SECTION 096723 - RESINOUS FLOORING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes resinous flooring systems with epoxy body coat(s).

1. Application Method: troweled.

B. Related Sections include the following:

1. Division 3 Section "Cast-in-Place Concrete."

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include manufacturer's technical data, application instructions, and recommendations for each resinous flooring component required.

B. Samples for Initial Selection: For each type of exposed finish required.

C. Samples for Verification: For each resinous flooring system required, 6 inches (150 mm) square, applied to a rigid backing by Installer for this Project.

D. Product Schedule: Use resinous flooring designations indicated in Part 2 and room designations indicated on Drawings in product schedule.

E. Installer Certificates: Signed by manufacturer certifying that installers comply with specified requirements.

F. Material Test Reports: For each resinous flooring component.

G. Maintenance Data: For resinous flooring to include in maintenance manuals.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Engage an experienced installer (applicator) who is experienced in applying resinous flooring systems similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance, and who is acceptable to resinous flooring manufacturer.

1. Engage an installer who employs only persons trained and approved by resinous flooring manufacturer for applying resinous flooring systems indicated.
2. Engage an installer who is certified in writing by resinous flooring manufacturer as qualified to apply resinous flooring systems indicated.

B. Source Limitations: Obtain all resinous flooring materials, including but not limited to primers, resins, hardening agents, grouting coats, and topcoats, patching and fill material, joint sealant, and repair materials through one source manufacturer.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages and containers, with seals unbroken, bearing manufacturer's labels indicating brand name and directions for storage and mixing with other components.

B. Store materials to prevent deterioration from moisture, heat, cold, direct sunlight, or other detrimental effects.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Type-1 Concrete substrate shall be properly cured for a minimum of 30 days. Conduct ASTM-F 1869 Anhydrous Calcium Chloride Test. If moisture vapor emission content of the concrete slab exceeds 5lbs/1000ft2 per 24 hrs, Stonhard OP2 Osmotic Vapor Grout must be used prior to resinous flooring installation. Slab-on grade substrates without Poly vapor-retarder may also require osmotic vapor grout. Comply with resinous flooring manufacturer's written instructions for substrate temperature, ambient temperature, humidity, ventilation, and other conditions affecting resinous flooring application.

B. Lighting: Provide permanent lighting or, if permanent lighting is not in place, simulate permanent lighting conditions during resinous flooring application.

C. Close spaces to traffic during resinous flooring application and for not less than 24 hours after application, unless manufacturer recommends a longer period.

PART 2 - PRODUCTS

2.1 RESINOUS FLOORING AT TOILET ROOMS AND LOCKER ROOMS

A. Basis of Design Products: Subject to compliance with requirements, provide Stonblend GSI as manufactured by Stonhard, Inc. Contact Tom Burns (800)854-0310 or equivalent product approved by architect prior to bidding.

B. System Characteristics:

1. Color and Pattern: As selected by Architect from manufacturer's full range.
2. Wearing Surface: Manufacturer's standard orange-peel texture.
3. Overall System Thickness: 3/16 inch (4.8 mm)
4. Federal Agency Approvals: USDA and FDA approved for food-processing environments.

C. System Components: Manufacturer's standard components that are compatible with each other and as follows:

1. Body Coat(s):

a. Resin: Bisphenol-A Epoxy.
b. Formulation Description: 100 percent solids
c. Application Method: Hand-Troweled with notch-free square steel 18" trowel.

1) Thickness of Coats: 3/16 inch (4.8 mm)
2) Number of Coats: One.

d. Aggregates: Manufacturer's standard.

2. Primer: Type recommended by manufacturer for substrate and body coat(s) indicated.

a. Formulation Description: 100 percent solids

3. Grout Coat

a. Formulation Description: 100 percent solids
b. Type: Clear
c. Number of Coats: One

4. Topcoat: Chemical-resistant and UV-resistant sealing or finish coat(s).

a. Resin: Aliphatic Urethane.
b. Formulation Description: Waterborne Aliphatic Urethane,
c. Type: Clear
d. Finish: Matte
e. Number of Coats: One

D. At all showers and at alcoves between showers in Locker Rooms, provide Stoneblend GSI with added texture. Install per manufacturer's recommendations.

2.2 RESINOUS FLOORING AT FOOD SERVICE

A. Basis of Design Products: Subject to compliance with requirements, provide Stonshield UTS Contact Tom Burns (800)854-0310 with texture as manufactured by Stonhard, Inc. or equivalent product approved by architect prior to bidding..

B. System Characteristics:

1 Color and Pattern: As selected by Architect from manufacturer's full range.
2 Wearing Surface: Texture for slip resistance.
3. Integral Cove Base: 4 inches (100 mm) high.
5. Overall System Thickness: 1/4 inch (6.4 mm).
6. Federal Agency Approvals: USDA and FDA approved for food-processing environments.

C. System Components: Manufacturer's standard components that are compatible with each other and as follows:

1. Body Coat(s):

a. Resin: Urethane.
b. Formulation Description: 100 percent solids
c. Application Method: Troweled.

1) Thickness of Coats: 1/4 inch (6.4 mm).
2) Number of Coats: One.

d. Aggregates: Manufacturer's standard.

2. Topcoat: Chemical-resistant and UV-resistant sealing or finish coat(s).

a. Resin: Urethane
b. Formulation Description: 100 percent solids
c. Type: Clear,

d. Finish: Gloss.
e. Number of Coats: One

2.3 ACCESSORY MATERIALS

A. Patching and Fill Material: Resinous product of single source resinous flooring manufacturer and recommended by manufacturer for application indicated.

B. Joint Sealant: Type produced by single source resinous flooring manufacturer for type of service and joint condition indicated.

PART 3 - EXECUTION

3.1 PREPARATION

A. General: Prepare and clean substrates according to resinous flooring manufacturer's written instructions for substrate indicated. Provide clean, dry, and neutral Ph substrate for resinous flooring application.

B. Concrete Substrates: Provide sound concrete surfaces free of laitance, glaze, efflorescence, curing compounds, form-release agents, dust, dirt, grease, oil, and other contaminants incompatible with resinous flooring.

1. Roughen concrete substrates as follows:

2. Concrete preparation shall be by mechanical means only and include use of a scabbler, scarifier or shot blast machine for removal of bond inhibiting materials such as curing compounds or laitance. Surface profile achieved shall be similar to medium grit sandpaper. No acid etching or water blasting permitted.

3. Repair damaged and deteriorated concrete according to resinous flooring manufacturer's written recommendations.
4. Verify that concrete substrates are dry.

a. Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with application only after substrates have maximum moisture-vapor-emission rate of 5 lb of water/1000 sq. ft. (1.36 kg of water/92.9 sq. m) of slab in 24 hours.
b. Perform additional moisture tests recommended by manufacturer. Proceed with application only after substrates pass testing.

5. Verify that concrete substrates have neutral Ph and that resinous flooring will adhere to them. Perform tests recommended by manufacturer. Proceed with application only after substrates pass testing.

C. Resinous Materials: 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. Mix components and prepare materials according to resinous flooring manufacturer's written instructions.

D. Use patching and fill material to fill holes and depressions in substrates according to manufacturer's written instructions.

E. Treat control joints and other nonmoving substrate cracks to prevent cracks from reflecting through resinous flooring according to manufacturer's written recommendations.

3.2 APPLICATION

A. General: Apply components of resinous flooring system according to manufacturer's written instructions to produce a uniform, monolithic wearing surface of thickness indicated.

1. Coordinate application of components to provide optimum adhesion of resinous flooring system to substrate, and optimum intercoat adhesion.
2. Cure resinous flooring components according to manufacturer's written instructions. Prevent contamination during application and curing processes.
3. At substrate expansion and isolation joints, provide joint in resinous flooring to comply with resinous flooring manufacturer's written recommendations.

a. Apply joint sealant to comply with manufacturer's written recommendations.

B. Apply primer over prepared substrate at manufacturer's recommended spreading rate.

C. Integral Cove Base: Apply cove base mix to wall surfaces before applying flooring. Apply according to manufacturer's written instructions and details including those for taping, mixing, priming, troweling, sanding, and topcoating of cove base. Round internal and external corners.

D. Apply troweled body coat(s) in thickness indicated for flooring system. Hand or power trowel and grout to fill voids. When cured, sand to remove trowel marks and roughness.

E. Apply grout coat, of type recommended by resinous flooring manufacturer to fill voids in surface of final body coat and to produce wearing surface indicated.

F. Apply topcoat(s) in number of coats indicated for flooring system and at spreading rates recommended in writing by manufacturer.

3.3 CLEANING AND PROTECTING

A. Protect resinous flooring from damage and wear during the remainder of construction period. Use protective methods and materials, including temporary covering, recommended in writing by resinous flooring manufacturer.

END OF SECTION 096723