



Utility Engineering Consultants, *LLC*

Phone : 205.951.3838
FAX : 205.951.3839
WEB : www.uecllc.com

130 Southcrest Drive, Suite 100
Homewood, AL 35209
P.O. Box 19218
Birmingham, Alabama 35219

December 11, 2024

Town of Town Creek
16000 Main Street
Town Creek, AL 35762

**RE: ADDENDUM NO. 1
 TOWN OF TOWN CREEK
 PROPOSED TOWN CREEK WATER INFRASTRUCTURE IMPROVEMENTS
 PROJECT
 CONTRACT NO. 1 – TOWN CREEK WATER TANK REHABILATION PROJECT
 DWSRF PROJECT NO. FS010347-01**

All Contractors shall acknowledge receipt of Addendum No. 1 for the above referenced job by signing and returning this statement by email: tthomas@uecllc.com or fax to (205) 951-3839.

Contractor: _____

Received by: _____

Date: _____



Utility Engineering Consultants, LLC

Phone : 205.951.3838
FAX : 205.951.3839
WEB : www.uecllc.com

130 Southcrest Drive, Suite 100
Homewood, AL 35209
P.O. Box 19218
Birmingham, Alabama 35219

December 11, 2024

Town of Town Creek
16000 Main Street
Town Creek, AL 35762

**RE: ADDENDUM NO. 1
TOWN OF TOWN CREEK
PROPOSED TOWN CREEK WATER INFRASTRUCTURE IMPROVEMENTS
PROJECT
CONTRACT NO. 1 – TOWN CREEK WATER TANK REHABILITATION PROJECT
DWSRF PROJECT NO. FS010347-01**

The changes, modifications and/or additions covered by the set forth in this Addendum No. 1 shall become part of and be incorporated in the Specifications, Contract Documents and Bid Documents for the above referenced Project.

CLARIFICATION

- The Exterior of the Tank shall be Sand Blasted and Coated.
- The Interior of the Tank shall be Cleaned and Touch – Up Coating where applicable.
- A pay for a Containment Drape System has been included in the Proposal Form should one be requested.
- The cost for the removal and reinstallation of the Antennas attached to the Tank will be the responsibility of the company that own the Antennas.
- Their will be a third party inspector. We have not decided who that person/firm will be.
- Water and Power is available at the Tank Site.
- Our records indicate the Tank does not contain any Lead.
- Lettering shall be replaced on one side. This cost is incidental to the work.
- Saturday and Sunday work will be allowed.

SPECIFICATION

- The Proposal Form, Section 01010, Section 13202 and Section 13203 should be removed and replaced with the attached.

This Addendum No. 1 shall be made a part of your set of Construction Contract Documents and Specifications. Acknowledgment of receipt of Addendum No.1 shall be noted in the Bid for Unit Price Contracts Section of this contract.

UTILITY ENGINEERING CONSULTANTS, LLC

Roderick A. Hawkins
RAH/tt

**ADDENDUM #1
12/11/2024
Proposal Form**

**PROPOSED TOWN CREEK WATER INFRASTRUCTURE IMPROVEMENTS PROJECT
CONTRACT NO. 1
TOWN CREEK WATER TANK REHABILITATION PROJECT
DWSRF PROJECT NO. FS010347-01
CONTRACT NO. TC24 179**

Contractor's Name _____

License No. _____

Item No.	Description	Estimated Quantity	Bid Unit Price	Bid Price
1.	Clean and Coat Exterior of the Town Creek 250,000 Gallon Elevated Tank in accordance with the Specification Documents in Section 13202 and Section 13203 Furnish and Install Per LS	1 LS		
2.	Pressure Wash, Clean and Apply Touch Up Coat on Tank Pitting is Prevalent Per LS	1 LS		
3.	Provide all Materials, Labor, and Equipment needed to provide containment for the 250,000 Gallon Elevated Tank noted in the Appendix. Furnish and Install Per LS	1 LS		
4.	Remove Old Screen Structure and Install New Vent Screen and Shield Per LS	1 LS		
5.	Tack Weld (Locations Where Needed) Per EA	20 EA		
6.	Containment Drape Per LS	1 LS		
7.	Provide Touch Up Coat for Interior (Where Needed at Tack Weld Sites and Areas Where the Vent Screen Removed and Replaced) Per LS	1 LS		
TOTAL OF ALL BIDS				
TOTAL BASE BID IN WRITTEN FORM:				

ADDENDUM #1
12/11/2024

SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.1 WORK UNDER THIS CONTRACT

- A. Clean and Coat Exterior of the Following Tank along with repairs and additions:
 - 1. Town Creek Elevated Tank, 88 Feet High, 250,000 Gallon Capacity.
- B. Work to be performed, but not limited to, shall be in accordance with Contract Drawings and Specifications prepared by Utility Engineering Consultants, LLC, 130 Southcrest Drive, Suite 100., Homewood, Alabama 35209 Phone (205) 951-3838.

1.2 LICENSES AND PERMITS

- A. The Contractor shall be responsible for securing from the Local Municipalities all permits, licenses and for paying all taxes required to perform the Contract work.
- B. The Contractor shall be responsible for compliance with all Federal, State and local laws and ordinances regarding licenses and permits.

1.3 PROTECTION OF THE OWNER, WORKMEN AND THE PUBLIC

- A. The Contractor is responsible for reading the General Conditions related to safe precaution of the work.
- B. The Engineer and the Owner shall not be required to act as Safety Engineers or Safety Supervisors.
- C. The Contractor is solely responsible for the safety prosecution of the work.
- D. It is the Contractor's responsibility to secure advice from the Safety Officer from his insurance company.

1.4 CONTRACTOR'S EXPERIENCE AND RESPONSIBILITY

- A. The Contractor must be experienced in constructing the work.
- B. The Contractor must have experience in all phases of the work.
- C. The Contract work requires that an experienced Superintendent shall be on the job site at all times during the prosecution of the work.
- D. The Contractor or his Superintendent shall be responsible for the work of his Subcontractors at all times.

- E. Interior shall be Pressured Wash, Cleaned and Interior Touch Up Paint applied in areas that are pitted and affected by Weld Patterns. These surfaces must be prepped prior to coating being applied.

1.5 PRECONSTRUCTION CONFERENCE

A preconstruction conference will be held with the successful Contractor and all subcontractors prior to the start of construction at which time all shall be apprized of their responsibilities and obligations regarding coordination of work contained in the Contract Documents.

1.6 OWNER PURCHASE OF MATERIALS

The Owner reserves the right to issue purchase orders and pay for major material purchases. The Contractor shall order such materials in the name of the Owner for delivery in care of the Contractor. Orders shall be coordinated with the Owner. The purchase price of the materials, plus applicable taxes, shall be deducted from the total payment due the Contractor for such an item. Items purchased by the Owner, but not used in the work, shall become the property of the Owner.

1.7 AGREEMENTS MADE BY CONTRACTOR WITH PRIVATE PROPERTY OWNERS

- A. The Agreements made by the Contractor between the private property owners, utilities and himself shall be in writing.
- B. The Contractor shall satisfy the terms of the Agreements and acquire written approval for work performed on the private property and with utilities prior to final payment being made by the Owner.
- C. The Contractor shall provide written approvals at the final inspection.
- D. Should the Contractor not produce the written Agreements, a sum equal to the work required to satisfy the Agreement shall be retained until written Agreement may be provided.

1.8 CONSTRUCTION DEBRIS

- A. Fuels, oils, bitumen, grease and other construction waste products shall not be discharged onto roads or into the storm drainage system or stream beds.
- B. Excess soils, pavement, concrete and rock shall be hauled from the construction site.
- C. No excavated soils shall be deposited in streams or drainage ways.

1.9 REGULATORY REQUIREMENTS

- A. Secure from the office of the Inspection Services, Division of the Public Works Departments of the Local Municipalities, Information For Regulatory Licenses, and Permits required.
- B. Obtain permits and licenses from each Municipality.

- C. Requirements contained in each individual authority's permit shall become the provisions and requirement for completion of the work.
- D. The Code Of Federal Regulations-Title 49, Part 191, Part 192, Part 199 and Part 40 shall be the authority standard. When a conflict occurs between the standards set forth in these Specifications and those included in the Code Of Federal Regulations-Title 49, Part 191, Part 192, Part 199 and Part 40, the Code Of Federal Regulations-Title 49 shall be the written direction, provisions and requirements for completion of the work.

1.10 NOISE POLLUTION AND EQUIPMENT OPERATIONS

- A. The Contractor shall operate construction equipment during the daylight hours only.
- B. No heavy machinery shall work in residential neighborhoods during the night time hours.
- C. Contractor shall secure his equipment in a suitable location out of the flow of traffic while it is not in operation.
- D. The Contractor shall maintain access to and from the local establishments during the daylight/night time hours.
- E. The local establishments shall have means to enter onto their property from the roadway at all times.

ADDENDUM #1
12/11/2024
SECTION 13202

TNEMEC TANK COATING

PART 1- GENERAL

1.1 SCOPE

- A. This specification covers repair, preparation of surfaces, performance and completion of painting of exterior surface specified on the following structures:
 - 1. One Elevated Storage Tank 250,000 Gallon Capacity located in Town Creek, Alabama.
- B. The CONTRACTOR shall be responsible for all costs associated with painting and repair operations as outlined in these specifications.
- C. The Water System can maintain system pressure while tank is being coated. The Tank can be valved off.
- D. Interior shall be Pressure Washed and Touch Up Coating shall be applied if needed.

1.2 WORK INCLUDED

- A. Preparation of surfaces which are to receive finishes.
- B. Disposal of blasting debris
- C. Tank repairs and modifications
- D. Finish surfaces
- E. Testing and cleaning

1.3 RELATED WORK AND APPLICABLE REQUIREMENTS SPECIFIED ELSEWHERE

Bidding Requirements, Contract Form and Conditions of the Contract and General Requirements shall apply to all work included in this section.

1.4 DOCUMENTS AND STANDARDS

- A. Coating manufacturers' printed instructions.
- B. American Society of Testing Materials
 - 1. ASTM B117 Salt Spray (Fog)
 - 2. ASTM D149 Dielectric Strength
 - 3. ASTM D4060 Abrasion
 - 4. ASTM D4541 Adhesion

<https://uecllc.sharepoint.com/sites/UECLLC/Shared%20Documents/UEC/!SPECs/Town%20Creek/TC%2024%20179/17%2013202.docx>

5. ASTM D4585 Humidity
 6. ASTM G53 QUV Exposure
 7. ASTM D 4141 Exterior Exposure (EMMAQUA)
- C. American National Standards Institute/National Sanitation Foundation
1. ANSI/NSF Standard 61 Listed Drinking Water System Components -Health Effects
- D. American Water Works Association
1. AWWA Standard C652-92 Disinfection
 2. AWWA Standard D100-05 Welded Steel Tanks For Water Storage
 3. AWWA Standard D102-14 Painting Steel Water Storage Tanks
- E. Code of Federal Regulations
1. 29 CFR 1910 Occupational Safety and Health Standards (General Industry Standards)
 2. 29 CFR 1910.134 Respiratory Protection
 3. 29 CFR 1910.1020 Access to Employee Exposure and Medical Records
 4. 29 CFR 1926 Safety and Health Regulations for Construction (Construction Industry Standards)
 5. 40 CFR 50 National Primary and Secondary Ambient Air Quality Standards
 6. 40 CFR 268 Land Disposal Restrictions
 7. All other Applicable State and Federal Regulations
- F. National Institute for Occupational Health and Safety
- G. Occupational Safety and Health Administration
- H. Steel Structures Painting Council (SSPC)
1. SSPC-SP 1 Solvent Cleaning
 2. SSPC-SP 2 Hand Tool Cleaning
 3. SSPC-SP 3 Power Tool Cleaning
 4. SSPC-SP 6 Commercial Blast Cleaning
 5. SSPC-SP 10-63 Near White Blast Cleaning
 6. SSPC WJ 4 Light Cleaning

PART 2 – MATERIALS

2.1 LITY OF COATINGS

- A. paints and paint products of the *Tnemec Company, Inc.*, mentioned in the following specifications are set up as standards of quality. The usual "or equal" clause shall apply. No request for substitution will be considered which decreases the film thickness and/or the number of coats to be applied, or which offers a change from the generic type of coating specified. Request for substitution shall contain the following:
1. ll Name of Each Product
 2. riptive Literature
 3. rections For Use
 4. ric Type
 5. Volatile Content by Volume
 6. ormance Data Listed in Section 3.8.

7. fe Cycle Cost Analysis based on actual case histories of projects completed with the Proposed Coating System.
- B. Bidders desiring to use paints other than those specified shall submit their proposal based on the specified materials. Submittals shall include a side by side comparison of the performance attributes of the proposed materials as compared to the specified coatings. In no case will the request be considered unless received, in writing, ten days prior to the bid opening date.

2.2 CERTIFICATIONS

Protective coatings for interior wet application shall be listed by NSF International as approved for potable water contact in accordance with NSF/ANSI/CAN 600.

2.3 SHIPPING, STORAGE AND HANDLING

- A. 1 paints shall be properly prepared by the manufacturer and delivered to the site for field painting in the original unbroken containers with manufacturers', label plainly printed thereon. Type of material to be applied at each location shall be submitted to the Engineer with the manufacturer's written recommendation of the type paint for each item to be painted.
- B. 1 coatings shall be stored in an enclosed structure to protect them from weather and excessive heat or cold. Flammable coatings must be stored to conform to City, County, State and Federal safety codes for flammable coatings or paint materials. At all times coatings shall be protected from freezing.

2.4 COATING SYSTEM

Following surface preparation, all interior and exterior surfaces shall be coated as hereinafter specified. The primer shall be applied in accordance with the recommendations of the manufacturer and not more than eight hours after surface preparation

2.5 ONE ELEVATED STORAGE TANK (250,000 GALLON CAPACITY)

A. Interior Surfaces – (NOT USED)

1. Surface Preparation: Remove all oil, grease and other soluble contaminants in accordance with SSPC-SP 1 Solvent Cleaning. All surface shall be abrasive blast cleaned in accordance with SSPC-SP 10 Near White Blast Cleaning. Surface profile shall be 1.5 - 2.5 mils. All surfaces shall be clean and dry. All surface s shall be primed within eight hours of surface preparation and/or before flash rusting of the surface occurs. Should either condition exist the substrate shall be re-blasted to achieve the desired level of cleanliness.
2. Coating System Certification: The coating system primer and finish shall meet the health effects requirements of NSF/ANSI/CAN 600 according to the requirements of NSF/ANSI/CAN 61.
3. Primer: All surfaces shall receive one coat of Tnemec Series 91 H2O Hydro-Zinc applied at a rate to achieve 2.5 - 3.5 mils DFT.
3. Stripe Coat: All weld seams, ladders, roof beams, as well as any other difficult to coat

<https://uecllc.sharepoint.com/sites/UECLLC/Shared%20Documents/UEC/!SPECS/Town%20Creek/TC%2024%20179/17%2013202.docx>

surface shall receive one stripe coat of Tnemec Series N140-1255 Pota-Pox Plus applied, by brush, at a rate to achieve 2.0 – 4.0 mils DFT.

5. Finish: Tnemec Series 22 Epoxoline applied at a rate to achieve 25.0 – 35.0 mils DFT.
6. Total Dry Film Thickness: The total dry film thickness shall be not less than 27.5 mils.

B. Exterior Surface

1. Surface Preparation:

a. Remove all oil, grease and other soluble contaminants in accordance with SSPC-SP 1 Solvent Cleaning. All surface shall be abrasive blast cleaned in accordance with SSPC-SP 10 Near White Blast Cleaning. Surface profile shall be 1.5 - 2.5 mils. All surfaces shall be clean and dry. All surfaces shall be primed within eight hours of surface preparation and/or before flash rusting of the surface occurs. Should either condition exist the substrate shall be re-blasted to achieve the desired level of cleanliness.

b. Containment: The Contractor shall install a containment system meeting the requirements of Class 3A as specified in the SSPC Guide 6 (12) “Guide for Containing Debris Generated During Paint Removal Operations”. Assessment of the containment system will be conducted in accordance with SSPC Guide 6 Section 5.5. All testing required will be paid by the Contractor. The standards and references listed in Section 3A of SSPC Guide 6 (92) shall form and be part of these specifications. The Contractors shall utilize SSPC Guide 6 for the development of the containment system. All workers shall be protected in accordance with all applicable OSHA Standards.

2. Primer: All surfaces shall receive one coat of Tnemec Series 91 H20 Hydro-Zinc applied at a rate to achieve 2.5 - 3.5 mils DFT.3. Full Prime: All surfaces shall receive a full prime coat of Tnemec 135 Chembuild applied at a rate to achieve 2.0 – 3.0 mils DFT.

3. 1st Intermediate: Tnemec Series 20-1255 Pota-Pox applied at a rate to achieve 2.0 – 3.0 mils DFT.

2nd Intermediate: Tnemec Series 1075 Endura-Shield II applied at a rate to achieve 2.0 – 3.0 mils DFT.

4. Finish: Tnemec Series 700 HydroFlon applied at a rate to achieve 2.0 - 3.0 mils DFT.

5. Lettering / Logo: All lettering and logos are to be applied using two coats of Tnemec Series 700 HydroFlon applied at a rate to achieve 2.0 - 3.0 mils DFT per coat. (If Applicable)

2.4 LETTERING AND TARGET MARKINGS

A. All tank lettering shall be replaced with matching lettering to be approved by Owner and Engineer if applicable.

B. Target markings shall be installed and painted on exterior of tank with Tnemec Series 700 HydroFlon applied at a rate to achieve 2.0 – 3.0 mils DFT.

2.5 DEBRIS DISPOSAL

A. Disposal of Debris: Until testing demonstrates otherwise, all debris collected by the

<https://uecllc.sharepoint.com/sites/UECLLC/Shared%20Documents/UEC/!SPECs/Town%20Creek/TC%2024%20179/17%2013202.docx>

containment system will be considered a hazardous waste and shall be handled and disposed of in accordance with federal and state regulations. SSPC Guide 7 " Guide for Disposal of Lead Contaminated Surface Preparation Debris" shall be considered as part of this specification. The Contractor shall pay for all testing required to determine if the collected material is hazardous.

- B. All debris shall be disposed of off-site in accordance with all Local, State and Federal Regulations.

PART 3 – APPLICATION

3.1 GENERAL

- A. Prepare surface and touch-up welds, burned and abraded areas on primed steel with specified primer before applying field coats.
- B. The painter shall mix, thin and apply each coating at the rate and manner specified by the manufacturer's printed instructions. Deficiencies in film thickness shall be corrected by the application of an additional coat(s) of paint.
- C. All coatings shall be applied in strict accordance with the applicable manufacturer's current printed product data sheet(s) and container labels. Coatings shall not be applied above or below the minimum and/or maximum surface temperatures as stated on the product data sheet(s) and shall not be applied to wet or damp surfaces, in rain, snow, fog or mist. Surface temperature must be at least 5°F above the dew point.
- D. The exterior intermediate and finish coat shall be applied by brush or roller. All stripe coats shall be applied by brush.
- E. Painting shall be completed well in advance of the probable time of day when condensation will occur and/or the surface temperature is expected to drop below the minimum listed on the applicable product data sheet(s).
- F. Finish coats shall be uniform in color and sheen without streaks, laps, runs, sags or missed areas.
- G. The manufacturer's recommended curing time shall elapse before the next coat is applied. Adequate ventilation shall be provided for proper drying of paints on interior tank surfaces. A minimum of 7 days following the application of the final coat on the interior surfaces shall be allowed before the tank is flushed, disinfected or filled with water.
- H. Clean-Up: All cloths and waste that might constitute a fire hazard shall be placed in closed metal containers or destroyed at the end of each day. Upon completion of the work, all staging, scaffolding, and containers shall be removed from the site and/or

destroyed in an approved and legal manner. Paint spots, oil, or stains upon adjacent surfaces and floors shall be completely removed, and the entire job left clean and acceptable to the Engineer.

3.2 EXISTING UTILITIES, STRUCTURES AND PROPERTIES

It shall be the responsibility of the contractor to locate and avoid damage to any and all existing water, gas, sewer, electric, telephone, and other utilities, structures, or appurtenances. The Contractor shall repair or pay for all damages caused by his operations or his personnel to existing utilities, structures, appurtenances, or properties, either below ground or above ground and shall settle in full all damage suites which may arise as a result of his operations.

3.3 VENTILATION

It is essential that the solvent vapors released during and after application of coatings be removed from the tank. During coating application, the capacity of ventilating fans shall be at least 300 cfm per gallon of coating applied per hour. Continuous forced ventilation at a rate of at least one complete air change per 4 hours shall be provided for at least 7 days after coating application is completed. Air shall be exhausted from the lowest portions of the tank with the top openings kept open and clear. A minimum of seven days (manufacturers printed instructions shall be followed for cure times at various temperatures) following application of the final coat on the interior shall be allowed before the tank is sterilized or filled with water.

3.4 SAFETY

- A. First entry of the tank shall be a confined space entry and Contractor shall comply with all OSHA regulations regarding confined space entry.
- B. Contractor shall furnish two (2) of each of the following for use by the Owner's representatives during cleaning and coating activities:
 - 1. Two (2) OSHA approved safety devices for ladders.
 - 2. Two (2) NIOSH approved full face respirators with replacement cartridges.
Respirators shall include a nose cup to reduce lens fogging.
- C. Contractor shall provide sufficient lighting of the work area for both safety and coating/surface preparation inspection activities.

3.5 DAILY LOG

- A. The Contractor shall keep a daily log in which he shall record the following information shall be recorded:
 - 1. Air Temperature: Air temperature readings shall be taken at intervals throughout

the days work. Readings shall be taken at the start of the mornings work, mid day and afternoon. Should environmental conditions change, additional reading shall be taken to assure that coatings are being applied under the conditions as outlined by the coatings manufacturer.

2. Surface Temperature: Surface temperatures shall be taken in areas where work is being performed. Surface temperature shall be that as specified by the coatings manufacturer.
3. Material Temperature: Material temperature reading shall be taken prior to the application of the paint.
4. Relative Humidity: Relative humidity readings shall be taken at intervals throughout the days work. Readings shall be taken at the start of the mornings work, mid day and afternoon. Should environmental conditions change, additional reading shall be taken to assure that coatings are being applied under the conditions as outlined by the coatings manufacturer.
5. Dew Point: Dew point readings shall be taken at intervals throughout the days work. Readings shall be taken at the start of the mornings work, mid day and afternoon. Should environmental conditions change, additional reading shall be taken to assure that coatings are being applied under the conditions as outlined by the coatings manufacturer.
6. Blast Profile: Following blasting operations, the Contractor shall take and record the depth of the blast profile. Blast profile measurements shall be taken using Testex X Course Replica Tape. Replica Tape shall be included in the daily log.
7. Detail or Work Performed During the Day: Area where work was performed and the extent of the work performed shall be included in the daily log.

3.6 TESTING EQUIPMENT

- A. In addition to the equipment required to take measurements which will be included in the daily log, The Contractor shall have on the project site the following testing equipment. Equipment shall be in calibration and proper working order.
- B. Measurement of Temperature, Humidity, Dew Point and Surface Temperature. On days when painting is being performed, the Contractor shall monitor and record as outlined below the ambient climatic conditions for the exterior of the tank:
 1. Air temperature, humidity and dew point at two (2) locations and surface temperature at four (4) different locations, shall be measured and recorded by the Contractor during the application of all paints in order to prevent application over moisture and monitor cure times for each coat.
 2. Air temperature, humidity, dew point, and surface temperature shall be measured and monitored by the Contractor continuously during the final cure of the finish coat.
 3. For the purpose of monitoring the above conditions, the Contractor shall install two (2) Dickson Temperature, Humidity and Dew Point Recorders, Model THDx with a temperature range of -20°F to 120°F. Both instruments shall be furnished with NBS Traceable Calibrations, sufficient quantity of 24 hours charts and pens, one 50 foot and one 100 foot probe extensions. The Contractor shall also furnish four

(4) PTC/312F Surface Thermometers.

- C. High Voltage Holiday Detection Equipment: Interior surfaces, following a minimum of 96 hours cure, shall be holiday detected in accordance with NACE SP0188-99 high voltage holiday detection. Holiday detector shall be a Tinker & Razor model AP/W Holiday D or equal. Areas found to have holidays shall be marked and repaired in accordance with the paint manufacturer's instructions. The Engineer shall be notified of time of testing so that he might be present to witness testing.

3.7 GUARANTEE AND ANNIVERSARY INSPECTION

- A. In accordance with AWWA D102-14, Section 5.2, all work shall be warranted for a period of two years from the date of completion.
- B. The Owner will notify the Contractor at least 30 days prior to the anniversary date and shall establish a date for the inspection. The tank will be drained and the Owner's representative and the Contractor shall thoroughly inspect all surfaces both inside and out. Any defects in the coating system shall be repaired by the Contractor at no additional cost to the Owner. Should a failure occur to 25% of the painted surface, either interior or exterior, the entire surface shall be cleaned and painted in accordance with these specifications.

3.8 PRODUCT PERFORMANCE CRITERIA

- A. Organic Zinc Rich Urethane Primer (Interior Primer) – (NOT USED)
1. Generic Type: Organic Zinc Rich Urethane Primer
 2. Special Qualifications: Certified in accordance with ANSI/NSF Std 61 for contact with potable water in tanks of 1,500 gallons capacity or greater.
 3. Solids By Volume: 63%
 4. Zinc Content: 83% by weight.
 5. Salt Spray (Fog): ASTM B 117, Scribed Panels, 50,000 hours exposure.
 6. Adhesion: ASTM 4541 Elcometer Adhesion.
 7. Humidity: ASTM D 4585. 4,000 hours exposure.
 8. Cathodic Disbondment: ASTM G8, Method A. Days Exposure
 9. Immersion: ASTM D 870 Potable Water Immersion. 7 years immersion.
 10. Prohesion: ASTM G 85 Prohesion Cabinet. 15,000 hours exposure.
- B. NSF Approved Epoxy Finish Coat – (NOT USED)
1. Generic Type: Modified Amine Epoxy
 2. Special Qualifications: Certified in accordance with ANSI/NSF Std 61 for contact with potable water in tanks of 50 gallons capacity or greater.
 3. Solids By Volume: 100%
 4. Cyclic Salt Fog/UV: ASTM D 5894, 10,000 hours exposure.
 5. Adhesion: ASTM 4541 Elcometer Adhesion after 6 months immersion in potable water @ 200° F.
 6. Adhesion: ASTM 4541 Elcometer Adhesion after 6 months immersion in crude oil @ 275° F.

- 7. Humidity: ASTM D 4585. 2,000 hours exposure.
- 8. Immersion: ASTM D 870 Potable Water Immersion. 2 years immersion.
- 9. Immersion: ASTM D 870 140° DI Water Immersion. 2,000 hours.
- 10. Dielectric Strength: ASTM D 149

C. Exterior Finish Coat

- 1. Generic Type: Fluoropolymer Urethane
- 2. Solids By Volume: 60%
- 3. Salt Spray (Fog): ASTM B 117, Scribed Panels, 10,000 hours exposure.
- 4. Adhesion: ASTM 4541 Elcometer Adhesion.
- 5. Humidity: ASTM D 4585. 3,000 hours exposure.
- 6. QUV: ASTM D 4587, 16,000 Hours (Report Gloss Retention)
- 7. QUV: ASTM D 4587, 25,000 Hours (Report Color and Gloss Retention)
- 8. EMMAQUA: ASTM D 4141, 1,500 Mj/M2 UV Exposure
- 9. EMMAQUA: ASTM D 4141, 2,000 Mj/M2 UV Exposure
- 10. EMMAQUA: ASTM D 4141, 3,500 Mj.M2 UV Exposure
- 11. AAMA 2605: 10 Years South Florida Exposure (Report Color and Gloss Retention, Chalking and Erosion)
- 12. Abrasion: ASTM D 40060 (CS-17 wheel, 1,000 gram load, 1,000 cycles)

3.9 DISINFECTION

Contractor shall disinfect the tank by one of the methods accepted by the Alabama Department of Environmental Management.

3.10 PAYMENT

Payment for cleaning and coating the tanks exterior shall be made on the basis of Lump Sum and Unit Price Bids. Such compensation shall be compensation in full for furnishing all labor, materials, tools and equipment; for all cleaning and coating of the tanks; lettering; needed repair work on the tank: protection of neighboring structures; for all surface preparation and painting; for all miscellaneous and incidental work for removal and disposal of blasting debris; and for supervision, overhead and profit. A separate item is listed in the Proposal Form to provide draping around the tank while coating procedures are being performed.

ADDENDUM #1

12/11/2024

SECTION 13203

INDURON TANK COATING

1. SCOPE:

- A. This specification covers repair, preparation of surfaces, performance and completion of painting of exterior surface specified on the following structures:
 - 1. One Elevated Storage Tank 250,000 Gallon Capacity located in Town Creek, Alabama.
- B. The CONTRACTOR shall be responsible for all costs associated with painting and repair operations as outlined in these specifications.
- C. The Water System can maintain system pressure while tank is being coated. The Tank can be valved off.
- D. Interior shall be Pressure Washed and Touch Up Coating shall be applied if needed.

2. APPLICABLE PUBLICATIONS AND REFERENCES:

The publications listed below form a part of this specification to the extent referenced. The publications referred to in text by the basic designation only.

ANSI/NSF 61/600 Drinking Water System Components – Health Effects

ASTM D 16 Terminology Relating to Paint, Varnish, Lacquer, and related Products

AWWA D102-06 Coating Steel Water-Storage Tanks

NACE RPO188-99 Discontinuity (Holiday) Testing of New Protective Coatings on Conductive Substrates

SSPC-PA-2 Measurement of Dry Coating Thickness with Magnetic Gages

SSPC-SP6/NACE 3 Commercial Blast Cleaning

SSPC-SP10/NACE 2 Near-White Metal Blast Cleaning

SSCP-SP1 Solvent Cleaning

AWWA C 652-02 Disinfection of Water Storage Facilities

3. **DEFINITIONS:**

1. Definition of Painting Terms: ASTM D16, unless otherwise specified
2. Coatings: Paint or heavy duty finishes for use on surfaces subject to interior and exterior exposure, submergence, high moisture, or splash, including primers, intermediate coats, and finish coats.
3. Interior Wet: Interior surfaces subject to immersion or splash, including the interior roof structure.
4. Interior Dry: Interior surfaces subject to normal temperature, humidity and condensation.
5. First Coat: Shop primer or field primer.
6. Second, Third, Intermediate, or Finish Coats: Successive finish coats applied over the first coat.
7. DFT: Dry Film Thickness as measured in Mills (1/1000 of an inch).

4. **QUALITY ASSURANCE**

A. Certification Requirements:

1. All coatings shall conform to OSHA requirements for allowable exposure to lead and other hazardous substances.
2. All coatings in contact with potable water or within potable water reservoirs shall be certified according to NSF Std. 61.

B. Product Manufacturer:

1. Manufacturer shall be a company that specializes in producing high quality industrial coating materials. This company shall have 10 years or more experience demonstrated by case histories in the designated field of application.

C. Applicator Qualifications:

1. Engage an experienced applicator with 5 years or more experience that has successfully completed coating system applications similar in material and extent to those indicated.

D. Single Source Responsibility:

1. Provide coating material and thinners produced by the same manufacturer for each system on all surfaces of the tank.

E. Field Painting Pre-Application Meeting:

Hold a pre-application meeting before the start of field surface preparation and coating application. Require attendance of parties directly affecting work of this section, including the engineer, applicator, inspector, and coating manufacturer's representative. Review the specifications to insure each party's responsibilities are understood. Subjects to be discussed are: environmental requirements, protection of surfaces not scheduled to be coated, surface preparation, application, disinfection, repair, field quality control,

cleaning, protection of coating systems, annual inspection, coordination with other work and any other areas of concern expressed at the meeting.

5. **DELIVERY, STORAGE AND HANDLING**

- A. Material shall be delivered to the site in original containers with labels intact and seals unbroken. Labels should provide the following information: material name, coating manufacturer, color name and number, batch or lot number, date of manufacture, mixing and thinning instructions.
- B. All coatings shall be stored in an enclosed structure to protect them from weather and excessive heat or cold. Flammable coatings must be stored to conform to City, County, State and Federal safety codes for flammable coatings or paint materials. At all times coatings shall be protected from freezing.
- C. All empty containers shall be disposed of in accordance with local, state and federal regulations.

6. **PROJECT/SITE CONDITIONS**

A. Climate:

No paint shall be applied when the air or surface temperature, as measured in the shade, is below that which is recommended by the manufacturer. Paint shall not be applied to wet or damp surfaces, and shall not be applied in rain, snow, fog, mist, or when the surface temperature will be less than 5 F above the dew point. No paint shall be applied when it is expected that the surface temperature will drop below the manufacturer's recommendation within 2 - 4 hours after the application of the paint. Dew or moisture condensation should be anticipated, and if such conditions are prevalent, painting shall be delayed until it is certain that the surfaces are dry. In addition, the days painting shall be completed well in advance of the probable time of day when moisture condensation will occur in order to permit the film the required drying time as specified by the manufacturer prior to the formation of moisture.

B. Ventilation:

Provide ventilation during coating curing stage in confined or enclosed areas in accordance with AWWA D102-06, Section A.7.5. Forced air ventilation shall be maintained for a minimum of four (4) days following interior coating application to assist in curing process.

C. Dust and Contaminants:

Schedule coating work to avoid excessive dust and airborne contaminants. Protect work areas from excessive dust and airborne contaminants during coating application and curing. Tank containment will follow SSPC GUIDE 6 for all containment specifications.

7. **PRODUCTS**

A. Manufacturers:

Induron Coatings

P.O. Box 2371

Birmingham, AL 35201-2371

Customer Service: 800-324-9584

Website: Induron.com

B. Materials:

Coating products of Induron Coatings, Inc. are listed as a standard of quality and performance. Only coatings that meet or exceed the performance of these specified coatings may be submitted for use. No substitutions will be considered unless the Engineer/Owner has received a written request for approval at least 10 days prior to the bid date for receipt of bids. Each request shall include the name of the specified material; and a complete description of the proposed substitute including performance and test data, cure times, recoat windows, and generic composition. No request for substitution shall be considered that would decrease film thickness, offer a change in the generic type of coating specified or the number of coats specified. The decision of the Engineer/Owner regarding approval or disapproval of the proposed substitution shall be final.

C. Colors: Colors shall be as selected by the Engineer/Owner.

D. Thinning, Mixing and Tinting:

1. Where thinning is necessary, only the products of the manufacturer furnishing the coating will be allowed. All thinning shall be done in strict accordance with the coating manufacturer's recommendations.
2. Mix in accordance to the manufacturer's recommendations.
3. Each coat shall be slightly different in shade than the preceding coat, unless otherwise noted.

8. **EXECUTION**

A. Examination:

Examine areas and conditions under which coating systems are to be applied. Notify General Contractor and Engineer of areas or conditions that are not acceptable. Do not begin surface preparation or application until unacceptable areas or conditions have been corrected.

B. Protection of Surfaces Not Scheduled to be Coated:

Protect surrounding areas and surfaces not scheduled to be coated from damage during surface preparation and application of coatings. Immediately remove coatings that fall on surrounding areas and surfaces not scheduled to be coated.

Containment: The Contractor shall install a containment system meeting the requirements of Class 3A as specified in the SSPC Guide 6 (12) "Guide for Containing Debris Generated During Paint Removal Operations". Assessment of the containment system will be conducted in accordance with SSPC Guide 6 Section 5.5. All testing required will be paid by the Contractor. The standards and references listed in Section 3A of SSPC Guide 6 (92) shall form and be part of these specifications. The Contractors shall utilize SSPC Guide 6 for the development of the containment system. All workers shall be protected in accordance with all applicable OSHA Standards

C. Coating Systems:

a. Steel Exterior: Pressure wash/ Overcoat – (NOT USED)

1. System: Epoxy Mastic/Aliphatic Urethane/Fluorourethane
2. Surface Preparation: SSPC-SP12 WJ-4. Method of cleaning shall be Low Pressure Water Cleaning at minimum 3500 psig and maximum 5000 psig to remove all chalk, dust, dirt, loose paint, and any other foreign matter. All areas of peeling, flaking or otherwise failing paint shall be cleaned in accordance with SSPC-SP2 Hand Tool Cleaning or SSPC-SP3 Power Tool Cleaning. All edges shall be feathered.
3. Spot Prime: Induramastic 85 Epoxy applied to achieve 3.0-5.0 dry mils. Color: As Selected.
4. 1st Coat Full Prime: Induramastic 85 Epoxy applied to achieve 3.0-5.0 dry mils. Color: As Selected.
5. Final Coat: PERMA-GLOSS FLUOROURETHANE applied to achieve 2.0-3.0 dry mils. Color: As selected.
6. Lettering/Logo: Two coats PERMA-GLOSS FLUOROURETHANE applied to achieve 2.0-3.0 dry mils per coat. Color: As Selected.
7. Total System Minimum DFT: 5.0 mils excluding the existing coating

a. Steel Exterior: SSPC-SP6 Blast clean

1. System: Zinc Epoxy/Epoxy/Aliphatic Polyurethane/Fluorourethane
2. AWWA D102-06: Outside Coating System 5
3. Surface Preparation: SSPC-SP6 Commercial Blast Cleaning
4. Surface Profile: 1.5-2.5 mils
5. Primer: MC-67 Moisture cure zinc epoxy primer applied to achieve 2.5-3.5 dry mils

6. First Intermediate: Perma Clean II applied to achieve 2.0-3.0 DFT Color TBD
7. 3rd Coat: Indurethane 6600 applied to achieve 2.0-3.0 dry mils. Color: As Selected.
8. Finish Coat: PermaGloss Fluorourethane applied to achieve 2.0-3.0 dry mils. Color: As Selected.
9. Lettering/Logo: Two coats PermaGloss Fluorourethane applied to achieve 2.0-3.0 dry mils per coat. Color: As Selected.
9. Total System Minimum DFT: 8.5 mils.

b. Steel Interior Wet: - (NOT USED)

1. System: Zinc/100 % Solids Ceramic Epoxy
2. AWWA D102-06: Inside Coating System 3
3. ANSI/NSF 61 Certified
4. Surface Preparation: SSPC-SP10 Near White Blast Cleaning
5. Surface Profile: 1.5-2.5 mils
6. Primer: CeramaPrime Ceramic Primer applied to achieve 2.5-3.5 dry mils. Color: Tan
7. Pit Filler: Aquatapoxy as needed. Color: White.
8. Stripe Coat: PE-70 Epoxy applied by brush to achieve 2.0-4.0 dry mils. Color: Blue.
9. Finish Coat: PermaClean 100 Ceramic Epoxy applied to achieve 25.0-35.0 dry mils. Color: Blue.
10. Caulking: Sika-Flex 1-A as needed.
11. Total System Minimum DFT: 27.5 mils.

D. Application

1. Prepare steel substrate in accordance with Coating Manufacturer's instructions.
2. Ensure surfaces are dry.
3. Prior to field touch up of shop primed steel, all surfaces shall be cleaned to remove all surface contamination including oil, grease, dust, dirt and foreign matter. All rusted, abraded, and unpainted areas shall be prepared to specified surface preparation before primer is applied.
4. Abrasive blast cleaned surfaces shall be coated the same day as the cleaning is performed. If rust or contamination appears as a result of delay in primer application, the surface shall be cleaned to specified surface preparation before primer is applied.
5. Apply coatings in accordance with coating manufacturer's instructions.

13203-6

6. Mix and thin coatings, including multi-component materials, in accordance with manufacturer's instructions.
7. Keep containers closed when not in use to avoid contamination.
8. Do not use mixed coatings beyond pot life limits.
9. Use application equipment, tools, pressure settings, and techniques in accordance with manufacturer's instructions.
10. After sufficient cure of the field prime coat, apply a stripe coat to the interior wet areas with a brush to critical locations on steel such as welds, corners, and edges using specified intermediate coat.
11. Uniformly apply coatings at spreading rate required to achieve specified DFT.
12. Apply coatings to be free of film defects that would adversely affect performance of the coating system. Apply exterior coatings to be free of characteristics or defect that adversely affect appearance.
13. Interior: Caulk all unwelded roof seams, connections, and crevices to prevent corrosion and staining.

E. Repair

1. Damaged Materials: repair or replace damaged materials and surfaces not scheduled to be coated.
2. Damaged Coatings: Touch-up or repair damaged coatings. Touch-up of minor damage shall be acceptable where the result is not visibly different from adjacent surfaces.
3. Coating Defects: Repair in accordance with coating manufacturer's instructions coatings that exhibit film characteristics or defects that would adversely affect performance or appearance of coating systems.

9. TESTING EQUIPMENT AND PROCEDURES

General:

The Contractor shall have on the project site the following testing equipment. Equipment shall be in calibration and proper working order. Equipment shall be used in accordance with the manufacturers' instructions or as directed by the Engineer. The Engineer shall be notified of time of testing so that he might be present to witness testing. The Contractor shall keep a daily log of environmental conditions, work schedule, and any other pertinent information. The log shall be turned over to the Owner at the end of the project to be included in the permanent record.

1. Sling Psychrometer: Relative humidity and dew point readings shall be taken at intervals throughout the days work. Readings shall be taken at the start of the mornings work, mid day and afternoon. Should environmental conditions change, additional reading shall be taken to assure that coatings are being applied under the conditions as outlined by the coatings manufacturer.
2. Surface Temperature Thermometer: Surface temperatures shall be taken in areas where work is being performed. Surface temperature shall be that as specified by the coatings manufacturer.
3. Replica Tape & Micrometer: Testex X-Course Replica Tape shall be employed to determine the surface profile of blasted surfaces. Surface profile shall be as specified.
4. Dry Film Thickness Measurements: Dry film thickness reading shall be taken with a properly calibrated (per the manufacturer's instructions) Type 1 (magnetic) or Type 2 (electromagnetic) instrument. Dry film thickness reading will be taken and recorded in accordance with guidelines set forth in SSPC-PA2 Measurement of Dry Coating Thickness with Magnetic Gages. The Contractor shall provide ladders, rigging, etc. as necessary to allow the Engineer to spot check paint thickness of each coat.
5. Holiday Detection: After completion of the interior coating system, interior surfaces shall be holiday detected in accordance with NACE RPO188-99 Discontinuity (Holiday) Testing of New Protective Coatings on Conductive Substrates. Holiday detector shall be a Tinker & Razor Model M-1 or equal. Areas found to have holidays shall be marked and repaired in accordance with the paint manufacturer's instructions. The Engineer shall be notified of time of testing so that he might be present to witness testing.

10. DISINFECTION

1. Disinfection of Water Contact Surfaces and Filling of Water Storage Tanks:
 - a. The interior of the tank and the wet riser shall be thoroughly washed and disinfected in accordance with AWWA C652 Method 2 or 3. The engineer shall approve the method of disinfection.
 - b. Do not disinfect water contact surfaces or fill water storage tanks until application of coating systems is complete, coatings have fully cured, and field quality control inspection is complete.

c. Allow number of days in accordance with manufacturer's instructions and as directed by engineer for full cure of coating systems on water contact before flushing, disinfecting, or filling with water.

d. The tank shall be filled with clean water furnished by the owner.

2. Bacteriological Testing: Upon completion of the disinfection process the owner or his representative shall arrange for bacteriological testing of water samples. The tank shall not be put into service until safe results are obtained.

11. FIRST ANNIVERSARY INSPECTION

1. Owner shall establish and notify contractor giving at least 30 days notice as to the date and method of inspection.
2. If an inspection date has not been established within 13 months after the coating work was completed, the first anniversary inspection shall be considered to be waived.
3. First anniversary inspection shall follow the guidelines set forth in AWWA D102-06 Section 5.2.