associates, Inc	X							X		
14	Connect Consulting, Inc									X	
15	CPH, Inc	X	X				X	X	X		X
16	CPZ Architects, Inc							X			
17	Craven, Thompson & Associates, Inc	X					X		X		
18	Debora L. Fields (DL Fields Consultants, LLC)							X			
19	EBS Engineering, Inc	X									
20	Engenuity Group, Inc	X					X				
21	Florida Technical Consultants, LLC	X									
22	GFA International, Inc				X					X	
23	Ingemel S.A. LLC	X	X	X		X	X				



24	Keith and Schnars, P.A						X		X		X
25	Kimley-Horn and Associates, Inc	X	X	X	X	X	X		X	X	X
26	Lakdas-Yohalem Engineering, Inc					X					
27	MARLIN Engineering, Inc						X				X
28	Miller Legg & Associates, Inc						X		X		
29	Netta Architects, LLC							X			
30	Premiere Design Solutions	X					X				X
31	R.J. Behar & Company, Inc	X				X					X
32	Saltz Michelson Architects, Inc	X		X	X	X	X	X	X		X
33	Slattery & Associates Architects Planners, Inc							X			
34	Synalovski Romanik Saye, LLC							X			
35	Tierra South Florida, Inc				X						
Count		16	5	8	6	7	15	9	9	4	10

1.6 PROPOSAL SUBMISSION

The www.bidsync.com website allows for vendors to complete, scan and upload their documents as part of the bidder's submittal on the website. Proposals should be formatted as follows:

Title Page:

List the following:

Subject: **RFQ # PSUT-20-03 "Design & Post-Design Services: WWTP West & East Surge Tanks Rehabilitation"**

1. Date
2. Name of the Firm
3. Address of the local office
4. Telephone Number
5. Email Address

Letter of Interest:

Limit to two (2) pages.

1. Attach a letter of interest that explains your firm's interest in working on this project, a positive commitment to perform the required work and a description of the firm including:
 - a. Include the size
 - b. Range of activities
 - c. Firms strength and stability



- d. Summary of abilities and experience of the firms' professional personnel
 - e. Summary of past performance of the firm on similar projects
 - f. Availability and access to the firms' top level management personnel.
 - g. Identification of firm's, single, professionally licensed point of contact for this project.
2. This Letter of Interest must be signed by a corporate officer.

1.6.1 Proposal Requirements

Prospective proposers interested in responding to this solicitation are requested to provide all of the information listed in this section. Submittals that do not respond completely to all of requirements specified herein may be considered non-responsive and eliminated from the process. Brevity and clarity are encouraged.

Part - A

Tab 1 – Standard Form 330 (Parts I and II)

The **Standard Form 330** has been included in this RFQ as **Attachment G**. Firms shall complete both Part I and II of the Standard Form 330 so that the City can obtain adequate information to pre-qualify firms and for the specified discipline and for the services outlined in this RFQ.

Tab 2 – Certified Minority Business Enterprise

1. Please identify if you are a Certified Minority Business Enterprise as defined by the Florida Small and Minority Business Assistance Act.
 - a. If you are a Certified Minority Business Enterprise as defined by the Florida Small and Minority Business Assistance Act, please provide proof.

Tab 3 – Other Completed Documents

1. **Attachment A: Contact Information Form**
 - a. Attached is contact information form (**Attachment A**) where the vendor will enter their contact information and complete the proposal checklist. The Contact information form shall be electronically signed by the contact person authorized to represent the contractor. This form must be completed and submitted through www.bidsync.com as part of the bidder's submittal.
 - b. Please note vendors should be registered on BidSync under the name of the organization that they are operating as and it should match the organization name on the documents that they are submitting and utilizing when responding to the solicitation.



- c. The contact information form should contain an electronic signature of the authorized representative of the Proposer along with the address and telephone number for communications regarding the Proposal.
- d. Proposals by corporations should be executed in the corporate name by the President or other corporate officer accompanied by evidence of authority to sign. The corporate address and state of incorporation must also be shown.
- e. Proposals by partnerships should be executed in the partnership name and signed by a partner whose title and the official address of the partnership must be shown.
2. **Attachment B: Non-Collusive Affidavit**
3. **Attachment C: Proposer's Qualifications Statement**
4. **Attachment F: References Form**

Part - B

Tab 4 – Ability of Professional Personnel:

1. Provide the name of the proposed Project Manager (PM). The PM is to be a Professional Engineer with experience specific to the Scope of Services who will sign and seal the work. The PM is to be the single point of contact between the City and the Consultant.
2. Provide a copy of the resume of the PM and other supporting personnel.
3. Provide any additional information relating to the ability of the professional personnel that will work on this project.

Tab 5 – Past Performance:

Please provide supplemental information regarding the following:

1. A listing of similar work signed and sealed by the proposed PM in the last 10 years with references (including names, titles, e-mail and phone numbers).

Tab 6 - Willingness to meet time and budget requirements:

Please advise if your firm is willing to meet the following time and budget requirements.

1. **Budget:** \$200,000 Consultant Fee Estimate
2. **Timeline:** The timeline for the consultant to complete the work would be 6 months from Notice to Proceed.

Please note that during this portion of the process, the City is NOT asking for the firms to submit pricing. After the evaluation committee has selected the firms in



order of preference, the City shall negotiate a contract with the most qualified firm for professional services at compensation which the agency determines is fair, competitive, and reasonable. Should the agency be unable to negotiate a satisfactory contract with the firm considered to be the most qualified at a price the agency determines to be fair, competitive, and reasonable, negotiations with that firm must be formally terminated. The agency shall then undertake negotiations with the next most qualified firm.

Tab 7 - Location:

Please provide the address and the primary location on where work will be performed by your firm for this project. If services will be performed by different offices (such as a joint venture) provide a location for each firm.

Tab 8 - Recent, current, and projected workloads of the firms:

Please provide any information regarding your firm's recent, current, and projected workloads for the Evaluation Committee to review.

Tab 9 - Firm's Understanding and Approach to the Work:

The understanding that the applicant and consultants demonstrate as to the requirements and needs of the project, including an evaluation of the thoroughness demonstrated in analyzing and investigating the scope of the project.

1. Provide a narrative statement demonstrating an understanding of the overall intent of this solicitation, as well as the methods used to complete assigned tasks.
2. Please clearly describe all aspects of the project proposed.
3. Please identify any sub-consultants that shall be used for this project and their involvement, if applicable.
4. Include details of your approach and work plans.
5. Identify any issues or concerns of significance that may be appropriate.
6. A brief statement must be included which explains why your proposal would be the most effective and beneficial to the City of Pembroke Pines.

1.6.2 Additional Information

Please provide any additional information that you deem necessary to complete your proposal in this section, if it has not been requested in another section.

1.7 VENDOR REGISTRATION AND QUALIFICATION DOCUMENTS



The City has implemented a new process that is intended to make the bidding process easier for vendors that bid on multiple City projects. This process will require vendors to complete and submit the following standard forms and documents at any time prior to bidding on a project. In addition, the vendors will be able to utilize these same forms without the need to re-fill and re-submit the forms each time they bid on a City project.

Furthermore, please make sure to update this information on an as-needed basis so that all pertinent information is accurate, such as local business tax receipts, and any other relevant information.

These forms will be found under the “Vendor Registration” group of “Qualifications” on the BidSync website for the City of Pembroke Pines. Please note that the BidSync website requires bidders to complete all of these qualifications prior to being able to submit questions on any bids, therefore, please make sure to complete this information as soon as possible.

The following documents can be completed prior to the bidding process through the BidSync website and do not need to be attached to your submittal as the BidSync website will automatically include it.

1.7.1 Vendor Information Form

1.7.2 Form W-9 (Rev. October 2018)

- a. Previously dated versions of this form will delay the processing of any payments to the selected vendor.

1.7.3 Sworn Statement on Public Entity Crimes Form

1.7.4 Local Vendor Preference Certification

- a. If claiming Local Pembroke Pines Vendor Preference, business must attach a current business tax receipt from the City of Pembroke Pines
- b. If claiming Local Broward County Vendor Preference, business must attach a current business tax receipt from Broward County or the city within Broward County where the business resides.
- c. The Local Vendor Preference Certification form must be completed by/for the proposer; the proposer **WILL NOT** qualify for Local Vendor Preference based on their sub-contractors’ qualifications.

1.7.5 Local Business Tax Receipts

1.7.6 Veteran Owned Small Business Preference Certification



- a. If claiming Veteran Owned Small Business Preference Certification, business must attach the “Determination Letter” from the United States Department of Veteran Affairs Center for Verification and Evaluation notifying the business that they have been approved as a Veteran Owned Small Business (VOSB).
- b. The Veteran Owned Small Business Preference Certification form must be completed by/for the proposer; the proposer **WILL NOT** qualify for Veteran Owned Small Business Preference based on their sub-contractors’ qualifications.

1.7.7 Equal Benefits Certification Form

1.7.8 Vendor Drug-Free Workplace Certification Form

1.7.9 Scrutinized Company Certification

1.8 EVALUATION OF PROPOSALS & PROCESS OF SELECTION

- A. Staff will evaluate all responsive proposals received from proposers who meet or exceed the bid requirements contained in the RFQ. Evaluations shall be based upon the information and references contained in the proposals as submitted. **As such, the Proposal should be as comprehensive as possible; clearly describing the details of services that the Proposer intends to provide.**

1.8.1 QUALIFYING FIRMS THAT HAVE NOT YET BEEN DEEMED QUALIFIED

- A. The City will convene an Evaluation Committee that will evaluate the proposals of the firms **that have not yet been deemed qualified** based on the following criteria to determine if the firm is fully qualified to render the required service:

Criteria	Points
Adequacy of Personnel / Ability of Professional Personnel	25 points
Whether a firm is a Certified Minority Business Enterprise (as defined by the Florida Small and Minority Business Assistance Act)	5 points
Past Record / Past Performance	25 points
Capabilities	25 points
Experience (of the firm or individual)	20 points
Total Points	100 points

- B. The Evaluation Committee will make a motion on whether or not to approve the firms as qualified to render the required professional services.



1.8.2 COMPETITIVE SELECTION OF PROFESSIONAL SERVICE PROVIDERS FROM THE QUALIFIED FIRMS

- A. The Evaluation Committee will evaluate the current statements of qualifications and performance data on file for the pre-qualified pool of professional services providers for the specified discipline(s), together with those that were submitted by other firms that were deemed qualified in **Section 1.8.1** above, regarding the proposed project.
- B. The Evaluation Committee shall have the option of shortlisting the qualified firms to **no less than three firms**. In addition, the Evaluation Committee **shall conduct discussions** and may require presentations from each of the short listed firms regarding their:
- (1) **Qualifications;**
 - (2) **Approach to the project; and**
 - (3) **Ability to furnish the required services.**
- C. The Evaluation Committee shall select in order of preference **no fewer than three firms** deemed to be the most highly qualified to perform the required services. In determining whether a firm is qualified, the Evaluation Committee shall utilize the following criteria:

Criteria	Points
Adequacy of Personnel / Ability of Professional Personnel	25 points
Whether a firm is a Certified Minority Business Enterprise (as defined by the Florida Small and Minority Business Assistance Act)	5 points
Past Record / Past Performance	25 points
Willingness to meet time and budget requirements	20 points
Recent, current, and projected workloads of the firms	15 points
Location	5 points
Local Vendor Preference/ Veteran Owned Small Business Preference*	5 points
Total Points	100 points

**Please note that the Local Vendor Preference is used to evaluate the submittals received from proposers and are assigned point totals, a preference of five (5) points of the total evaluation point shall be given to the Local Pembroke Pines Vendor(s); a preference of two and a half (2.5) points of the total evaluation point shall be given to the Local Broward County Vendor(s), all other vendors shall receive zero (0) points. Vendors must submit the attached Local Vendor Preference Certification Form in order to qualify for these evaluation points.*



Veteran Owned Small Business (VOSB) is also used to evaluate the submittals received from proposers and are assigned point totals, a preference of two and a half (2.5) points of the total evaluation point shall be given to the Veteran Owned Small Businesses. Vendors must submit the attached Veteran Owned Small Business Preference Certification Form in order to qualify for these evaluation points.

All other vendors shall receive zero (0) points.

- D. In the event a score for an individual evaluator results in a tie or the overall score results in a tie, the evaluator or evaluation committee will be asked to **break the tie and rank the tied vendors based on the volume of work previously awarded to each firm by the City**, with the object of effecting an equitable distribution of contracts among qualified firms, provided such distribution does not violate the principle of selection of the most highly qualified firms.
- i. In the event the score still results in a tie, the evaluator or evaluation committee will be asked to **break the tie and give preference to a business that certifies that it has implemented a drug-free workplace program on the Vendor Drug-Free Workplace Certification Form.**
 - ii. In the event the score still results in a tie, the evaluator or evaluation committee will be asked to break the tie by **publicly drawing lots.**
- E. The Evaluation Committee will make a recommendation to the City Commission to:
- a. Award the contract and for approval for the City Manager to negotiate a contract with most qualified firm. (The contract shall be awarded to the most responsive/responsible proposer whose proposal is determined to be the most advantageous to the City taking into consideration the evaluation criteria.)
- F. The City may request, accept, and consider proposals for the compensation to be paid under the contract only during competitive negotiations under **Section 1.8.3** below.

1.8.3 COMPETITIVE NEGOTIATION

In accordance with Florida Statute 287.055(5) "Competitive Negotiation":

- (a) The City's Administrative Staff shall negotiate a contract with the most qualified firm for professional services at compensation which the agency determines is fair, competitive and reasonable. In making such determination, the City's Administrative Staff shall conduct a detailed analysis of the cost of the professional services required in addition to considering their scope and complexity. For any lump-sum or cost-plus-a-fixed-fee professional service contract **over \$195,000** (*the threshold amount provided in s. 287.017 for CATEGORY FOUR*), the City shall require the firm receiving the award to



execute a truth-in-negotiation certificate stating that wage rates and other factual unit costs supporting the compensation are accurate, complete, and current at the time of contracting. Any professional service contract under which such a certificate is required must contain a provision that the original contract price and any additions thereto will be adjusted to exclude any significant sums by which the City determines the contract price was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such contract adjustments must be made within 1 year following the end of the contract.

(b) Should the City's Administrative Staff be unable to negotiate a satisfactory contract with the firm considered to be the most qualified at a price the City's Administrative Staff determines to be fair, competitive, and reasonable, negotiations with that firm must be formally terminated. The City's Administrative Staff shall then undertake negotiations with the second most qualified firm. Failing accord with the second most qualified firm, the City's Administrative Staff must terminate negotiations. The City's Administrative Staff shall then undertake negotiations with the third most qualified firm.

(c) Should the City's Administrative Staff be unable to negotiate a satisfactory contract with any of the selected firms, the City's Administrative Staff shall select additional firms in the order of their competence and qualification and continue negotiations in accordance with this subsection until an agreement is reached.

1.8.4 PROHIBITION AGAINST CONTINGENT FEES

In accordance with Florida Statute 287.055(6) "Prohibition against Contingent Fees":

(a) Each contract entered into by the City for professional services must contain a prohibition against contingent fees as follows:

"The architect (or registered surveyor and mapper or professional engineer, as applicable) warrants that he or she has not employed or retained any company or person, other than a bona fide employee working solely for the architect (or registered surveyor and mapper, or professional engineer, as applicable) to solicit or secure this agreement and that he or she has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the architect (or registered surveyor and mapper or professional engineer, as applicable) any fee, commission, percentage, gift, or other consideration contingent upon or resulting from the award or making of this agreement."

For the breach or violation of this provision, the City shall have the right to terminate the agreement without liability and, at its discretion, to deduct from the contract price, or otherwise recover, the full amount of such fee, commission, percentage, gift, or consideration.

1.9 TENTATIVE SCHEDULE OF EVENTS



Event	Time &/or Date
Issuance of Solicitation (Posting Date)	February 11, 2020
Question Due Date	February 24, 2020
Anticipated Date of Issuance for the Addenda with Questions and Answers	February 27, 2020
Proposals will be accepted until	2:00 p.m. on March 10, 2020
Proposals will be opened at	2:30 p.m. on March 10, 2020
Evaluation of Proposals by Evaluation Committee	March – April, 2020
Recommendation of award to City Commission	April – May, 2020

1.10 SUBMISSION REQUIREMENTS

Bids/proposals **must be submitted electronically** at www.bidsync.com on or before **2:00 p.m. on March 10, 2020.**

Please note vendors should be registered on BidSync under the name of the organization that they are operating as and it should match the organization name on the documents that they are submitting and utilizing when responding to the solicitation.

The vendor must provide their information through the designated lines items listed on the BidSync website. In addition, the vendor must complete any webforms on the BidSync website and provide any additional information requested throughout this solicitation. Any additional information requested in the solicitation should be scanned and uploaded. **Unless otherwise specified, the City requests for vendors to upload their documents as one (1) PDF document in the order that is outline in the bid package.**

The City recommends for proposers to submit their proposals as soon as they are ready to do so. Please allow ample time to submit your proposals on the BidSync website. Proposals may be modified or withdrawn prior to the deadline for submitting Proposals. BidSync Support is happy to help you with submitting your proposal and to ensure that you are submitting your proposals correctly, but we ask that you contact their support line at 1-800-990-9339 with ample time before the bid closing date and time.

PLEASE DO NOT SUBMIT ANY PROPOSALS VIA MAIL, E-MAIL OR FAX.



CONTACT INFORMATION FORM

IN ACCORDANCE WITH “PSUT-20-03” titled “**Design & Post-Design Services: WWTP West & East Surge Tanks Rehabilitation**” attached hereto as a part hereof, the undersigned submits the following:

A) Contact Information

The Contact information form shall be electronically signed by one duly authorized to do so, and in case signed by a deputy or subordinate, the principal's properly written authority to such deputy or subordinate must accompany the proposal. This form must be completed and submitted through www.bidsync.com as part of the bidder's submittal. The vendor must provide their pricing through the designated lines items listed on the BidSync website.

COMPANY INFORMATION:

COMPANY: _____

STREET ADDRESS: _____

CITY, STATE & ZIP CODE: _____

PRIMARY CONTACT FOR THE PROJECT:

NAME: _____ TITLE: _____

E-MAIL: _____

TELEPHONE: _____ FAX: _____

AUTHORIZED APPROVER:

NAME: _____ TITLE: _____

E-MAIL: _____

TELEPHONE: _____ FAX: _____

SIGNATURE: _____

B) Proposal Checklist

1) Did you submit the following items, as stated in section 1.6 “Proposal Submission” of the bid package?

Title Page	Yes_____
------------	----------



Letter of Interest, signed by a corporate officer.	Yes_____
<u>Part A</u>	
Tab 1 – Standard Form 330 (Parts I and II)	Yes_____
Tab 2 – Certified Minority Business Enterprise	Yes_____
Tab 3 - Other Completed Documents	Yes_____
1. Attachment A - Contact Information Form	Yes_____
2. Attachment B - Non-Collusive Affidavit	Yes_____
3. Attachment C - Proposer’s Qualification Statement	Yes_____
4. Attachment F - References Form	Yes_____
<u>Part B</u>	
Tab 4 – Ability of Professional Personnel	Yes_____
Tab 5 – Past Performance	Yes_____
Tab 6 – Willingness to meet time and budget requirements	Yes_____
Tab 7 – Location	Yes_____
Tab 8 – Recent, current, and projected workloads of the firms	Yes_____
Tab 9 – Firm’s Understanding and Approach to the Work	Yes_____

2) Did you update the following documents found under the “Vendor Registration” group of “Qualifications” on the BidSync website for the City of Pembroke Pines?

Vendor Information Form	Yes_____
Form W-9 (Rev. October 2018)	Yes_____
Sworn Statement on Public Entity Crimes Form	Yes_____
Local Vendor Preference Certification	Yes_____
Local Business Tax Receipts	Yes_____
Veteran Owned Small Business Preference Certification	Yes_____

Draft Document for Commission Review



City of Pembroke Pines

Attachment A

Equal Benefits Certification Form	Yes_____
Vendor Drug-Free Workplace Certification Form	Yes_____
Scrutinized Company Certification	Yes_____



WWTP Rehabilitation
East Surge Tank Corrosion Issues
December 18, 2019 at 11:50:30 AM



WWTP Rehabilitation
East Surge Tank Corrosion Issues
December 18, 2019 at 11:50:25 AM



WWTP Rehabilitation
East Surge Tank Corrosion Issues
December 18, 2019 at 11:50:19 AM



WWTP Rehabilitation
East Surge Tank Corrosion Issues
December 18, 2019 at 11:50:10 AM

**WWTP Rehabilitation**

East Surge Tank Corrosion Issues

December 18, 2019 at 11:49:58 AM

**WWTP Rehabilitation**

East Surge Tank Corrosion Issues

December 18, 2019 at 11:49:09 AM

**WWTP Rehabilitation**

East Surge Tank Corrosion Issues

December 18, 2019 at 11:48:34 AM

**WWTP Rehabilitation**

East Surge Tank Corrosion Issues

December 18, 2019 at 11:48:24 AM



WWTP Rehabilitation

East Surge Tank Corrosion Issues

December 18, 2019 at 11:48:18 AM



WWTP Rehabilitation

East Surge Tank Corrosion Issues

December 18, 2019 at 11:42:13 AM



WWTP Rehabilitation

East Surge Tank Corrosion Issues

December 18, 2019 at 11:41:46 AM



WWTP Rehabilitation

East Surge Tank Corrosion Issues

December 18, 2019 at 11:41:40 AM

**WWTP Rehabilitation**

East Surge Tank Corrosion Issues

December 18, 2019 at 11:41:26 AM

**WWTP Rehabilitation**

West Surge Tank Air Diffusers (Replacement)

December 17, 2019 at 2:12:14 PM

**WWTP Rehabilitation**

West Surge Tank Air Diffusers (Replacement)

December 17, 2019 at 2:12:11 PM

**WWTP Rehabilitation**

West Surge Tank Air Diffusers (Replacement)

December 17, 2019 at 2:12:09 PM



WWTP Rehabilitation
East Surge Tank Corrosion Issues
December 17, 2019 at 10:53:37 AM



WWTP Rehabilitation
East Surge Tank Corrosion Issues
December 17, 2019 at 10:53:18 AM



WWTP Rehabilitation
East Surge Tank Corrosion Issues
December 17, 2019 at 10:53:08 AM



WWTP Rehabilitation
East Surge Tank Corrosion Issues
December 17, 2019 at 10:53:03 AM



WWTP Rehabilitation

East Surge Tank Corrosion Issues

December 17, 2019 at 10:52:54 AM



WWTP Rehabilitation

East Surge Tank Corrosion Issues

December 17, 2019 at 10:52:49 AM



WWTP Rehabilitation

East Surge Tank Corrosion Issues

December 17, 2019 at 10:50:32 AM



WWTP Rehabilitation

East Surge Tank Corrosion Issues

December 17, 2019 at 10:50:17 AM



WWTP Rehabilitation
East Surge Tank Corrosion Issues
December 17, 2019 at 10:49:33 AM



WWTP Rehabilitation
East Surge Tank
December 4, 2019 at 10:02:04 AM



WWTP Rehabilitation
East Surge Tank
December 4, 2019 at 10:01:57 AM



WWTP Rehabilitation
East Surge Tank
December 4, 2019 at 10:01:52 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues (hole from the interior)

October 7, 2019 at 8:18:36 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues (hole from the interior)

October 7, 2019 at 8:18:28 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

October 7, 2019 at 8:10:11 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues (hole from the exterior)

October 7, 2019 at 8:10:05 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

October 7, 2019 at 8:07:44 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

October 7, 2019 at 8:07:41 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

October 7, 2019 at 8:06:55 AM



WWTP Rehabilitation

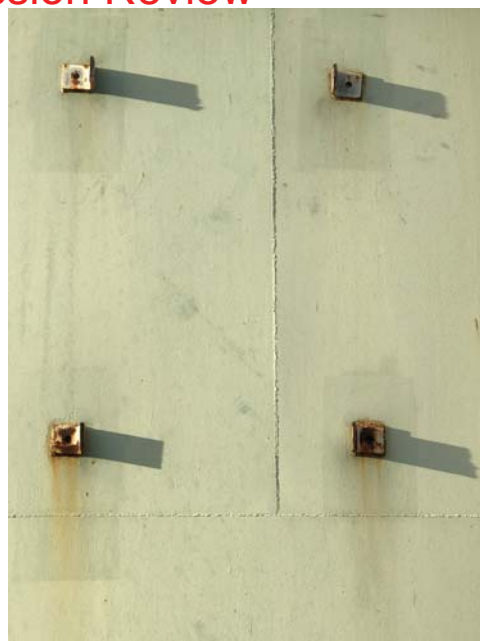
West Surge Tank Corrosion Issues

October 7, 2019 at 8:06:51 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

October 7, 2019 at 8:06:35 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

October 7, 2019 at 8:06:33 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

October 7, 2019 at 8:06:20 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

October 7, 2019 at 8:06:16 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues
September 19, 2019 at 9:08:13 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues
September 19, 2019 at 9:07:58 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues
September 19, 2019 at 9:07:19 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues
September 19, 2019 at 9:07:13 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

September 19, 2019 at 9:07:07 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

September 19, 2019 at 9:07:03 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

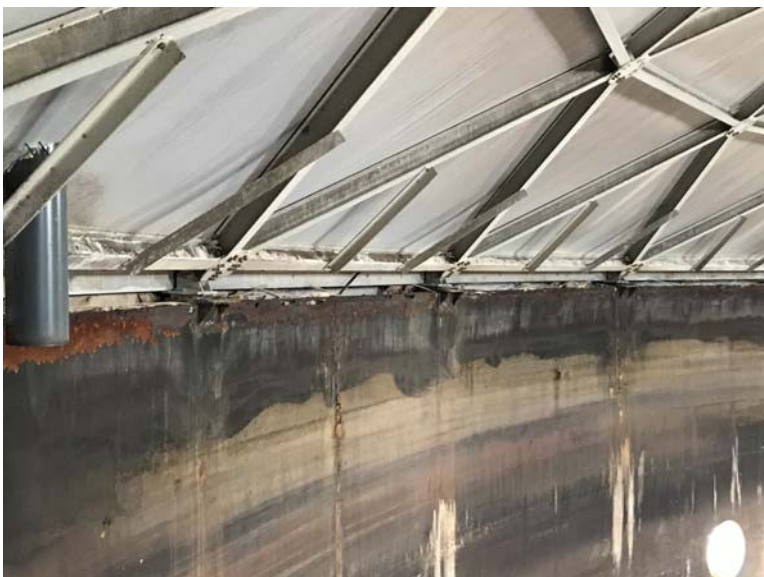
September 19, 2019 at 9:06:55 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

September 19, 2019 at 9:07:34 AM



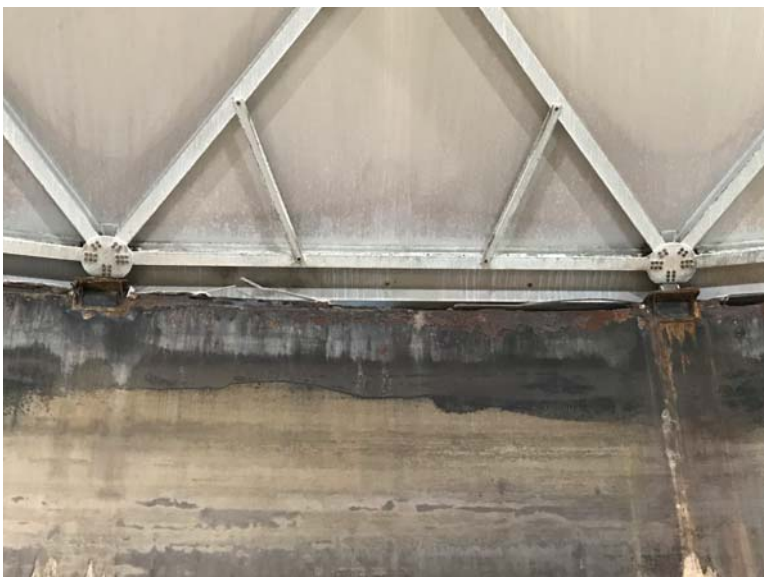
WWTP Rehabilitation

West Surge Tank Corrosion Issues
September 19, 2019 at 9:07:28 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues
September 19, 2019 at 9:05:16 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues
September 19, 2019 at 9:05:08 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues
September 19, 2019 at 9:05:00 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

September 19, 2019 at 9:04:10 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

September 19, 2019 at 9:04:02 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

September 19, 2019 at 9:03:53 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

September 19, 2019 at 9:03:45 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

September 19, 2019 at 9:03:26 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

September 19, 2019 at 9:03:16 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

September 19, 2019 at 9:03:06 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

September 19, 2019 at 9:02:57 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

September 19, 2019 at 9:02:46 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

September 19, 2019 at 9:02:36 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

September 19, 2019 at 9:02:29 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

September 19, 2019 at 9:02:20 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

September 19, 2019 at 9:02:11 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

September 19, 2019 at 9:02:05 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

September 19, 2019 at 9:01:56 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues

September 19, 2019 at 9:01:46 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

September 19, 2019 at 9:01:40 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

September 19, 2019 at 9:01:29 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

September 19, 2019 at 9:01:21 AM

**WWTP Rehabilitation**

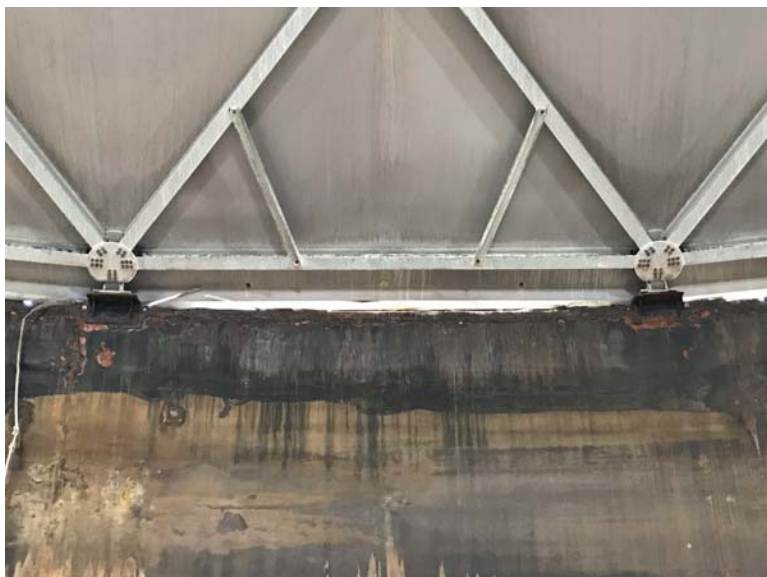
West Surge Tank Corrosion Issues

September 19, 2019 at 9:01:08 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

September 19, 2019 at 9:00:55 AM

**WWTP Rehabilitation**

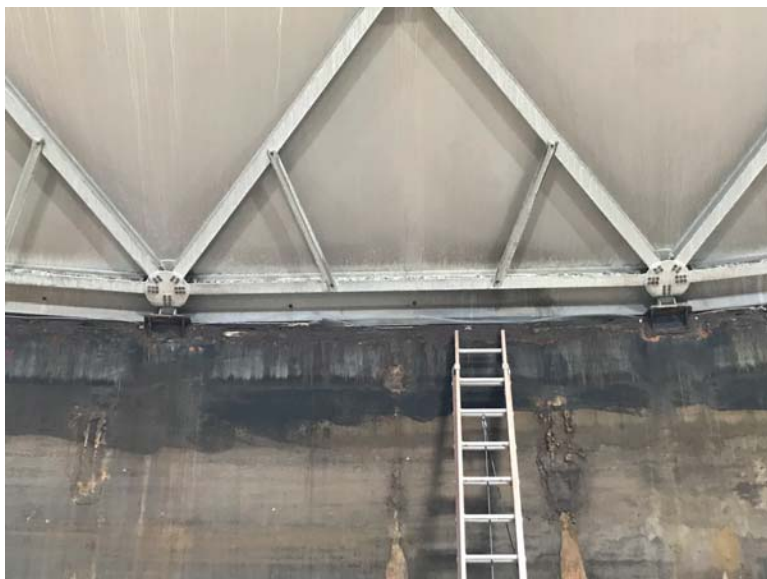
West Surge Tank Corrosion Issues

September 19, 2019 at 9:00:38 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

September 19, 2019 at 9:00:31 AM

**WWTP Rehabilitation**

West Surge Tank Corrosion Issues

September 19, 2019 at 9:00:22 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues
September 19, 2019 at 9:00:13 AM



WWTP Rehabilitation

West Surge Tank Corrosion Issues
September 19, 2019 at 9:00:02 AM



WWTP Rehabilitation

West Surge Tank (Excess Grit)
May 29, 2019 at 10:36:07 AM



WWTP Rehabilitation

West Surge Tank (Excess Grit)
May 29, 2019 at 10:35:55 AM



WWTP Rehabilitation

West Surge Tank (Excess Grit)

May 29, 2019 at 10:35:50 AM



Attachment 1

Google Earth

© 2019 Google

600 ft



BASIS OF DESIGN MEMORANDUM**ECKLER ENGINEERING, INC.**

4700 Riverside Drive, Suite 110
Coral Springs, Florida 33067
CA. NO. 7803

Project:	Pembroke Pines WWTP Rehab – Phase 1	Date:	July 31, 2019
Reference:	Evaluation and Preliminary Design Memorandum	EEL Pro. No.:	243-002.13
Prepared By:	Christopher Makransky, E.I.	Reviewed By:	Douglas K Hammann, P.E.

A. SITE VISIT

On July 1, 2019 Eckler Engineering conducted a site visit to the Pembroke Pines Wastewater Treatment Plant. Present also was structural engineer Gene Sanders and Cardinal Contractors. The purpose of the site visit was to evaluate the interior of the West Surge Tank and provide recommendation of rehabilitation requirements. This site visit was subsequent to West Surge Tank coating evaluations by Service Contracting Solutions and Florida Protective Coatings Consultants, Inc, on May 17, 2019, and June 27, 2019, respectively. Both parties agree that majority of existing interior coating below the top 12 inches is in tightly adhered condition. For complete reports, see Attachments herein.

B. EVALUATION

Overall, the steel walls, concrete floor, and coatings appeared to be good condition, however there was noticeable corrosion in some areas that needs to be addressed. The top 4-12 inches of steel wall is corroded along the entire perimeter of the tank. Corrosion has also affected the beam seats which connect the tank wall to its geodesic dome. Lastly, there are several noticeable corrosion spots scattered throughout the entirety of the tank wall.

C. RECOMMENDATION

Eckler Engineering recommends the procedures detailed by Florida Protective Coatings Consultants, Inc, in Attachment 1, in addition to the following:

- Prior to any work, ensure conformance with all relevant rules and regulations.

- Prior to coating, cut and replace the top 12 inches of steel wall along the entire perimeter. Using AWS-certified welder, weld new sections prior to cutting the next section. Repair/replace corroded dome beam seat angles in like kind. Support the dome as necessary during all steel replacement.
- Remove/replace any noticeable corroded steel along the entire height of the steel wall.

To clarify pre-coating surface preparation, all surfaces shall be pressure washed to clean. All new steel will be sand-blasted to near-white. Existing metal will be sweep cleaned to create a surface profile for coating application.

D. SITE VISIT PHOTOS

Below are captioned photos taken during the site visit.



Figure 1: Steel Tank Wall



Figure 2: Steel Tank Wall Close Up



Figure 3: Dome Beam Seat Connection

E. APPLICABLE RULES AND REGULATIONSStructural

National American Welding Society (AWS)

American Institute of Steel Construction (AISC)

National Association of Corrosion Engineers (NACE)

Sandblasting/Height Safety/Products Application

OSHA Abrasive Blasting

Broward County Environmental Protection and Growth Management Department
(BCEP&GMD)

F. ATTACHMENTS

Attachment 1: Florida Protective Coatings Consulting, Inc. - West Surge Tank Interior
Coatings Evaluation

Attachment 2: Service Contracting Solutions - West Surge Tank Interior Coatings
Evaluation

Attachment 1

Florida Protective Coatings Consulting, Inc. - West Surge Tank Interior Coatings Evaluation

FLORIDA PROTECTIVE COATINGS CONSULTANTS, INC.
INDEPENDENT REPRESENTATIVE OF TNEMEC COMPANY INCORPORATED

250 WAYMONT COURT, SUITE 210 LAKE MARY, FL 32746 TEL: 407-322-1243 FAX: 407-322-1245 WWW.TNEMEC.COM

June 27, 2019

Cardinal Contractors, Inc. | Primoris Mechanical Contractors
13790 NW 4th St. Suite 109
Sunrise, FL 33325

Attn: Mr. Juan Gonzalez

Pembroke Pines WWTP – West Surge Tank Interior Coatings
Visit to Determine State of Existing Coating Systems

Juan,

This letter is written in regards to the findings of the existing coating systems on the interior of the West Surge Tank at the Pembroke Pines WWTP. You, Fred, and I observed the interior on June 25th at approximately 2:00pm, after Service Contracting Solutions Pressure Cleaned the interior upper sections of the tank.

The tank's concrete floor is uncoated and appears to be in excellent condition.

The interior walls are visually in moderate/good condition with excessive corrosion and pitting taking place in the upper 1 foot of the walls, where the dome meets the shell. Noticeable holes were evident in a few small spots. The middle and lower steel sections were in good condition with minor corrosion in localized areas, mostly on the weld seams.

Dry Film Thickness readings were obtained from random areas and averaged about 18.0 mils, with a range from 14.0 – 22.0 mils. The testing instrument used to perform this test was a PosiTest DFT Coating Thickness Gage Version 3.0(dual probe).

I performed an adhesion test in three random areas on the lower portion of the tank in accordance with ASTM D6677 Adhesion Testing by Knife. The existing coating was tight and well-adhered, found to have adequate adhesion strength and integrity. Since the existing coating was very difficult to remove, additional adhesion testing was not performed.

Coating Recommendation:

Surface Preparation: Pressure wash to clean all surfaces to be coated.

Abrasive Blast Clean all bare steel, rust, corrosion, loose coating, and other contaminants in accordance with SSPC-SP10/NACE No.2 Near-White Blast Cleaning.

All well-adhered coatings shall be Sweep Abrasive Blast Cleaned with fine abrasive and low pressure to create a surface profile and remove surface contaminants.

Existing coating edges shall be feathered.

Spot Prime: Apply (1) coat of Tnemec Series 1 Omnithane at a rate of 2.5 – 3.5 mils DFT.

Stripe Coat: Apply (1) coat by brush or roller of Tnemec Series N69 HI Build Epoxoline at a rate of 4.0 – 6.0 mils DFT, to all welds, edges, bolts, etc...

Pitt Filler: Apply Tnemec Series 215 Surfacing Epoxy to fill all pits, voids, and irregularities in the steel.

Coating System: Apply (2) coats of Tnemec Series 46H-413 HB Tneme-Tar at a rate of 8.0 – 10.0 mils DFT, per coat.

Notes and limitations:

- Tnemec Series 1 Omnithane has a (1) year maximum recoat window.
- Tnemec Series 215 Surfacing Epoxy has a (14) day maximum recoat window at 95 degrees.
- Tnemec Series N69 HI Build Epoxoline has a (60) day maximum recoat window.
- Tnemec Series 46H-413 HB Tneme-Tar has a (14) hour maximum recoat window at 95 degrees.
- Allow a minimum (5) days at 95 degrees to cure before placing into service.

I've attached photos below for reference.

As always, it's good painting practice to apply a mockup with a portion of the surface preparation exposed for confirmation and acceptance by all parties. This benchmark will set a standard and confirm proper surface preparation, coating system thickness, applications, and adhesion.

If you need anything or have any questions, please don't hesitate to call.

Best Regards,



Blake Holmes | Coatings Consultant
FPCCI / TNEMEC
(954)648-2787
NACE Coating Inspector Cert. #68739



Figure 1: Visual of corrosion on upper wall sections, with noticeable hole



Figure 2: ASTM D6677. Resulting in a Pass



Figure 3: DFT Reading



Figure 4: Interior Visual

Attachment 2

Service Contracting Solutions - West Surge Tank Interior Coatings Evaluation

Service Contracting Solutions

Field Assessment Report

Pembroke Pines Digester Interior

05-17-2019

NACE Inspector: George Avendano



Photograph 1: Digester Interior

Field Investigation

Visual:

I entered the tank and walked clockwise around the interior perimeter of the tank wall. This inspection is being done from ground level however the corrosion located around the top perimeter of the interior is very evident. There are several areas on the walls where chemical staining and rust is visible on and thru the coating.

Wastewater tanks covered with geo domes experience concentrated levels of hydrogen sulfide gas that turns into H_2SO_4 as it interacts with condensation buildup on the dome. The yellow staining on the pictures below that turns to rusted steel under the dome to tank connections provides evidence of coating degradation due to chemical exposure.

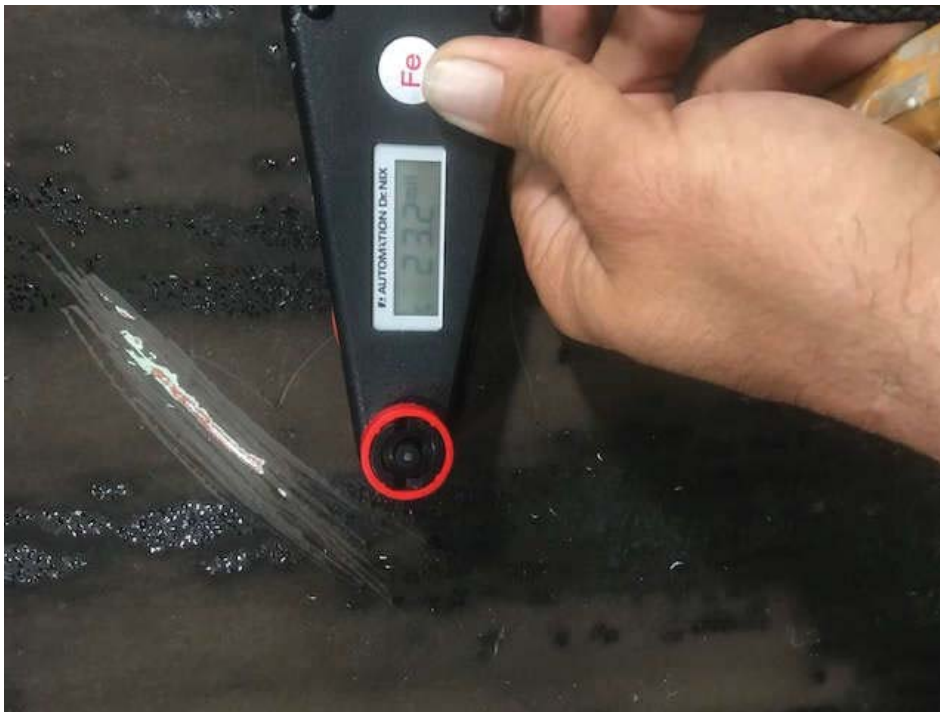
The existing coating overall is intact and tightly adhered short of the upper wall portions. I found no visual signs of large areas of loose coatings that would cause concern or require complete removal.

To properly inspect the top wall plate and dome connection brackets it will need to be pressure washed and decontaminated. This can be done when scaffolding is set up for cleaning and coating of the tank. These areas appear to be heavily corroded. See picture 1.

Coating Thickness:

The Dry Film thickness was measured using a Quanix dry film gage that was calibrated prior to and after use with the National Institute of Standards and Technologies (NTST) standards.

Elevation	North	East	South	West	Opening
1-2'	20	25	21	22	24
2-5'	22	20	23	21	23
5'-8'	22	17	20	23	21



Picture 2: Adhesion and coating thickness.

Summary:

Overall it is recommended that the interior tank coating be cleaned, spot primed, and completely over coated. The original Tnemec system is not suitable for immersion service when over coating tightly adhered existing coatings. We recommend spot priming with PPG Amerlock 2 @ 4.0-6.0 Mils DFT and top coating with Inflow Solutions RS @ 60 Mils DFT. This system is compatible for over coating the existing coal tar and is designed for use in severe waste water environments and Hydrogen Sulfide attack. The Inflow Solutions RS would be provided as a no cost change to the previous TNEMEC system.

The scaffolding set up, cleaning process, SP-10/SP-7 blasting, spot priming, and coating application will take between 5 to 6 weeks from the point we start building scaffolding.

We can also provide a Lee County reference that is familiar with the Inflow Solutions material on multiple wastewater tanks.

Additional Recommendation:

It is also recommended that metallic epoxy polymer drip stops are applied to the wall connecting geo dome beams roughly 1' to 2' from the perimeter wall. This will limit the concentrated acid attack that is currently running down the beams to the top of the wall surfaces and connection braces. The drip stops will divert the acidic condensation to fall prior to reaching the perimeter wall. This was not part of the original quote however we can provide pricing during the cleaning and surface preparation of the tank.

Sincerely,

George Avendano

5/30/2019

FLORIDA PROTECTIVE COATINGS CONSULTANTS, INC.
INDEPENDENT REPRESENTATIVE OF TNEMEC COMPANY INCORPORATED

250 WAYMONT COURT, SUITE 210 LAKE MARY, FL 32746 TEL: 407-322-1243 FAX: 407-322-1245 WWW.TNEMEC.COM

December 17, 2019

Cardinal Contractors, Inc. | Primoris Mechanical Contractors
13790 NW 4th St. Suite 109
Sunrise, FL 33325

Attn: Mr. Juan Gonzalez

Pembroke Pines WWTP – East Surge Tank Interior Coatings
Visit to Determine State of Existing Coating Systems

Juan,

This letter is written in regards to the findings of the existing coating systems on the interior of the East Surge Tank at the Pembroke Pines WWTP. George Avendana and I observed the interior on December 16th at approximately 8:00am.

The tank's concrete floor is coated and appears to be in good condition. There are (6) square spots where concrete pedestals or bases were clearly chipped out, and remain uncoated. A previous grout injection was performed on the existing cracks throughout.

The interior walls are visually in moderate/good condition with excessive corrosion and pitting taking place in the upper 1 foot of the walls, where the dome meets the shell. Localized corrosion was noticeable on the chime welds throughout the tank.

Dry Film Thickness readings were obtained from random areas and averaged about 29.0 mils DFT, with a range from 28.0 – 30.0 mils. The testing instrument used to perform this test was a PosiTest DFT Coating Thickness Gage Version 3.0(dual probe).

I performed an adhesion test in three random areas on the lower portion of the tank in accordance with ASTM D6677 Adhesion Testing by Knife. The existing coating was tight and well-adhered, found to have adequate adhesion strength and

integrity. Since the existing coating was very difficult to remove, additional adhesion testing was not performed.

Before proceeding with a coating remediation, I suggest a structural Engineer evaluate the dome's integrity and stability due to heavy corrosion.

Coating Recommendation:

Surface Preparation: Pressure wash to clean all surfaces to be coated.

Abrasive Blast Clean all bare steel, rust, corrosion, loose coating, and other contaminants in accordance with SSPC-SP10/NACE No.2 Near-White Blast Cleaning.

All well-adhered coatings shall be Sweep Abrasive Blast Cleaned with fine abrasive and low pressure to create a surface profile and remove surface contaminants.

Existing coating edges shall be feathered.

Spot Prime: Apply (1) coat of Tnemec Series 1 Omnithane at a rate of 2.5 – 3.5 mils DFT.

Stripe Coat: Apply (1) coat by brush or roller of Tnemec Series N69 HI Build Epoxoline at a rate of 4.0 – 6.0 mils DFT, to all welds, edges, bolts, etc...

Pitt Filler: Apply Tnemec Series 215 Surfacing Epoxy to fill all pits, voids, and irregularities in the steel.

Coating System: Apply (2) coats of Tnemec Series 46H-413 HB Tneme-Tar at a rate of 8.0 – 10.0 mils DFT, per coat.

Notes and limitations:

- Tnemec Series 1 Omnithane has a (1) year maximum recoat window.
- Tnemec Series 215 Surfacing Epoxy has a (14) day maximum recoat window at 95 degrees.
- Tnemec Series N69 HI Build Epoxoline has a (60) day maximum recoat window.

- Tnemec Series 46H-413 HB Tneme-Tar has a (14) hour maximum recoat window at 95 degrees.
- Allow a minimum (5) days at 95 degrees to cure before placing into service.

As always, it's good painting practice to apply a mockup with a portion of the surface preparation exposed for confirmation and acceptance by all parties. This benchmark will set a standard and confirm proper surface preparation, coating system thickness, applications, and adhesion.

If you need anything or have any questions, please don't hesitate to call.

Best Regards,

A handwritten signature in black ink, appearing to read 'Be AL'.

Blake Holmes | Coatings Consultant
FPCCI / TNEMEC
(954)648-2787
NACE Coating Inspector Cert. #68739

SECTION 09900

PROTECTIVE COATINGS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This Section covers the work required to provide all labor, materials, equipment and incidentals to perform all of the necessary surface preparation and painting required to complete this contract in its entirety.
- B. It is the intent of these Specifications to paint all concrete, exposed miscellaneous metal, pipe, fittings, valves, equipment and all other work required to be painted unless otherwise specified. Minor items omitted in the schedule of work shall be included in the work of this Section where they come within the general intent of the specifications as stated herein.
- C. The following surfaces or items are "NOT" required to be coated:
 - 1. Aluminum: gratings, checkered plates, hatches, handrails, toe boards, stairways and walkways
 - 2. Stainless steel, brass, bronze, and aluminum other than exposed tubing
 - 3. Piping buried in the ground or embedded in concrete
 - 4. Ducts, pipes and other miscellaneous items covered with insulation or plastic coated
 - 5. Concealed surfaces of pipe or crawl spaces
 - 6. Finish hardware
 - 7. Nonferrous architectural metals, unless specifically noted otherwise
 - 8. Packing glands and other adjustable parts and nameplates of mechanical equipment
 - 9. Exterior concrete slabs and equipment

1.02 RELATED SECTIONS

- A. Section 15062 – DIP Pipe and Fittings
- B. Section 15100 – Valves and Appurtenances
- C. Section 15140 – Pipe Hangers and Supports

1.03 ABBREVIATIONS

The abbreviations and definitions listed below, when used in this Section, shall have the following meanings:

ANSI	American National Standards Institute
ASTM	American Society of Testing Materials
AWWA	American Water Works Association
DFT	Dry Film Thickness
FPP	Fiberglass Reinforced Plastic
HCl	Hydrochloric Acid
MDFT	Minimum Dry Film Thickness
MDFTPC	Minimum Dry Film Thickness Per Coat
mil	Thousandths of an Inch
MIL-P	Military Specification - paint
NACE	National Association of Corrosion Engineers
NSF	National Sanitary Foundation
OSHA	Occupational Safety and Health Act
SFPG	Square Feet Per Gallon
SFPGPC	Square Feet Per Gallon Per Coat
SP	Surface Preparation
SSPC	the Society for Protective Coatings

1.04 SUBMITTALS

- A. Submittals will be made with the coating system data sheet included at the end of this section.
- B. The following shall be submitted for each proposed coating system: manufacturer's specifications, surface prepared details, application procedures, technical data sheets, and dry film thickness or coverage.
- C. Unless otherwise specified, hereinafter and before any painting work is started prepare with type of paint and application specified, and on similar substrate, to which paint is to be finally applied, samples not less than 8" in size.
- D. Furnish additional samples as required until colors, finishes and textures are acceptable. Retain accepted samples to be used as the quality standard for final finishes.
- E. Before proceeding with the work under this Section, finish one complete space or item of each color scheme required showing selected colors, finishes and textures are acceptable. Retain accepted samples to be used as the quality standard for final finishes.
- F. Schedule of Painting Operations: The Contractor shall submit for review a complete schedule of painting operations 30 days from the notice to proceed.

1.05 QUALITY ASSURANCE

- A. The paint manufacturer shall provide a representative to visit the job site at intervals during surface preparation and painting may be required for product application quality assurance and to determine compliance with manufacturer's instructions and these Specifications, and may be necessary to resolve field problems attributable to, or associated with, the manufacturer's products furnished under this Contract.

- B. A site visit report shall be prepared and submitted by paint manufacturer's representative documenting compliance with the manufacturer's recommended applications.

1.06 INSPECTION

- A. The Contractor shall give the Engineer a minimum of three days advance notice of the completion of any surface preparation work or start of coating application work.
- B. Before application of the prime coat and each succeeding coat, all surfaces to be painted shall be inspected by the Engineer. Any and all defects or deficiencies shall be corrected by the Contractor before application of any subsequent coating.
- C. Coating applications shall be checked for required MDFT as per these specifications. All coated surfaces failing to meet the MDFT requirements shall be rejected.
- D. For all coatings subject to immersion, full cure must be obtained for the completed system. Consult the coatings manufacturer's written instructions for these requirements. The coatings shall not be immersed for any purpose until completion of the curing cycle.
- E. Inspection by the Engineer of the waiver of inspection of any particular portion of the work shall not be construed to relieve the Contractor of his responsibility to perform the work in accordance with these specifications.

1.07 PAINT DELIVERY AND STORAGE

All materials shall be new and shall be delivered to the project site in unopened containers that plainly show, at the time of use, the designated name, date of manufacturer, color, and name of manufacturer. Paints shall be stored in a suitable protected area that is heated or cooled as required to maintain temperatures within the range recommended by the paint manufacturer.

1.08 PROJECT SITE CONDITIONS

The local agency having jurisdiction may require observance and conformance with EPA Volatile Organic Compound (VOC) restrictions. EPA limits the content of VOC's in painting materials to 2.5 lb/gallon. Information regarding the VOC content of proposed paints will be required during submittals.

1.09 WARRANTY

Contractor shall warrant to the Owner and guarantee the work under this Section against defective workmanship and materials for a period of two years commencing on the date of Final Acceptance of the Work. This warranty does not alleviate the Contractor or supplier of implied or other specified or written warranties for long term product quality.

PART 2 - PRODUCTS

2.01 GENERAL

Products containing lead will not be allowed. Oil shall be pure boiled linseed oil.

2.02 PAINT MATERIALS

- A. Products shall be as manufactured by Tnemec Company, Inc., Kerneos Aluminate Technologies or approved equals.
- B. The following paint products are by Tnemec Company, Inc. and Kerneous, as applicable, and are used for the basis of establishing the desired quality expected for the project.

<u>Product Type</u>	<u>Company</u>	<u>Product Name</u>
Coal Tar Epoxy	Tnemec	Series 46H-413 HB TnemeTar
Cycloaliphatic Epoxy (Non Potable)	Tnemec	Series 104 H.S. Epoxy
MIO/ZINC MCU	Tnemec	Series 1 Omnithane
Polyamide Epoxy	Tnemec	Series 66HS Epoxoline
Aliphatic Polyurethane	Tnemec	Series 1095 EnduraShield
Modified MCU	Tnemec	Series 446 PermaShield MCU
Styrenated Acrylate	Tnemec	Series 156 EnviroCrete
Mortar	Kerneos	Supercoat PG

2.03 COLORS

- A. Provide as selected by the Owner.
- B. Formulate with colorants free of lead, lead compounds, or other materials which might be affected by presence of hydrogen sulfide or other gas likely to be present at the project.
- C. Proprietary identification of colors is for identification only. Any authorized manufacturer may supply matches.

2.04 TESTING GAUGES

- A. Furnish a magnetic type dry film thickness gauge, to test coating thickness specified in mils, as manufactured by:
 - 1. Nordson Corp., Anaheim, CA, Mikrotest
 - 2. Or equal
- B. Furnish an electrical holiday detector, low voltage, wet sponge type to test finish coat, except zinc primer, high-build elastomeric coatings, and galvanizing, for holidays and discontinuities as manufactured by:
 - 1. Tinker and Rasor, San Gabriel, CA, Model M-1
 - 2. Or equal
- C. Furnish a high voltage holiday detector for elastomeric coatings in excess of 25 mils dry film thickness. Unit to be recommended by the coatings manufacturer.

PART 3 - EXECUTION

3.01 PROTECTION OF SURFACES NOT TO BE PAINTED

- A. Mask or otherwise protect hardware, lighting fixtures, switch plates, aluminum surfaces, machined surfaces, couplings, shafts, bearings, nameplates and other surfaces not intended to be painted which cannot be removed.
- B. Provide drop cloths to prevent paint materials from falling on or marring adjacent surfaces.
- C. Protect working parts of mechanical and electrical equipment from damage during surface preparation and painting processes. Openings in motors shall be masked to prevent paint and other materials from entering motors.

3.02 ENVIROMENTAL CONDITIONS

- A. Coatings shall not be applied in temperature exceeding the manufacturer's recommended maximum and minimum allowable, nor under adverse conditions such as dust, smoke-laden atmosphere, damp or humid weather.

3.03 SAFETY

- A. Coating shall be performed in strict accordance with the safety recommendations of the coating manufacturer; with the safety recommendations of the National Association of Corrosion Engineers contained in the publication, Manual for Painter Safety; federal, state and local agencies having jurisdiction.
- B. Ultimate responsibility for safety is Contractor's.

3.04 PREPARATION OF SURFACES

- A. All surfaces to be coated shall be prepared as specified herein and shall be pressure cleaned, free of loose coatings, prepared as indicated below, clean, and dry before coating. Specific surface preparation shall be specified for the individual coating systems.
- B. Steel shall be blasted unless otherwise specified. Blasting shall be done with a centrifugal wheel or compressed air blasting equipment, using proper abrasives to attain an average profile depth of 1.5 mils.

Do not re-use sand or flint abrasives. Short abrasives must be thoroughly clean of contamination before re-use. Blow dust and grit from surface with clean, dry air. Coat within 8 hours or before rust contamination occurs.
- C. All concrete shall have cured for 28 days.

3.05 COATING SYSTEM INDEX

The following is a general index to the coating system description described herein:

System No.	Title
1	Exterior of New Concrete
2	Interior of New Valve Vaults, Air Release Structures
3	Exposed Metal Highly Corrosive
4	Submerged Metal - Domestic Sewage
5	Exposed Metal and DIP - Moderate Corrosive Conditions
6	Exposed Fiberglass and PVC Piping
7	UV Exposed Concrete

3.06 COATING SYSTEMS

A. System No. 1 Exterior of New Concrete Structures, Valve Vault, Wet Well

Surface Preparation: All curing oils, form oils, laitance, soluble salts and loose concrete must be removed. Concrete must be dry and thoroughly clean before coatings.

Prime Coat: None required.

Top Coat: Coal tar epoxy at 8.0 mils DFT per coat.

MDFT: 16 mils DFT for two-coat system. Allow minimum of 24 hours drying time between coats.

B. System No. 2 – Interior of New Valve Vaults, Air Release Structures

Surface Preparation: Concrete: All curing oils, form oils, laitance, soluble salts and loose concrete must be removed in accordance with SSPC-SP13(Surface Preparation of Concrete). Concrete must be dry and thoroughly clean before coatings. Concrete shall be cured 28 days, brush off blast. Refer to the Manufacturer's Product Data Sheet for ICRI CSP Requirement.

Filler/Surfacer: Concrete substrate surface with cracks and/or voids greater than ½" in depth or width or areas where underlying aggregate has been exposed shall be patched with filler and surfacer. Material shall be applied in accordance with the manufacturer's application instructions.

Prime Coat: Tnemec Series 104 HB Epoxy, 8.0 – 10.0 mils DFT.

Top Coat: Tnemec Series 104 HB Epoxy, 8.0 – 10.0 mils DFT.

MDFT: Minimum 12.0 mils MDFT cycloaliphatic epoxy system. Time between coats and method of application shall be as per manufacturer's written instructions.

Color: First Coat – Beige
Second Coat – Gray

C. System No. 3 – Exposed Metal – Highly Corrosive

Surface Preparation: Abrasive blast clean to an SSPC-SP10 (near white metal).
 Prime Coat: Series 1 Omnithane at 2.5 – 3.5 mils DFT.
 Intermediate Coat: Series 446-1223 Red PermaShield MCU at 6.0 – 8.0 mils DFT.
 Top Coat: Series 446-1222 Gray PermaShield MCU at 6.0 – 8.0 mils DFT.
 MDFT: 14.5 mils DFT for three-coat system.
 Color: As selected by Owner from manufacturer's standard available colors.

D. System No. 4 – Submerged Metal – Domestic Sewage, Pump Station Wet Well Piping

Surface Preparation: Abrasive blast or centrifugal wheel blast, SSPC-SP5.
 Prime Coat: Series 1 Omnithane at 2.5 – 3.5 mils DFT.
 Intermediate Coat: Series 446-1223 Red PermaShield MCU at 6.0 – 8.0 mils DFT.
 Top Coat: Series 446-1222 Gray PermaShield MCU at 6.0 – 8.0 mils DFT.
 MDFT: 14.5 mils DFT for three-coat system.
 Color: As selected by Owner from manufacturer's standard available colors.

E. System No. 5 – Exposed Metal and DIP – Moderate Corrosive Conditions, Exterior of Tanks, Steel Supports, Valve Pit Piping, Valves, etc.

Surface Preparation: Abrasive blast, SSPC-SP7 (brush-off blast clean). Or Power Tool Clean, SSPC-SP3. Must have a 1.5 mil Profile.
 Spot Prime: Series 66HS Epoxoline at 4.0 – 6.0 mils DFT.
 Prime Coat: Series 66HS Epoxoline at 3.0 – 5.0 mils DFT.
 Top Coat: Series 1095 EnduraShield at 3.0 – 5.0 mils DFT.
 MDFT: 11.0 mils DFT for three coats.

F. System No. 6 – Exposed Fiberglass and PVC Piping

Surface Preparation: Hand or Power Tool Cleaning, SSPC-SP2/SSPC-SP3 Must have a 1.5 mil Profile.
 Prime Coat: Series 66HS Epoxoline at 3.0 – 5.0 mils DFT.
 Intermediate Coat: Series 66HS Epoxoline at 3.0 – 5.0 mils DFT.
 Top Coat: Series 1095 EnduraShield at 3.0 – 5.0 mils DFT.
 MDFT: 11.0 mils DFT for three coats.

G. System No. 7 – UV Exposed Concrete, Including Pipe Saddles and Interior of Pump Station Walls

Surface Preparation: Concrete: All curing oils, form oils, laitance, soluble salts and loose concrete must be removed. Concrete must be dry and thoroughly clean before coatings.

Prime Coat:	Series 1026 Enduratone at 2.0 – 3.0 mils DFT.
Top Coat:	Series 1026 Enduratone at 2.0 – 3.0 mils DFT.
MDFT:	Minimum 4.0 mils of DFT for two-coat Acrylic system. Time between coats and method of application shall be as per manufacturer's written instructions.

3.07 UNIDENTIFIES SURFACES

Any surfaces not specifically named in the schedule and not specifically accepted shall be prepared, primed and coated in the manner and with material consistent with these Specifications. The Engineer shall select which of the manufacturer's products, whether the type is indicated herein or not, shall be used for such unnamed surfaces. The painting shall be done within the scope of the contract.

3.08 WORKMANSHIP

- A. On metal surfaces apply each coat of paint at the rate specified by the manufacturer to achieve the minimum dry mil thickness required. If material has thickened or must be diluted for application by spray gun, the coating shall be built up to the same film thickness achieved with undiluted material. One gallon of paint as originally furnished by the manufacturer shall not cover a greater area when applied by spray gun than when applied unthinned by the application of an additional coat(s). On masonry, application rates will vary according to surface texture; however, in no case shall the manufacturer's stated coverage rate be exceeded. On porous surfaces, it shall be the painter's responsibility to achieve a protective and decorative finish either by decreasing the coverage rate or applying additional coats of paint.
- B. All safety equipment shall be painted in accordance with OSHA Standards as approved.
- C. Materials shall be mixed in proper containers of adequate capacity. All materials shall be thoroughly stirred before use and shall be kept stirred while using. No unauthorized thinners or other materials shall be added to any paint.
- D. Only skilled painters shall be used on the work and specialists shall be employed where required.
- E. Steel members, metal castings, mechanical and electrical equipment and other metals which are shop primed before deliver at the site will not require a prime coat on the job. All piping and other bare metals to be painted shall receive one coat of primer before exposure to the weather, and this prime coat shall be the first coat as specified in the painting schedule.
- F. Finish surfaces shall not show brush marks or other irregularities. Undercoats shall be thoroughly and uniformly sanded with No. 00 sandpaper or equal to remove defects and provide a smooth, even surface.

- G. Before final acceptance of the work, all damaged surfaces of coating shall be cleaned and repainted as directed by the Engineer.

3.09 APPLICATION SCHEDULE

- A. System No. 1 – Exterior of New Concrete – This system shall be used on the exterior of all new pre-cast concrete valve vaults, manholes, and constructed wetwell.
- B. System No. 2 – Interior of New Valve Vaults and Air Release Structures – This system shall be used in the interior of all new concrete valve vaults. Pre-cast concrete shall be coated prior to installation. Coating shall extend through the pre-cast joints.
- C. System No. 3 – Exposed Metal – Highly Corrosive – This system shall be used on all metal surfaces exposed to weather including equipment, conduits, piping, exposed metal frames and elsewhere as scheduled. Galvanized piping and aluminum hatches do not require painting.
- D. System No. 4 – Submerged Metal – Domestic Sewage, Pump Station Wet Well Piping
This system shall be used for wet well piping, wet well ferrous metals.
- E. System No. 5 – Exposed Metal and DIP – Moderate Corrosive Conditions, Exterior of Tanks, Steel Supports, Valve Pit Piping, Valves, etc. – This system shall be used for interior and exterior piping, structural steel and interior dry pit metals.
- F. System No. 6 – Exposed Fiberglass and PVC Piping – This system shall be used on UV exposed fiberglass and PVC piping.
- G. System No. 7 – UV Exposed Concrete – This system shall be used on the headworks structure area as specified in the contract drawings.

3.10 CLEANUP

- A. It shall be the responsibility of the Contractor to collect and dispose of property, all waste materials from the site in accordance with all requirements of the federal, state, and local environment protection agencies.
- B. At completion of the work, remove all paint where it has been spilled, splashed, splattered, sprayed, or smeared on all surfaces, including glass, light fixtures, hardware, equipments, painted and unpainted surfaces.
- C. After completion of all paintings, the Contractor shall remove from the job site all painting equipment, surplus materials and debris resulting from this work.

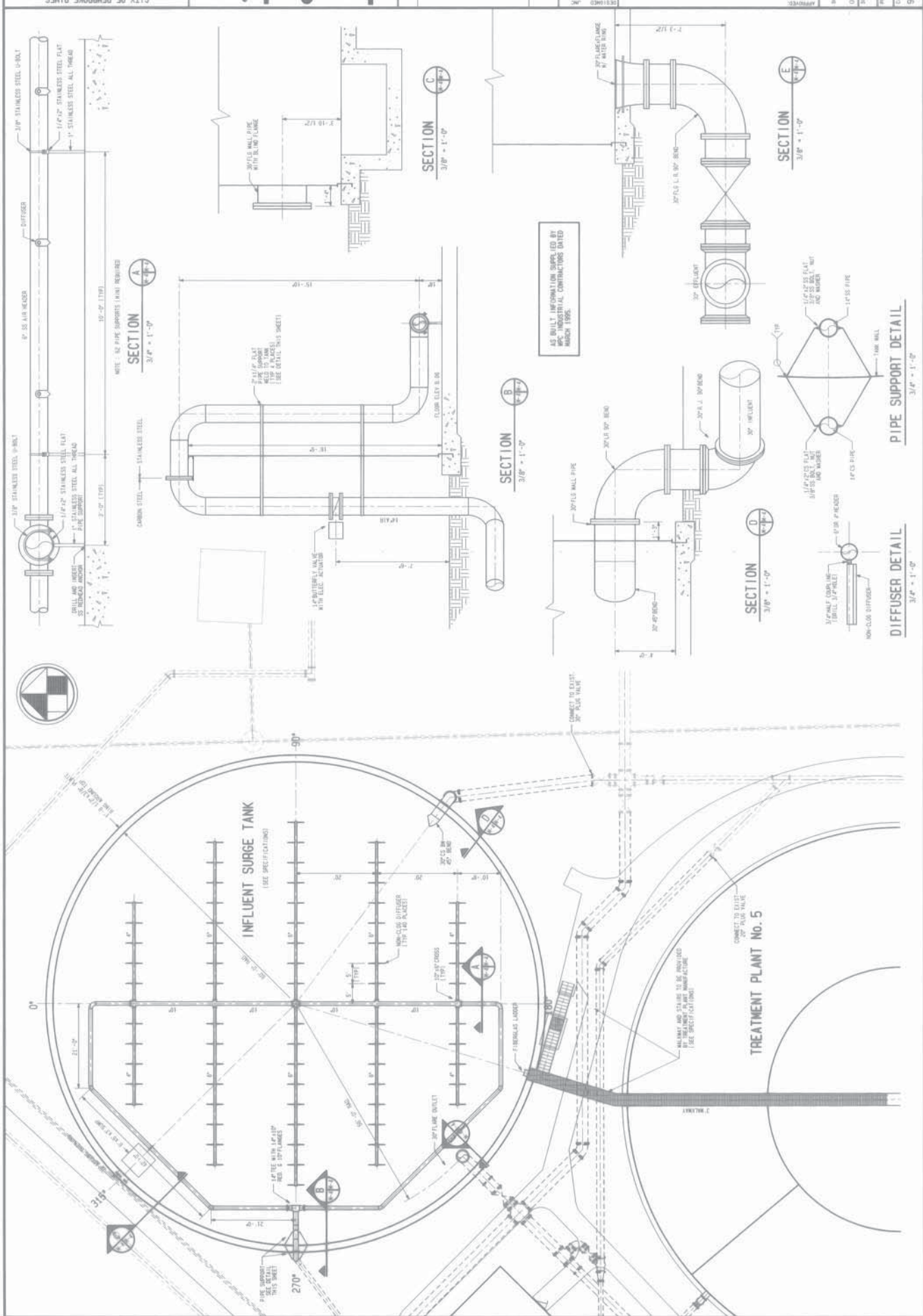
3.11 MANUFACTURER'S SERVICE

Furnish paint manufacturer representative to visit job site at intervals during surface preparation and painting as may be required for product application quality assurance, and to determine compliance with manufacturer's instructions and these specifications, and as may be necessary to resolve field problems attributable to, or associated with, manufacturer's products furnished under this Contract.

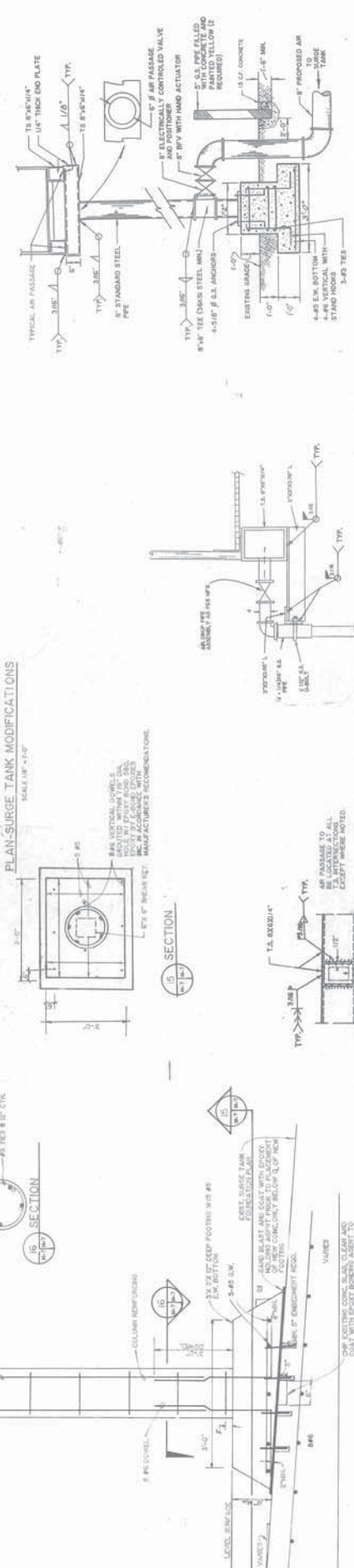
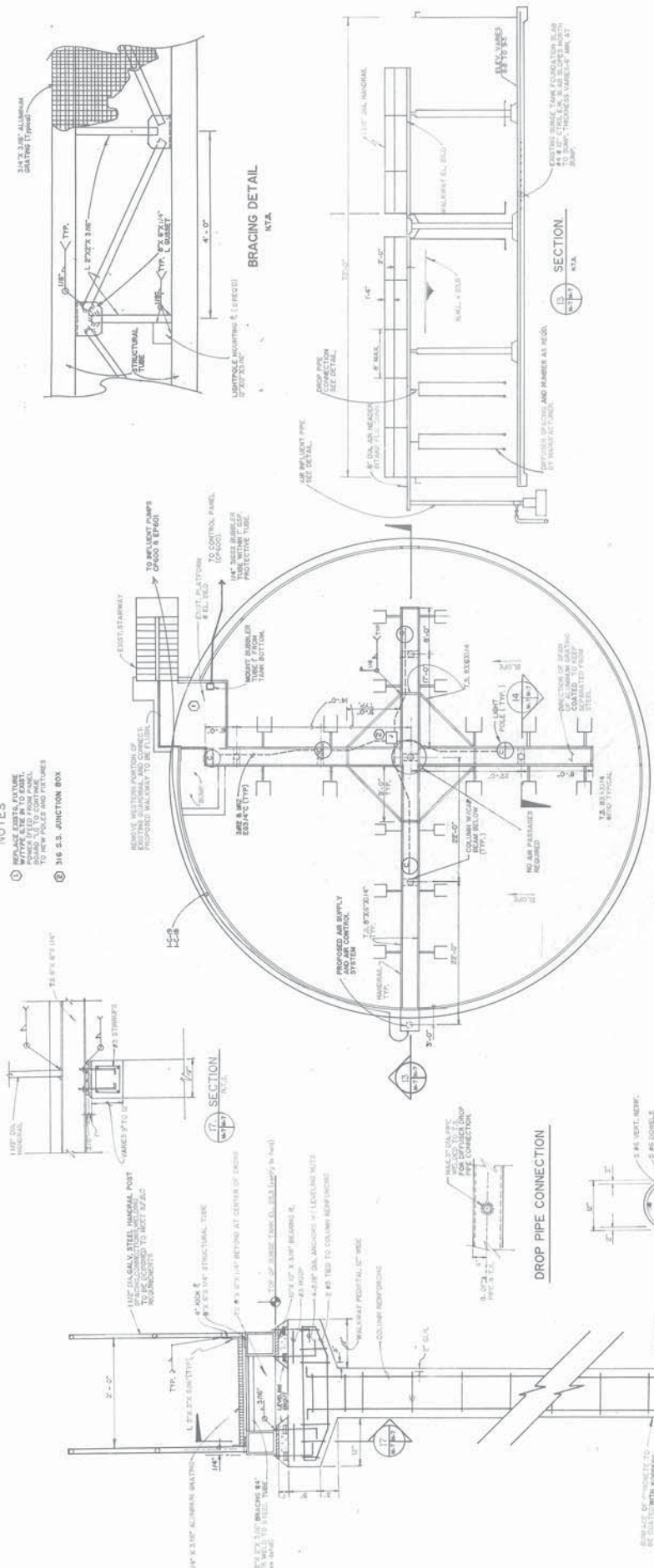
3.12 COATING SYSTEM DATA SHEET

To be included with submittal. See form on next page.

END OF SECTION







14 SECTION

TYPICAL AIR PASSAGE
N.T.A.

DROP PIPE SUPPORT DETAIL
N.T.A.

AIR INFLUENT DETAIL
N.T.S.

AS BUILT