

## **ADDENDUM NO. 2**

### **VILLAGE OF COVINGTON WATER TREATMENT PLANT CHEMICAL FEED ROOM FLOOR & SPILL CONTAINMENT ALTERATIONS September 10, 2019**

To: Planholders

From: Mote & Associates, Inc. Phone: (937) 548-7511  
214 West Fourth Street Fax: (937) 548-7484  
Greenville, Ohio 45331 E-mail: info@moteassociates.com

Re: Village of Covington  
Water Treatment Plant Chemical Feed Room Floor & Spill Containment Alterations

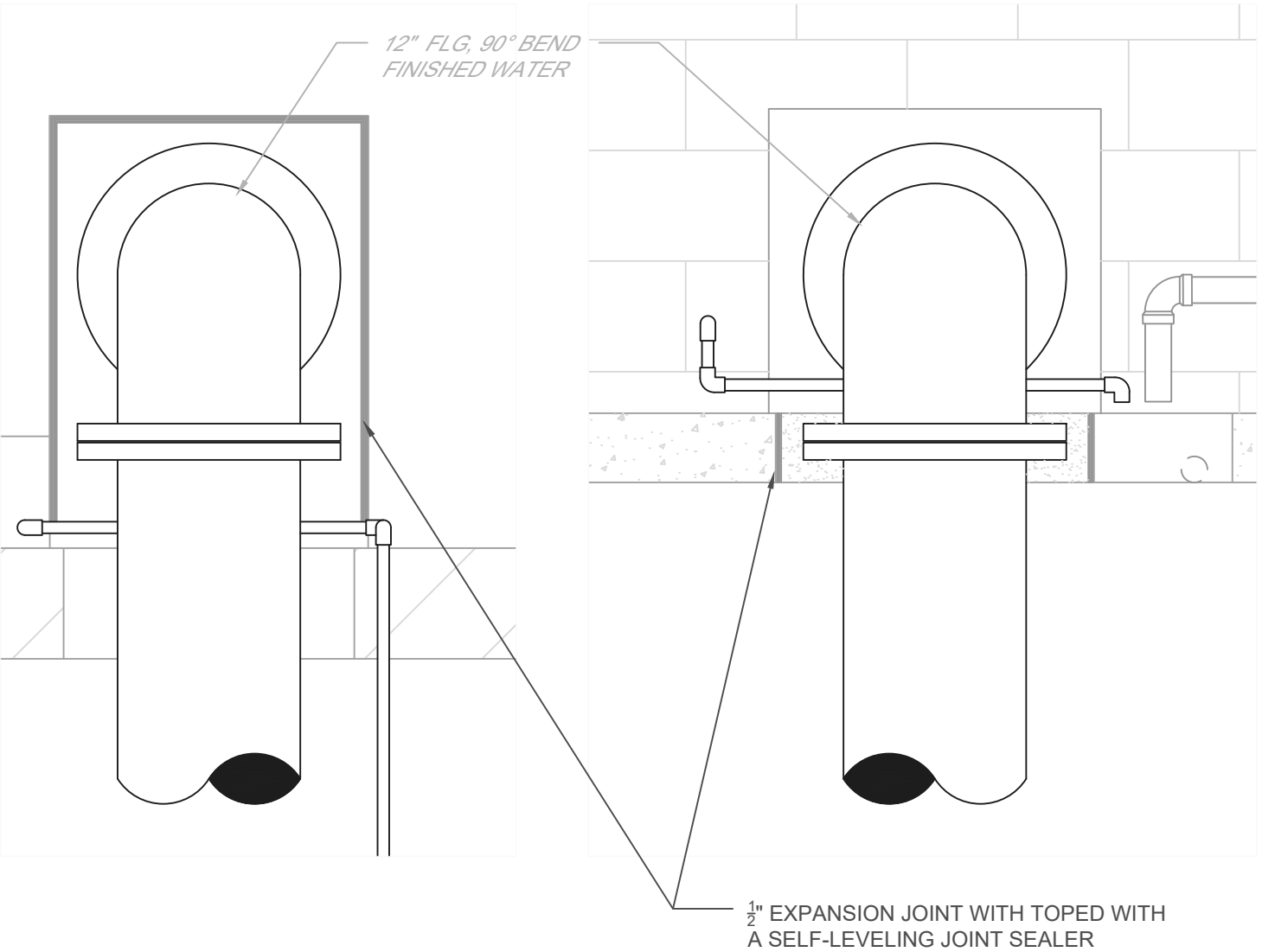
This Addendum forms a part of the Contract Documents and modifies the original Contract Documents dated August 2019 and Addendum #1 dated August 28, 2019. Acknowledge receipt of this Addendum in the space provided on the Bid Proposal form. Failure to do so may subject the Bidder to disqualification.

#### **GENERAL CLARIFICATIONS:**

1. Contractor to install expansion joint material and self-leveling joint sealer around the perimeter of the non-shrink grouted fill area as shown in Exhibit "A" attached.
2. The Owner will now be providing the chemical lining system for spill containment area outside of this Contract utilizing STONHARD, a Division of StonCor Group, Inc. The containment lining work shall no longer be included in the Base Bid for this project as follows:
  - a. Technical Specification Section 09 97 00 Special Coating-Spill Containment contained in the original documents shall be removed and replaced revised Specification 09 97 00.30 Special Coating-Spill Containment attached to this Addendum. This revised Specification is included for the Bidder's reference only to assist with the sequence of work.
  - b. The Contractor shall allow 45 days for placement of the chemical lining system which will consist of 28 days for curing from the date the concrete containment is poured and then 17 days for placement of the lining material. Any time exceeding this 45 days due to any delay by STONHARD will be cause for a contract time extension. A copy of the information regarding the conditions and work to be completed by STONHARD is attached for the Bidder's reference.
  - c. The Engineer's Estimate has been reduced from \$126,943 to \$112,945 to reflect the deduction of the containment lining work from the subject Contract.

End of Addendum

Attachments: Exhibit 'A' – Plan & Section View of Joint Material Installation  
Technical Specification Section 09 97 00.30 Special Coating-Spill Containment  
Excerpt of Quote from STONHARD for chemical lining system



**PLAN VIEW**  
SCALE 1" = 1'-0"

**SECTION VIEW**  
SCALE 1" = 1'-0"

**EXHIBIT "A"**

**SPECIAL COATINGS - SPILL CONTAINMENT - STONCHEM**  
**09 97 00.30**

**PART ONE – GENERAL**

**1.01 Work Included**

- A. Contractor shall provide all work necessary to apply Special Application Coatings to new and existing concrete flooring and CMU painted block and all related work necessary to complete work shown or specified.

**1.02 Specialized Applicator**

- A. To insure proper surface preparation and coatings application the general contractor shall employ a specialist in such coating applications. That special coatings applicator shall well versed in chemical containment liner system and not simply general painting.
- B. If the special coatings applicator can supply a comprehensive extended warranty or bonding against product failure due to poor product selection or improper application, this can be taken into consideration to lessen the general contractors warranty period.

**1.03 Special Considerations**

- A. Contractor and the Special Coatings Supplier shall be aware that part of this special coating project is to be applied to new and existing concrete as well as painted CMU (concrete masonry units) walls.
- B. The existing surfaces have been exposed to Sodium-Permanganate (NaMnO<sub>4</sub>) and Poly-Phosphate over time and has stained the concrete surfaces. Extra preparations may need to be taken into consideration to prepare the surfaces for a new special coating.

**1.04 Definitions**

- A. Abbreviations: OSHA - Occupational Safety & Health Administration; SSPC - Steel Structures Painting Council
- B. Coating: The term coating includes emulsions, enamels, paints, stains, varnishes, sealers, emulsion filler, and other coating materials whether used as prime, intermediate, or finish coats.
- C. Spatter: Drops and droplets of coating and spilled or splashed coatings on surfaces not specified to be coated or surfaces previously finish coated.
- D. Resinous Lining: Includes a penetrating two-component epoxy primer, a three-component mortar coat consisting of high-performance epoxy hybrid resin, curing agent and finely divided mineral composite aggregate and a highly impermeable, mineral composite, high performance, epoxy hybrid topcoat.

## 1.05 Related Work Specified Elsewhere

- A. 01 30 00 Submittals & Substitutions
- B. 03 01 50.61 Resurfacing of Cast Decks and Underlayment
- C. 03 30 00 Cast-in-Place Concrete

## 1.06 Quality Assurance

- A. Single Source Responsibility: Obtain primary resinous lining materials including primers, resins, hardening agents, finish or sealing coats from a single manufacturer with not less than ten years of successful experience in manufacturing and installing principal materials described in this section. Contractor shall have completed at least five projects of similar size and complexity; Stonhard or approved equal. Provide secondary materials only of type and from source recommended by manufacturer of primary materials.
- B. Pre-Installation Conference
  - 1. General Contractor shall arrange a meeting not less than thirty days prior to starting work.
  - 2. Attendance
    - a. General Contractor
    - b. Engineer/Owner's Representative
    - c. Manufacturer/Installer's Representative
- C. Standards:
  - 3. Standards referred to by number or title shall form a part of this specification to the extent required by the references thereto. Latest revisions shall apply, unless otherwise shown or specified.
- D. Minimum requirements for materials are included in this Section. These requirements are intended to establish standards of quality. Products of manufacturers which meet all minimum requirements as herein established shall be acceptable. Written acceptance of the materials to be used shall be obtained prior to surface preparation or application.
- E. No request for substitution will be considered which decreases the film thickness designated, or which offers a change from the generic type of coating specified. Requests for substitution shall contain the full name of each product, descriptive literature, and directions for use, generic type, and nonvolatile content by volume.
- F. All materials shall be brought to the job site in the original sealed and labeled containers of the manufacturer and shall be subject to inspection by the resident representative of the job.
- G. All materials shall be the product of or recommended by the coating manufacturer.
- H. All materials shall be compatible with the service intended. No products shall be used that may have ingredients which might react detrimentally with adjacent fluids or gases.

### **1.07 Submittals**

- A. Submittals shall be as specified in the Section 01 33 00 – Submittal Procedures.
- B. Submit the following:
  - 1. Shop drawings with performance data and physical characteristics.
  - 2. Color charts.
  - 3. List of surfaces indicating coating system and colors.
  - 4. Manufacturer's Certificate specified in Paragraph 3.06.
  - 5. Manufacturer's application instructions.

### **1.08 Product Delivery, Storage and Handling**

- A. The Contractor shall be responsible for the delivery, storage and handling of products.
- B. Promptly remove damaged or deteriorated products from the job site. Replace damaged products with undamaged and undeteriorated products.
- C. All materials used shall be factory pre-weighed and pre-packaged in single, easy to manage batches to eliminate on-site mixing errors. No on-site weighing or volumetric measurements allowed.

### **1.09 Job Conditions**

- A. Environmental Requirements:
  - 1. Perform coating work in strict conformance with manufacturer's printed recommendations as to environmental conditions under which coating and coating systems can be applied.
  - 2. Concrete substrate shall be dense, free of voids, fins, honeycombs and other imperfections. Horizontal surfaces shall have a “once over” steel trowel finish (wood float, broom or machine trowel finishes are unacceptable). Finish concrete to the required grade, less allowance for overlayment thickness. A vapor barrier shall be present for concrete on or below grade to prevent osmotic pressure forces from affecting adhesion of overlayment. Cure concrete 30 days minimum and conduct the following tests prior to application of overlayment:
    - a. Test for “bird baths,” if complete drainage is critical, by flooding horizontal surfaces with water and marking unacceptable areas. Unacceptable areas are to be corrected prior to application of overlayment.
    - b. Test for unacceptable moisture content in concrete by the “plastic sheet” method (Ref. ASTM D-4263). The number of test sites shall be representative for the scope of work.

- c. Test for acceptable concrete surface tensile strength of 200 psi minimum by using a “pull-off test” (Ref. ASTM D-4541) in which a 1.0-inch diameter hole is cut into the concrete. Using a polymer adhesive, glue a 0.8-inch diameter dolly to the area cut in the concrete. The number of test sites shall be representative for the scope of the work.
  - d. All patching and repair materials must be compatible with the overlayment and must be tested for acceptable surface tensile strength of 200 psi minimum by using “pull-off test” (Ref. A-2-c above). The number of test sites shall be representative for the scope of the work.
  - e. Test for substrate temperature by using a surface dial thermometer or equal. Temperature shall be equal to or greater than the minimum temperature recommended by the overlayment material manufacturer. Generally, ideal temperature range is between 60 to 80°F/16 to 27°C. Material should not be applied if humidity is above 85%. Substrate temperatures should be greater than 5°F/3°C above the dew point.
  - f. Inspect for contamination, such as oil, grease, or chemical spills. Contamination must be removed prior to application of overlayment.
3. Utilities, including electric, water, heat (air temperature between 50 to 75°F/10 to 24°C) and finished lighting to be supplied by Village of Covington.
  4. Job area to be free of other trades during, and for a period of 24 hours, after lining installation.
  5. Protection of finished lining from damage by subsequent trades shall be the responsibility of the General Contractor and the Village.
  6. Do not apply special coatings in areas where dust is being generated.
  7. During the course of the coating work, adequately ventilate the coated spaces to ensure there will be no concentration of noxious odors, hazardous fumes, or flammable vapors.
  8. Do not apply coatings in damp weather or when the temperature is below 50°F or above 95°F.

**B. Protection:**

1. Protect all finish work of other trades and surfaces not being coated. Furnish suitable coverings as required. Remove coating spatter from all finished surfaces and restore finishes of affected items to their original conditions at no additional cost to the Owner.
2. Post "Wet Paint" notices, as required, to protect newly coated surfaces.
3. Keep oily rags and waste in Underwriters' Laboratories labeled metal containers. Do not allow oily rags and waste to accumulate in buildings.



- g. Thermal Coefficient of Linear Expansion    2 x 10<sup>-5</sup> in./in.°C  
(ASTM C-531)
- h. Cure Rate 24 hours for normal operations    (@ 70°F/21°C)

### 2.03 Engineering Details

#### A. Points of Termination

1. Edges shall be chased to “lock” the lining into the concrete.
2. Tank perimeters shall be treated in one of three methods as specified by the Owner prior to bid:
  - a. Lining shall terminate at tank perimeter without sealing perimeter edge, to allow detection of leaks that may occur under the tank.
  - b. Lining shall terminate at tank perimeter with a compatible elastomer sealing the interface between the lining and the tank.
  - c. Lining shall lap and seal onto the perimeter of the tank by bridging over compatible elastomer at the tank/slab interface to compensate for possible movement.
3. Equipment support legs shall be treated in one of the two methods described in 2.b. or 2.c. above as specified by the Owner prior to bid.
4. Trench drains shall be treated in one of three methods as specified by the Owner prior to bid:
  - a. Steel angle trench lip must be anchored to prevent movement between the steel and concrete. Lining shall be chased to “lock” the lining where it terminates at the angle. Steel angle will be coated with material compatible with the lining material or will remain uncoated at Owner’s option.
  - b. Prefabricated polymer or alloy trenches must be anchored to prevent movement between the concrete and trench. Lining shall be chased to “lock” the lining where it terminates at the trench.
  - c. Concrete trench will be lined to maintain monolithic protection. “Cold Joint” will be treated by lining manufacturer to assure bridging of potential cracks.
5. Pipe drains shall be treated by chasing the lining to “lock” in place at point of termination. Pipe drain must be anchored to prevent movement between concrete and trench.
6. Pipe chases shall be treated by having the lining lap and seal onto the perimeter of the pipe chase.



**B. Joints and Cracks**

1. Control joints shall be treated by lining manufacturer to assure bridging of potential cracks and to maintain monolithic protection.
2. Cold joints or construction joints shall be treated by lining manufacturers to assure bridging potential cracks and to maintain monolithic protection on horizontal and vertical surfaces as well as horizontal and vertical interfaces.
3. Vertical and horizontal expansion/contraction joints shall be honored by installing backer rod and compatible sealant after lining is installed. Sealant shall be sufficient to handle traffic conditions and chemical exposures in area.
4. Cracks in vertical or horizontal concrete substrates shall be treated by lining manufacturer to assure bridging of cracks and to maintain monolithic protection.

**PART THREE – EXECUTION**

**3.01 New Concrete Curing Time**

- A. Contractor shall ensure that all new concrete has cured for a minimum of 28 days prior to any coatings be applied to it.

**3.02 Preparation**

- A. Substrate: Concrete preparation shall be by mechanical means and include use of a scabber, scarifier or shot blast machine for removal of bond inhibiting materials such as curing compounds or laitance.

**3.03 Application**

- A. General: Apply each component of resinous lining system in compliance with manufacturer's directions to produce a uniform monolithic wearing surface of thickness indicated, uninterrupted except at divider strips, saw joints or other types of joints (if any), indicated or required.
- B. Primer: Mix and apply primer over properly prepared substrate with strict adherence to manufacturer's installation procedures and coverage rates.
- C. Mortarcoat: Mix and apply mortarcoat according to manufacturer's recommended procedures.
- D. Top Coat: Mix and apply mineral composite topcoat over properly cured mortarcoat with strict adherence to manufacturer's installation procedures.

**3.04 Field Quality Control**

- A. The right is reserved to invoke the following material testing procedure at any time, and any number of times during period of lining application.

- B. The Owner will engage service of an independent testing laboratory to sample materials being used on the job site. Samples of material will be taken, identified and sealed, and certified in presence of Contractor.
- C. Testing laboratory will perform tests for any of the characteristics specified, using applicable testing procedures referenced herein, or if none are referenced, in manufacturer's product data.
- D. If test results show materials being used do not comply with specified requirements, Contractor may be directed by Owner to stop work; remove non-complying materials; pay for testing; reapply lining materials to properly prepared surfaces which had previously been coated with unacceptable materials.

### **3.05 Inspection**

- A. Inspect all surfaces on which paint is to be applied and notify the Engineer of any defects considered detrimental to the application of materials specified.
- B. If any dirty, rusty, scaly, greasy, damp, scuffed surfaces, or conditions otherwise detrimental to the formation of a durable paint film are painted over, both the removal of paint and repainting the affected area shall be done by the Contractor without additional cost to the Owner.

### **3.06 Curing, Protection and Cleaning**

- A. Cure resinous lining materials in compliance with manufacturer's directions, taking care to prevent contamination during stages of application and prior to completion of curing process. Close area of application for a minimum of 24 hours.
- B. Protect resinous lining materials from damage and wear during construction operation. Where temporary covering is required for this purpose, comply with manufacturer's recommendations for protective materials and method of application. General Contractor is responsible for protection and cleaning of surfaces after final coats.
- C. Cleaning: Remove temporary covering and clean resinous lining just prior to final inspection. Use cleaning materials and procedures recommended by resinous lining manufacturer. Touch-up coatings and restore finish where damaged or defaced by construction activities.
- D. Remove coating spatter from all finished surfaces and restore affected finishes.

### **3.07 Certification**

- A. The Contractor shall submit to the Engineer, immediately upon completion of the job, certification from the manufacturer indicating that the quantity of each coating purchased was sufficient to properly coat all surfaces.

End of Section

# STONHARD

Mr. Mike Busse  
City of Covington Ohio  
1 S High St  
Covington, OH 45318

Project Name: **Covington, OH - WTP Chemical Lining Project**

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September 10, 2019

Re: Quote Number: **4290809**

Dear Mr. Mike Busse:

Thank you for the opportunity to work with you on the Covington, OH - WTP Chemical Lining Project project at City of Covington OH - Water Treatment Plant, Water Street, Covington OH 45318 . For this project, Stonhard proposes the following scope of work and pricing:

<b>Area Name</b>	<b>Size</b>	<b>Product</b>
Drum Storage/Chemical Containment Area	425 sq ft	STONCHEM 502

**Area Name: DRUM STORAGE/CHEMICAL CONTAINMENT AREA**

**Scope of Work (Drum Storage/Chemical Containment Area):**

- Stonchem 502 is a high-performance, epoxy hybrid lining system
- applied at a nominal thickness of 40 mil/1 mm. The mortar-coat,
- topcoat sequencing provides a light-duty chemical barrier
- for areas with occasional foot traffic. The Stonchem 502 system
- has excellent resistance to caustics and moderate concentrations
- of acids.
- 
- - Power-wash substrate
- - Prep
- - Prime
- - Apply mortar-coat
- - Apply topcoat

**Conditions of Use (Drum Storage/Chemical Containment Area):**

- There are no spillages specified. However if spillages do occur, they are not to exceed the Chemical Resistance Guides of the quoted products. The spillages occur over 100 % of the floor through normal operations on a daily basis.

- The floor is mopped and swept with general purpose cleaner occasionally at a temperature of 90° F.
- The floor is subject to cart traffic and hand trucking on rubber and plastic wheels with a maximum load of no more than 5,000 lbs.

**Warranty (Drum Storage/Chemical Containment Area):**

- Refer to Terms and Conditions for detailed warranty.

**Pricing (Drum Storage/Chemical Containment Area):**

- \$13,900 based on prevailing wage labor.

**Pricing Assumes:**

The following is a list of requirements needed to ensure a successful completion of this project:

- Lighting - The area must have adequate lighting in order to install the specified Stonhard product.
- Heat - A minimum substrate and material temperature of 60F must be maintained in the area to ensure proper curing.
- Electricity - The area must have a 240v/60 amp/3 phase or 480v/30 amp/3-phase power source; and multiple, dedicated 110V/20 amp outlets.
- Trash removal - A dumpster or equivalent means of trash removal must be provided.
- Material storage - The material must be stored in a dry, heated location in or around the area.
- Accessibility - Area must be free of all moveable equipment and trades prior to Stonhard's arrival.
- Price is based on one (1) phase/set-up only. If additional phases and/or set-ups are required, additional charges will be incurred.
- Finished floor will follow contour of existing substrate.
- Stonhard-trained installation team.
- Floor will be mechanically prepared with equipment other than a Blastrac- such as, scarifiers, grinders, scabblers, etc.
- All leftover product is the property of Stonhard.
- Not responsible for damages caused by hydrostatic and/or osmotic pressure.
- Single source warranty for one year covering both materials and workmanship.

**Exclusions:**

- Quote does not include integral cove base
- Quote does not include removal of existing overlayment
- Quote does not include grout or pitching/sloping of floor
- Quote does not include mobile generators or special power requirements
- Quote does not include night/holiday work
- Quote does not include asbestos or lead abatement
- Quote does not include temporary barriers, tenting or ventilation for odor or dust
- Quote does not include floor protection of finished system
- Any area that is not accessible for preparation cannot be warrantied for bond

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City of Covington Ohio, Quote 4290809

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**Special Terms and Conditions:**

- Price is based on one (1) phase/set-up only. If additional phases and/or set-ups are required, additional charges will be incurred.
- Pricing is based on compatibility of existing wall coating to recommended Stonhard system. If incompatible, additional charges will apply for removal of the existing coating.

**STONHARD**