

**WEIRTON AREA WATER BOARD  
HANCOCK COUNTY, WEST VIRGINIA**

**SKY VIEW WATER STORAGE TANK REHABILITATION PROJECT**

**MAY 30, 2018  
ADDENDUM #1**

To whom it may concern:

**A. BOILER PLATE**

1. The Bid Date for this Project is **June 5, 2018 at 2:00 PM**. Bids will be received by **The Thrasher Group, Inc., 300 Association Drive, Charleston West Virginia**.

**B. SPECIFICATIONS**

1. **DELETE** Section 099050 – “Repainting of Steel Water Storage Facility” and **REPLACE** with the revised Section 099050 – “Repainting of Steel Water Storage Facility” included in this Addendum #1.

**C. DRAWINGS**

1. NOT APPLICABLE

**D. QUESTIONS AND CLARIFICATIONS**

**Question:**

1. Where is each tank located?

**Answer:**

1. Both tanks are located on Sky View Drive in Weirton, WV. Google Earth coordinates are as follows:
  - Latitude - 40°26'8.88"N
  - Longitude - 80°36'3.76"W

**Question:**

2. What is the overall height and/or low water level of each tank?

**Answer:**

2. Each tank is approximately 54 feet tall. The Contractor shall coordinate with the Owner during the construction phase of the project to remove the water from the existing water storage tanks.

**Question:**

3. Reference Specification 014000 1.7.B.1. Can you confirm the Contractor is to retain the services of a testing laboratory for the work on both tanks?

**Answer:**

3. Inspection services for the tank painting will be provided by the WAWB. No additional laboratory testing is required by the Contractor.

**Question:**

4. Reference Specification 015000 3.3.B &G. Drawings are referenced that indicate temporary road, paved area and project sign requirements. Are those drawings available? The bid document CD only contained one set of specifications.

**Answer:**

4. There are no drawings related to the project.

**Question:**

5. Reference 099050.2.5.A. The Tnemec column of the table appears to contain Sherwin Williams product designations. Can you provide the Tnemec coating designations required for the exterior of the tanks?

**Answer:**

5. Refer to revised Specification Section 099050 included with this Addendum #1.

**Question:**

6. What is the warranty requirement for the work?

**Answer:**

6. The warranty requirements for the work shall be as specified in the General Conditions of the Construction Contract.

**Question:**

7. Have any addendums been issued?

**Answer:**

7. No.

**Question:**

8. Do the tanks have antennas and if so, who is responsible for removing them?

**Answer:**

8. The existing tanks do not have antennas.

**Question:**

9. Can we get a list of planholders?

**Answer:**

9. An updated planholders list can be viewed on the Thrasher Group website – [www.thrashereng.com](http://www.thrashereng.com).

**Question:**

10. What is the preliminary estimate bid price?

**Answer:**

10. \$275,000.00

**Question:**

11. When is the desired mobilization date?

**Answer:**

11. The WAWB anticipates issuing a Notice to Proceed within 60 days of the bid opening.

**Question:**

12. Who is the inspector?

**Answer:**

12. The WAWB anticipates using World International Testing to perform inspection services during the painting project.

**E. GENERAL**

1. NOT APPLICABLE

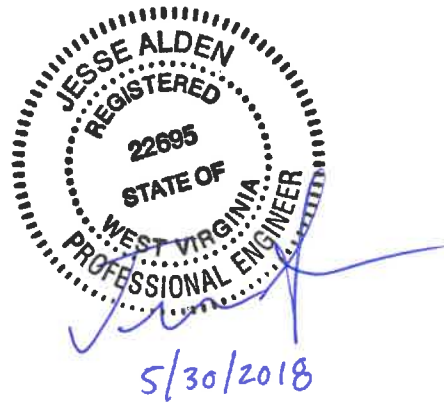
If you have any questions or need any other information please do not hesitate to contact me.

Sincerely,

THE THRASHER GROUP, INC.

  
Jesse Alden, P.E.  
Project Manager

Enclosures



## SECTION 099050 - REPAINTING OF STEEL WATER STORAGE FACILITY

### PART 1 – GENERAL

#### 1.1 DESCRIPTION

##### A. Scope:

1. This section of the specifications contains the detailed criteria for the selection of materials, surface preparation, and the furnishing of all paint, labor, equipment and appliances for field painting of steel water storage facilities specified herein: ANSI/AWWA D102 “AWWA Standard for Painting Steel Water Storage Tanks.”

##### B. Definitions:

1. Specific coating terminology used in this section is in accordance with definitions contained in ASTM D16, ASTM D3960, and the following definitions:
  - a. Dry Film Thickness (DFT): the thickness of one (1) fully cured continuous application of coating.
  - b. Field Coat: the application or the completion of application of the coating system after installation of the surface at the site of the work.
  - c. Shop Coat: One (1) or more coats applied in a shop or plant prior to shipment to the site of erection or fabrication, where the field or finishing coat is applied.
  - d. Tie Coat: An intermediate coat used to bond different types of paint coats. Coatings used to improve the adhesion of a succeeding coat.
  - e. Photochemically Reactive Organic Material: Any organic material that will react with oxygen, excited oxygen, ozone or other free radicals generated by the action of sunlight on components in the atmosphere giving rise to secondary contaminants and reaction intermediates in the atmosphere which can have detrimental effects.
  - f. Volatile Organic Compound (VOC) Content: The portion of the coating that is a compound of carbon, is photochemically reactive, and evaporates during drying or curing, expressed in grams per liter or pounds per gallon.
  - g. Touch-Up Painting: The application of paint on areas of painted surfaces to repair marks, scratches, and areas where the coating has deteriorated to restore the coating film to an unbroken condition.

#### 1.2 PRE-CONSTRUCTION MEETING

- A. A pre-construction meeting will **NOT** be held to discuss the technical aspects of the specified coatings and their application characteristics.

### 1.3 CONTRACTOR PRE-QUALIFICATION

- A. All contractors bidding shall provide documentation of having repainted five (5) potable water tanks within 24 months of the bid date.
- B. Access to the site can be obtained by contacting the Owner.
- C. Contractor must be approved by Owner prior to awarding Contract.

### 1.4 QUALITY ASSURANCE

#### A. References:

- 1. This section contains references to the following documents. They are a part of this section as specified and modified. Where a referenced document contains references to other standards, those documents are included as references under this section as if referenced directly. In the event of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.
- 2. Unless otherwise specified, references to documents shall mean the documents in effect at the time of Advertisement for Bids, Invitation to Bid, or on the effective date of the Agreement if there were no Bids. If referenced documents have been discontinued by the issuing organization, references to those documents shall mean the replacement documents issued or otherwise identified by that organization. Where document dates are given in the following listing, references to those documents shall mean the specific document version associated with that date, regardless of whether the document has been superseded by a version with a later date, discontinued or replaced.

<b>Reference</b>	<b>Title</b>
ASTM D16	Standard Terminology Relating to Paint, Varnish, Lacquer and Related Products
ASTM D2200 (SSPC-Vis1)	Pictorial Surface Preparation Standards for Painting Steel Surfaces
ASTM D3359A	Methods for Measuring Adhesion by Tape Test
ASTM D3960	Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings
ASTM D4417	Field Measurement of Surface Profile of Blast-Cleaned Steel
F 595 B	Federal Standard Colors
SSPC	SSPC Painting Manual – Systems and Specifications, Vol. 2

#### B. Standardization

- 1. Materials and supplies provided shall be the standard products of Manufacturers. Materials in each coating system shall be the products of a single Manufacturer.
- 2. The standard products of Manufacturers other than those specified will be accepted when it is demonstrated to the Engineer that they are equal in composition, durability, usefulness and convenience for the purpose intended. Requests for substitutions will be considered, provided the following minimum conditions are met:

- a. The proposed coating system shall use an equal or greater number of separate coats to achieve the required dry film thickness.
- b. The proposed coating system shall use coatings of the same generic type as that specified.
- c. Requests for substitution shall have directions for application and descriptive literature which includes generic type, percent solids by volume, volatile organic content (grams per liter), and information confirming that the substitution is equal to the specified coating system.
- d. The Contractor shall provide a list of references where paint of the same generic type has been applied. The reference list shall give the project name, city, state, owner, phone number of owner, coating system reference and number, and year paint was applied.

#### 1.5 DELIVERY AND STORAGE

- A. Materials shall be delivered to the job site in their original, unopened containers. Each container shall bear the following:
  1. Manufacturer's name
  2. Coating type
  3. Batch number
  4. Date of manufacture
  5. Storage life
  6. Special directions
- B. Materials shall be stored in enclosed structures and shall be protected from weather and excessive heat or cold. Flammable materials shall be stored in accordance with state and local codes.
- C. Materials exceeding storage life recommended by the Manufacturer shall be removed from the site.

#### 1.6 RESPONSIBILITY

- A. The Contractor shall provide all materials, scaffolding, and other equipment and services required to prepare all surfaces and coat all surfaces as set forth in the Contract Documents. The Contractor shall be responsible for the final finish on all surfaces.

## 1.7 SUBMITTALS

- A. Before materials are delivered to the job site, the Contractor shall provide the following information in accordance with Section 013000 – Administrative Requirements.
1. For each primer and finish coating, the Contractor shall furnish a Safety Data Sheet (SDS).
  2. For each primer and finish coating, the Contractor shall provide the Manufacturer's application instructions, which shall include the following:
    - a. Surface preparation recommendations.
    - b. Primer type, where required.
    - c. Maximum dry and wet mil thickness per coat.
    - d. Minimum and maximum curing time between coats, including atmospheric conditions for each.
    - e. Curing time before submergence in liquid.
    - f. Thinner to be used with each paint.
    - g. Ventilation requirements.
    - h. Minimum atmospheric conditions during which the paint shall be applied.
    - i. Allowable application methods.
    - j. Maximum allowable moisture content.
    - k. Maximum storage life.
  3. List of materials proposed to be used under this section and Manufacturer's data for each material.
  4. Color charts.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURER(S)

- A. Tnemec Company, Inc.
- B. The Sherwin Williams Company
- C. Engineer's Approved Equal

### 2.2 MATERIALS SELECTION, COLORS, AND LABELING

- A. The Contractor shall furnish information to the Engineer by way of shop drawing submittal for the proposed materials to be used in execution of the work. The information shall include the following:
1. Complete product specification sheets
  2. Manufacturer's instructions
  3. Color selection guides
- B. If requested by the Engineer, the Contractor shall also secure a written statement from the painting manufacturer attesting to the compatibility of the proposed paint systems with the



existing paint described hereinafter.

- C. The Engineer will prepare a color schedule based on the Owner's selections (except where colors are already specified herein) and return the same to the Contractor along with the reviewed shop drawings.
- D. All materials shall be delivered to the site in manufacturer's sealed containers. The manufacturer shall label each container. Labels shall give the following:
  - 1. Manufacturer's name
  - 2. Brand
  - 3. Type of paint
  - 4. Color of paint
  - 5. Instructions for reducing
- E. Thinning shall be done only in accordance with direction of the manufacturer and exclusively with the types of reducer recommended. Mixing or job tinting may be done when approved by the Engineer.

### 2.3 EXISTING PAINT SYSTEMS

- A. The existing interior coatings on the storage tank are to be completely removed in accordance with Steel Structures Painting Council Specifications SSPC-SP10 "Near White Blast". The exterior finish will be cleaned by using SSPC-SP6 "Commercial Blast Cleaning".
- B. Protection of Grounds
  - 1. Contractor shall provide scaffolding and containment during sand blasting, priming and painting for protection of people and property, including all landscaping, driveways, roads, walks, buildings, utilities, etc. Any damage to such items shall be corrected by the Contractor at the Contractor's expense to the Owner's satisfaction.
- C. Abatement of Lead Based Paint
  - 1. The exterior paint system and interior paint system have been tested and contain lead paint. The Contractor shall provide containment of all loose paint removed from the interior and exterior tank. The Contractor shall submit a lead paint abatement plan to the Engineer for approval prior to the start of any work performed on the tank.
  - 2. The Contractor shall comply with West Virginia State Code CFR16-35 cited as the West Virginia "Lead Abatement Act."
  - 3. The Contractor shall perform the following duties as part of the lead paint abatement plan:
    - a. Ensure that each of his or her employees or agents who will come in contact with lead or who will be responsible for a lead abatement project is licensed. Employees will be required to take a blood test prior to beginning work on this project. The blood test results shall be submitted to the Owner. Should the test results be greater than 40 micrograms/dl, the employee will not be permitted to work on this project.

- b. Ensure that the project is supervised by a licensed lead abatement supervisor.
- c. Maintain sampling records for each contained work area of a lead abatement project until it meets the minimum clearance standards established by the West Virginia Department of Environmental Protection.
- d. Keep a record of the project and make the record available to the division and the divisions of commerce, labor, and environmental protection upon request. Records required by this subsection shall be kept for at least three years and shall include at a minimum:
  - 1. The name, address and license number of the individual who supervised the lead abatement project and each employee or agent who worked on the project.
  - 2. The location and design of the project, if applicable, and the amount of lead-containing material that was removed.
  - 3. The starting and completion date of the project and a summary of the procedures that were used to comply with all federal and state standards.
  - 4. The name and address of each disposal site where lead-contaminated waste was deposited and the disposal site receipts.

**2.4 SCHEDULE OF NEW PRODUCTS**

A. Products specified are as manufactured by Sherwin Williams or Tnemec Company, Inc.

- 1. Products for each specified function and system shall be of a single manufacturer.
- 2. All materials in contact with potable water must have been tested and approved by the ANSI/NSF Standard 61.

**2.5 EXTERIOR REPAINT SYSTEM**

A. The exterior surfaces shall be painted using the following system:

	<b>Tnemec</b>	<b>Sherwin Williams</b>
Prime	Hydro-Zinc Series 94-H2O @ 2.5-3.5 mils DFT.*	Corothane 1 Galvapac 1K Zinc Rich Primer @ 3.0 – 4.0 mils DFT.*
Intermediate Coat	Hi-Build Epoxoline II Series N69 @ 3.0-5.0 mils DFT.*	Macropoxy 646 Fast Cure Epoxy @ 3.0 – 5.0 mils DFT.*
Finish	Endura-Shield Series 73 @ 2.0- 5.0 mils DFT.*	Acrolon 218 HS or Hi-Solids Polyurethane @ 2.0 – 3.0 mils DFT.*
Total DFT	7.5 – 13.5 mils	8.0 – 12.0 mils
*Notes:	Apply one (1) complete coat of each paint. Certain finish coat colors may require two (2) coats. Color shall be determined by Engineer/Owner.	Apply one (1) complete coat of each paint. Certain finish coat colors may require two (2) coats. Color shall be determined by Engineer/Owner.

- B. The Contractor shall furnish to the Owner at least one (1) extra gallon to finish paint specified above for exterior paint for touch-up repairs due to vandalism.
- C. All materials shall be applied in accordance with manufacturer’s directions and any thinning required shall be done in a manner and exclusively with the type of reduce recommended.
- D. Spray application may be used in conformance with applicable section of AWWA D102.
- E. All materials shall be applied under adequate illumination.

2.6 INTERIOR REPAINT SYSTEM

- A. The interior surfaces shall be painted using the following system:

	<b>Tnemec</b>	<b>Sherwin Williams</b>
Prime	Series 94-H20 Hydro Zinc Aromatic Zinc Rich Urethane @ 2.5 – 3.5 mils DFT.*	Macropoxy 5500 @ 3.0 – 5.0 mils DFT.
Weld Coat	Series N140-15BL @ 2.0 – 3.0 mils DFT. Color – White.*	Macropoxy 5500 @ 4.0 – 6.0 mils DFT. B58VX605 hardener with Opti-Check OAP pigment technology may be used for rapid holiday detection with safe blue light inspection lamps.
Intermediate Coat	Series N140-1255 Pota-Pox Plus Polyamidoamine Epoxy @ 4.0 – 6.0 mils DFT. Color – Beige.*	Macropoxy 5500 @ 4.0 – 6.0 mils DFT. B58VX605 hardener with Opti-Check OAP pigment technology may be used for rapid holiday detection with safe blue light inspection lamps.
Finish	Series N140-15BL Pota-Pox Plus Polyamidoamine Epoxy @ 6.0 – 8.0 mils DFT. Color – White.*	Macropoxy 5500 @ 5.0 – 6.0 mils DFT.
Total DFT	6.5 – 9.5 mils	8.0 – 12.0 mils
*Notes:	Apply one (1) complete coat of each paint. For the Weld Coat, apply by brush to all welds and sharp edges. Otherwise, apply by spray application.	Apply one (1) complete coat of each paint. For the Weld Coat, apply by brush to all welds and sharp edges. Otherwise, apply by spray application.

- B. All coatings shall be a “system” and shall be thoroughly compatible each with the other. Not coatings or primers of different manufacturers shall be applied upon each other. The contractor shall submit the coatings schedule to the Owner.
- C. Paint shall not be applied when the temperature of the steel or paint is below 40 degrees F. Paint shall not be applied when the surface temperature is expected to drop 32 degrees F before the paint has dried. With chemically cured coatings, (catalyzed epoxies, etc.)

particular care shall be exercised to follow manufacturer's special temperature requirements (usually 50 degrees F or above).

- D. Paint shall not be applied in rain, snow fog, mist or when the steel temperature is below the dew point, resulting in condensation.
- E. Each coat of paint shall be in proper state of cure or dryness before the application of the succeeding coat. A minimum of 24 hours shall be allowed between coats.
- F. All weld seams shall receive one (1) brush coat of the specified primer after the sandblasting and cleaning has been completed. The brush prime coat is in addition to the specified prime coat.
- G. All coats shall be smooth, free of brush marks, streaks, laps or pile up of paints, and skipped or missed area.

## 2.7 TOUCH-UP AND REPAIR

- H. At completion, all painted surfaces and coatings shall be inspected. All damaged spots, whether due to defective materials or workmanship or defects of surfaces covered shall be touched up and the finish restored. Additional coats of paint and coatings required to cover all spots or discoloration of every sort shall be applied at no additional costs to the Owner.
- I. The contractor shall furnish to the Owner at least one (1) extra gallon of finish paint specified above of exterior paint for touch-up repairs due to vandalism.

## PART 3 – EXECUTION

### 3.1 MANUFACTURER(S)

- A. Surfaces shall be clean, dry, and adequately protected from dampness. Surfaces shall be free of any material, which will adversely affect adhesion or appearance of painting and coating.
- B. Cleanliness shall be checked by wiping the prepared steel surface with a white cloth dampened with manufacturer's thinner for the particular paint system. If the surface is not clean, the contractor shall take steps to clean the surface more thoroughly before applying paint.
- C. All surface preparation procedures should be done in conformance with local, state, and federal OSHA and EPA guidelines. Waste generation and removal should be in conformance with all OSHA and EPA guidelines.

### 3.2 INTERIOR SURFACES

- A. Interior surfaces shall have all existing paint removed with surface preparation SSPC –SP10 (near white metal blast). All rust pits, which penetrate 50% or more of the thickness of the

steel, shall be repaired by welding. All welding shall be done in conformity with “ANSI/AWWA D100-96 Welded Steel Tanks for Water Storage”.

### 3.3 EXTERIOR SURFACES

- A. Exterior surfaces shall have existing paint removed with surface preparation SSPC-SP6 (Commercial Blast Cleaning).

### 3.4 WELDS

- A. Existing weld spatter or weld spatter introduced during repair or renovation procedures shall be removed by power tool cleaning.

### 3.5 APPLICATION

- A. All materials shall be applied in accordance with manufacturer’s directions and any thinning required shall be done in a manner and exclusively with the type of reducer recommended.
- B. All materials shall be applied under adequate illumination.
- C. Materials shall be thoroughly mixed and kept at a uniform consistency during application.
- D. Finished work shall be uniform and of the approved color. Make edges of paint adjoining other materials or colors sharp and clean without overlapping.
- E. Total minimum dry film thickness of paint films specified herein will be measured with an Elcometer or similar instrument to determine acceptability. Special attention shall be given to weld seams.
- F. No painting or finishing shall be done under conditions, which are unsuitable for the production of good results. The surfaces to be painted shall be at least 5 feet above the dew point. Apply all paint consistent with temperature limitations as noted by the manufacturer. Do not apply finishes in spaces where dust is being generated.

### 3.6 FIRST ANNIVERSARY INSPECTION

- A. The Owner shall establish a time period for inspection of paint systems within the contract guarantee period in accordance with Section 9 of AWWA D102. The Contractor shall comply with said Section 9 at no additional cost to the Owner.

### 3.7 DISINFECTION AND STERILIZATION

- A. Disinfection and Sterilization shall be in accordance in Specification 331313 – Water Storage Tank Disinfection

3.8 WORKMANSHIP AND CLEANUP

- A. The contractor shall keep the premises clean at all times and shall remove all rubbish as often as directed by the Engineer. All debris is to be removed from the grounds.
- B. The existing water storage tanks are in close proximity to residential property owners. The Contractor shall take additional care when performing the work to avoid any damage to residential property; if any damage does occur, the Contractor shall be solely responsible for any and all costs necessary to restore/repair the adjacent property to its original condition.

3.9 BASIS OF PAYMENT

- A. Measurement and payment for all work and materials described in these specifications shall be included in the Contractor's lump sum bid prices as shown in the Bid Schedule.

END OF SECTION 099050