

SHERMAN VOLUNTEER FIRE DEPARTMENT:

Broadcast flooring system with high performance Polyaspartic top coats.

1.1 SYSTEM DESCRIPTION

A. The work shall consist of preparation of the substrate, the furnishing and application of an epoxy based shop floor system with two high performance topcoats. The system shall have the color and texture as specified by the Owner with a nominal thickness of 1/8". It shall be applied to the following areas: two apparatus bay areas, two hallways, laundry room, boiler room, vestibule/stairway base, radio room, gear dryer room, janitors closet all strictly in accordance with the Manufacturer's recommendations.

B. Mechanical pad bases in the Boiler Room only.

1.2 SUBMITTALS

A. Product Data: Latest edition of Manufacturer's literature including performance data and installation procedures.

B. Manufacturer's Safety Data Sheet (SDS) for each product being used.

C. Samples: A 6-inch square sample of the proposed system. Color, texture, and thickness shall be representative of overall appearance of finished system.

D. Submittals:

1. For flooring system, documentation including VOC content and chemical composition.

2. Maintenance, cleaning and repair recommendations.

3. Manufacturer's application instructions

1.3 QUALITY ASSURANCE

A. The Manufacturer shall have a minimum of 5 years' experience in the production, sales, and technical support of epoxy and urethane industrial flooring and related materials.

B. The Contractor shall have been approved by the flooring system manufacturer in all phases of surface preparation and application of the product specified.

C. No requests for substitutions shall be considered that would change the generic type of the specified System for the two apparatus bay areas.

D. System shall be in compliance with requirements of United States Department of Agriculture (USDA), Food & Drug Administration (FDA), and local Health Department.

E. A pre-installation conference shall be held between the Contractor and the Owner to review and for clarification of this specification, application procedure, quality control, inspection and acceptance criteria and production schedule.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping

1. All components of the system shall be delivered to the site in the Manufacturer's packaging, clearly identified with the product type and batch number.

B. Storage and Protection

1. The Contractor shall be provided with a storage area for all components. The area shall be dry and out of direct sunlight. Contractor is responsible that all storage is in accordance with the Manufacturer's recommendations and relevant health and safety regulations.
2. Copies of Safety Data Sheets (SDS) for all components shall be kept on site for review by the Firehouse personnel.

C. Waste Disposal

1. The Contractor shall be provided with adequate disposal facilities for non-hazardous waste generated during installation of the system.

1.5 PROJECT CONDITIONS

A. Site Requirements

1. Contractor shall identify air, material and substrate environmental/temperature requirements with the submission of bid. All installation work shall be done in accordance with manufacturers recommended environmental/temperature conditions.
2. Contractor shall identify the relative humidity and any other environmental requirements in the specific location of the work
3. The Contractor shall ensure that adequate ventilation is available for the work area.
4. The Contractor shall be supplied with existing lighting levels.

B. Safety Requirements

1. All open flames and spark-producing equipment shall be removed from the work area prior to commencement of application.
2. Smoking is strictly prohibited within the building.
3. The Owner or authorized personnel shall be responsible for the removal and replacement of all non-fixed items from the work area.
4. Non-related personnel in the work area shall be kept to a minimum.

C. Site Testing Requirements

1. Verify 48 hour in-service conditioning of the concrete floor slab and the occupied air space above the floor slab per section 9 of ASTM F2170-19a.

2. Concrete floor slab shall be at in-service temperature and the occupied air space above the floor slab shall be at in-service temperature and service relative humidity for at least 48 hours.

3. Contractor shall determine number and location of “in-situ” (internal relative humidity) test holes required for the appropriate sleeves and probes per section 10.1 of ASTM F2170-19a.

4. Record total area of concrete slab and number of test holes required on report.

1.6 WARRANTY

A. Contractor warrants that material shipped be substantially free from material defects and will perform as per manufacturers published literature if used in accordance with the latest prescribed procedures and requirements.

B. Contractor is responsible for the application and processing of products and is liable for any defects.

PART 2 – PRODUCTS

2.1 FLOORING

A. Resins & Coatings: 1/8” Double-Broadcast Shop Floor seamless flooring system.

1. System Materials:

a. Primer: Resins and Coatings, resin and hardener. In the event of elevated moisture levels exceeding manufacturers recommendations contractor shall follow manufacturers recommendations for installation.

b. 1st Broadcast Coat: resin and Standard or Fast hardener. Clean, dry 25 or 40 mesh silica quartz sand.

c. 2nd Broadcast Coat: resin and Standard or Fast hardener. Clean, dry 25 or 40 mesh silica quartz sand.

c. Grout Coat: Pigmented Resin & Hardener,

d. 2nd Topcoat: Resins & Coatings, Pigmented Resin & Hardener,

2. Patch Materials

a. Shallow /Deep Fill and Patching: Use Resin & Hardener with clean dry silica sand suitable for troweling.

2.2 PRODUCT REQUIREMENTS

A. 1st Broadcast /2nd Broadcast Coats

1. Percent Solids 100 %

2. VOC 0 g/L

3. Tensile Strength, ASTM D 638 5'780 psi
4. Compressive Strength ASTM D-695 13'100 psi
5. Flexural Strength ASTM C-580 4000 psi
6. Abrasion Resistance, ASTM D 4060 C 17 Wheel, 1,000 gm load, 1,000 cycles 30mg weight loss
7. Flammability, ASTM D 684, NFPA 101, Type 1 Class 1
8. Hardness, Shore D ASTM 2240 70-80
9. Potlife @ 70 F 20-40 minutes

B. Grout Coat& Top Coat

1. Percent Solids 85 %
2. VOC 0 g/L
3. Tensile Strength, ASTM D 2370 6500 psi
4. Impact Resistance >160 in/lbs
5. Tensile Elongation ASTM D 2370 8%

PART 3 – EXECUTION

3.1 EXAMINATION

A. Contractor shall examine substrates, areas and conditions, for compliance with requirements for maximum moisture content, installation tolerances and other conditions affecting flooring performance.

1. Verify that substrates and conditions are satisfactory for flooring installation and comply with requirements.

3.2 PREPARATION

A. General

1. Existing concrete surfaces shall be free of oil, grease, curing compounds, loose particles, moss, algae growth, laitance, friable matter, dirt, and bituminous products.
2. Moisture Testing: Perform internal relative humidity or "in-situ" testing per ASTM F 2170-19a.
 - a. Perform three tests for the first 1,000 sf and at least one extra test for every additional 1,000 sf of area.
 - b. Application will proceed using standard epoxy primer only when the vapor/moisture emission rates meet the manufacturers recommendations

c. If the moisture-vapor drive exceeds manufacturers recommendations, then the Owner and/or authorized representative shall be notified and advised of the need to install a moisture-vapor mitigating primer system that has been approved by the manufacturer.

3. There shall be no visible moisture present on the surface at the time of application of the system. Compressed oil-free air and/or a light passing of a propane torch may be used to dry the substrate.

4. Mechanical surface preparation

a. Shot blast all surfaces to receive flooring system with a mobile steel shot, dust-recycling machine (Blastrac or equal) or utilize diamond grinders or other suitable equipment as approved by owner. All surface and embedded accumulations of paint, toppings hardened concrete layers, laitance, power trowel finishes and other similar surface characteristics shall be completely removed leaving a bare concrete surface having a minimum profile of CSP 3-4 as described by the International Concrete Repair Institute.

b. Floor areas inaccessible to the mobile blast machines shall be mechanically abraded to the same degree of cleanliness, soundness and profile using diamond grinders, needle guns, bush hammers, or other suitable equipment. Terminations at drains and doorways (doorway terminations should be planned ahead of time on exact termination, usually directly under the door) shall be key cut using a suitable diamond saw to properly seat the system, providing a smooth transition between areas. The detail cut shall also apply to drain perimeters and expansion joint edges. Depth of cut shall be relevant to the finish floor thickness.

c. Cracks and joints (non-moving) greater than 1/8 inch wide are to be chiseled or chipped-out and repaired per manufacturer's recommendations.

5. At spalled or worn areas, mechanically remove loose or delaminated concrete to a sound concrete and patch per manufacturer's recommendations.

3.3 APPLICATION

A. General

1. The system shall be applied in six distinct steps as listed below:

- a. Substrate preparation
- b. Priming
- c. Broadcast coat application
- d. 2nd Broadcast application
- e. Grout coat application

f. Topcoat application

2. Immediately prior to the application of any component of the system, the surface shall be dry and any remaining dust or loose particles shall be removed using a vacuum or clean, dry, oil-free compressed air.
3. The handling, mixing and addition of components shall be performed in a safe manner to achieve the desired results in accordance with the Manufacturer's recommendations.
4. The contractor shall ensure that the pitch provides adequate drainage to existing floor drains or otherwise provide leveling work to eliminate bird baths and ensures all water drains to existing floor drains.
5. A neat finish with well-defined boundaries and straight edges shall be provided by the contractor.

B. Primer

1. The primer shall comprise of 2 components, resin and hardener installed as per the Manufacturers recommendations
2. In the event of elevated moisture levels follow manufacturers recommendations.
3. The resin shall be added to the hardener and thoroughly mixed by suitably approved low speed drill mixer.
4. The primer shall be applied over horizontal surfaces as approved by the Manufacturer
5. Allow material to fully cure.

C. 1st Broadcast Coat

1. The 1st Broadcast coat shall be applied as a single application as per manufacturers recommendation.
2. The Broadcast coat shall be comprised of a resin and hardener and mixed in the ratio as per manufacturers recommendations. The broadcast sand will be clean dry silica quartz.
3. The resin shall be added to the hardener and thoroughly mixed by suitably approved means per manufacturers recommendation.
4. An even bead of material should then be poured over the horizontal surfaces and leveled using a method approved by the manufacturer. Use a manufacturers approved method to achieve a consistent even finish.
5. Broadcast Natural quartz at a rate recommended by the manufacturer. Allow material to fully cure.

D. 2nd Broadcast Coat

1. Sweep and vacuum loose sand and repeat steps 1-6 per manufacturers recommendations.

E. 1st Grout & Topcoat (Pigmented)

1. The 1st grout/topcoat shall be roller applied at the rate as recommended by the manufacturer.
2. The grout/topcoat shall be comprised of a liquid resin and hardener that is mixed at the ratio as recommended by the manufacturer. Colorant shall be added as per manufacturers recommendation.

F. 2nd Topcoat (Pigmented)

1. The 2nd topcoat shall be roller applied at the rate as per manufactures recommendation.
2. The 2nd topcoat shall be comprised of a liquid resin and hardener that is mixed at the ratio as recommended by the manufacturer.

3.4 FIELD QUALITY CONTROL

A. Tests, Inspection

1. The following tests shall be conducted by the Applicator:
 - a. Temperature
 1. Air, substrate temperatures and, if applicable, dew point.
 - b. Coverage Rates
 1. Rates for all layers shall be monitored by checking quantity of material used against the area covered.

3.5 CLEANING AND PROTECTION

- A. Cure flooring material in compliance with manufacturer's directions, taking care to prevent their contamination during stages of application and prior to completion of the curing process.

3.6 PROTECTION OF EXISTING EQUIPMENT

- A. Contractor shall protect all existing equipment from dust and debris while work is ongoing. Contractor shall use hepa vacuums while any grinding, blasting, scraping, scarifying or other dust producing activities are taking place. Existing air intakes, compressed air equipment, exhaust mobile systems shall be protected with poly or other suitable coverings to prevent dust from entering into systems.

B. Contractor shall leave workspace broom clean daily.

3.7 YELLOW REFLECTIVE LINE STRIPING

A. Contractor shall install yellow reflective (not illuminating) lines below the polyaspartic top coats to delineate the travel lanes for the fire/ambulance equipment.

3.8 PROJECT WARRANTY

A. Contractor shall warranty all work for defects in workmanship and materials for a period of 5 years from date of acceptance.

3.9 Bid Requirements

A. Contractor base bid shall be for the complete scope of work listed herein. Base bid shall include troweled epoxy flooring for all areas.

B. Contractor is encouraged to propose cost effective alternates for all areas except for the apparatus bays.

C. Work shall be done in 2 phases. South apparatus bay, North apparatus bay. The other areas can be added onto either phase.

D. Contractor shall provide a proposed schedule for the entire project. The SVFD will need approximately 4-6 days after they are able to move trucks/equipment into the south apparatus bay prior to work commencing on the north apparatus bay.

E. Project must start within 10 days after bid award and all work must be complete within 6 weeks.

F. Anticipated bid award date is April 11, 2022 subject to town meeting approval.

G. Sealed bids are due March 4, 2022 by 12:00 PM at the Fire Marshal's office at the Offices of Emergency Services 1 Route 39 North Sherman, Ct 06784 (cell phone # 475-228-6080). Reference lower level flooring project on the envelope.

H. Please direct any questions to Chief Chris Fuchs, chief@shermanvfd.org

I. Bidders are required to verify all existing conditions and satisfy themselves that they understand all existing conditions prior to submission of their bid. No extra payments will be made for non compliance with this requirement.

SUBMISSION OF PROPOSAL:

All qualified proposals will be evaluated. The evaluation of the proposals will be done by the SVFD and its decision will be final. Award will be made to the most qualified firm who demonstrates previous experience in performing work of similar scope to this RFP and the ability to perform the work as it relates to the scope of the project. Schedule and pricing will be key factors of selection. The SVFD reserves the right to reject any and all proposals. The person signing the proposal must be a legal representative of the Proposer authorized to negotiate and bind the firm to the contract. The proposer agrees to be bound by their proposal price for a period of 60 days from the date of submission. The

Proposer and its sub-consultants shall be licensed to practice in the State of CT and registered with the State of CT.

FEE PROPOSAL: Utilize the bid form attached. The fee proposal must be signed by a legal representative of the Proposer's company authorized to negotiate and bind the firm to the contract in the event the firm is selected. The fee proposal must include all direct costs associated with the performance of the work required in this RFP included but not limited to administrative fee, processing fee, reproduction fees, communication fees, and transmittal fees. No additional compensation will be considered.

CONTRACT: A response to an RFP is an offer to contract with the Town of Sherman based upon the terms, conditions and specifications contained in this RFP.

Proposals do not become contract unless and until executed by the BOS.

All proposed and recommended work is to meet State and Town building codes and follow any other Town codes or ordinance that applies. The Town of Sherman (or the SVFD) will not be held responsible for any costs incurred by the contractor for work performed in the preparation for submitting the proposal. The proposal shall be comprehensive to complete all phases of the work described.

The SVFD and the Town of Sherman reserves the right to reject any and all proposals.

INSURANCE REQUIREMENTS: The successful Firm agrees to maintain in enforce and in compliance with the below limits for the complete term of the contract.

General Liability Each Occurrence 1,000,000

General Aggregate 2,000,000

Auto Liability Combined Single Limit

Each Accident 1,000,000

Professional Liability 2,000,000

Excess Liability/ Umbrella 1,000,000

WORKMAN'S COMPENSATION INSURANCE: The Proposer shall take out and maintain during the life of the contract adequate Workman's compensation Insurance for all the employees employed on said work. In case any class of employees or subcontractors is engaged in hazardous work under the contract at the site of the work is not protected under the Workman's Compensation statute, the contractor shall provide Workman's Compensation Insurance for the protection of employees not otherwise protected.

SVFD Flooring Bid Form

	Base Bid	Proposed Alternate
South Apparatus Bay	_____	NA
North Apparatus Bay	_____	NA
East Hallway	_____	_____
West Hallway	_____	_____
Radio Room	_____	_____
Laundry Room	_____	_____
Janitors Closet	_____	_____
Vestibule/stairway landing	_____	_____
Gear Drying room	_____	_____