SECTION 07 18 00 - TRAFFIC COATINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Restroom waterproof traffic coatings **RMX-01** with integral base **ICB-01** and supplementary items necessary for application.

1.2 ACTION SUBMITTALS

A. Product Data: Manufacturer's technical literature for each product and system indicated.

1. Include manufacturer's specifications for materials, finishes, construction details, application instructions, and recommendations for maintenance.

B. Shop Drawings: Show extent of each traffic coating. Include details for treating substrate joints and cracks, flashings, deck penetrations, and other termination conditions.

C. Samples for Verification Purposes: For each type of traffic coating required, prepared on rigid backing and of same thickness and material indicated for the Work.

1. Provide stepped samples on backing large enough to illustrate build-up of traffic coatings.

1.3 INFORMATIONAL SUBMITTALS

A. Manufacturer's Project Acceptance Document: Certification by the manufacturer that its products and systems are approved, acceptable, suitable for use in specific locations, for specific details, and for applications indicated, specified, or required, and that a warranty will be issued.

B. Field Quality Control Reports: Written report of testing and inspection required by "Field Quality Control".

C. Warranty:

1. Provide manufacturer's written warranty covering materials and application (labor) stating obligations, remedies, limitations, and exclusions.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: To include in maintenance manuals. Include recommendations for periodic inspections, cleaning, care, maintenance, and repair of traffic coatings.

1.5 QUALITY ASSURANCE

A. Applicator Qualifications:

1. Experience: Installer's personnel with not less than 5 years of experience in the successful performance of Work similar to scope of this Project.
2. Supervision: Installer shall maintain a competent supervisor at Project while the Work is in progress, and who has not less than 5 years of experience installing products and systems similar to scope of this Project.
3. Manufacturer Acceptance: Installer shall be certified, approved, licensed, or acceptable to manufacturer to install products.

B. Fire-Test-Response Characteristics: Provide traffic coating materials with the fire-test-response characteristics as determined by testing identical products per test method below for deck type and slopes indicated by an independent testing and inspecting agency that is acceptable to authorities having jurisdiction.

1. Mechanical/Equipment-rooms that Also Serve as a Return Air Plenum: Provide materials identical to those of traffic coatings tested according to ASTM E 84, where used in areas serving as a return air plenum that comply with requirements indicated.

    a. Flame spread less than 25.
    b. Smoke Density less than 50.

1.6 PRE-APPLICATION CONFERENCE

A. Pre-Application Conference: Before Work begins, conduct conference at Project site.

1. Participants:

    a. Architect.
    b. Contractor, including superintendent.
    c. Installer, including project manager and supervisor.
    d. If requested, Manufacturer's qualified technical representative.
    e. Installers of other construction interfaced with Work.

2. Minimum Agenda: Installer shall demonstrate understanding of the Work required by describing detailed procedures for preparing, installing, and cleaning the Work. Demonstration shall include, but not be limited to, following topics:

    a. Tour representative areas of Work, inspect and discuss condition of substrate, and other preparatory work performed by other trades.
    b. Review Contract Document requirements.
    c. Review approved submittals.
    d. Review inspection and testing requirements.
    e. Review environmental conditions and procedures for coping with unfavorable conditions.
    f. Resolve deviations or differences between Contract Documents and the manufacturer's specifications.

3. Record discussions, including decisions and agreements, and prepare report.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages and containers with seals unbroken and bearing manufacturer's labels showing the following information:

1. Manufacturer's brand name.
2. Type of material.
3. Directions for storage.
4. Date of manufacture and shelf life.
5. Lot or batch number.
6. Mixing and application instructions.
7. Color.

B. Store materials in a clean, dry location protected from exposure to direct sunlight. In storage areas, maintain environmental conditions within range recommended in writing by manufacturer.

1.8 PROJECT CONDITIONS

A. Environmental Limitations: Apply traffic coatings within the range of ambient and substrate temperatures recommended in writing by manufacturer. Do not apply traffic coatings to damp or wet substrates, when temperatures are below 40 deg F (5 deg C), when relative humidity exceeds 85 percent, or when temperatures are less than 5 deg F (3 deg C) above dew point.

1. Do not apply traffic coatings in snow, rain, fog, or mist, or when such weather conditions are imminent during the application and curing period. Apply only when frost-free conditions occur throughout the depth of the substrate.

B. Do not apply traffic coating until items that will penetrate membrane have been installed.

1.9 COORDINATION

A. Coordinate application of products and systems with interfacing and adjoining construction to provide a successful application without failure.

1.10 WARRANTY

A. Manufacturer's Warranty: Furnish manufacturer's written material and labor warranty signed by an authorized representative using manufacturer's standard form agreeing to furnish materials and labor required to repair or replace work which exhibits material defects caused by manufacture or design and application of product. "Defects" is defined to include but not limited to deterioration or failure to perform as required.

1. Defects of traffic coatings includes, but is not limited to, the following:

   a. Adhesive or cohesive failures.
   b. Abrasion or tearing failures.
   c. Surface crazing or spalling.
   d. Intrusion of water, oils, gasoline, grease, salt, deicer chemicals, or acids into deck substrate.

2. Warranty does not include deterioration or failure of traffic coating due to unusual weather phenomena, failure of prepared and treated substrate, formation of new substrate cracks exceeding 1/16 in (1.5 mm) in width, fire, vandalism, or abuse by maintenance equipment.
3. Warranty Period: Manufacturer shall warrant the products to be free from material and

labor Defects for a period of 5 years from date of Substantial Completion

PART 2 - PRODUCTS

2.1 MANUFACTURERS AND PRODUCTS

A. Available Manufacturers and Products: Subject to compliance with requirements of Contract Documents as judged by the Architect, manufacturers offering products that may be incorporated into the Work include, but are not limited to, those listed.

1. BASF Construction Chemicals, LLC Building Systems.
2. Gaco Western LLC.
3. Neogard; Division of Jones-Blair.
4. Pacific Polymers International, Inc.
5. Pecora Corporation
6. Tremco Incorporated; an RPM company.

2.2 MATERIALS, GENERAL

A. Single Source Responsibility: Furnish each type of product from single manufacturer. Provide second-ary materials only as recommended by manufacturer of primary materials.

2.3 TRAFFIC COATING

A. Restroom Waterproof Traffic Coating System **RMX-01** With Integral Base **ICB-01**:
   1. Physical Requirements: Provide traffic coatings complying with ASTM C 957 and the following minimum physical properties of cured system:
      a. Tensile Strength, ASTM D412, 2,500 psi plus or minus 500 psi.
      b. Elongation, ASTM D412, 400% plus or minus 100%.
      c. Permanent Set, ASTM D412, < 30%
      d. Tear Resistance, ASTM D1004, approximately 200 pli
      e. Shore A, ASTM D2240, 60–80
      f. Adhesion, ASTM D4541, minimum 250 psi
      g. Water Resistance, ASTM D471, < 3% (7 days)
      h. Taber Abrasion, ASTM D4060, approximately 25 mg (1,000 CS-17)
      i. DCOF, ANSI 137.1, minimum 0.65 dry surface and 0.50 wet surface.
   2. Material Compatibility: Provide primers; base, intermediate, and topcoats; and miscellaneous materials that are compatible with one another and with substrate under conditions of service and application, as demonstrated by the manufacturer based on testing and field experience.
   3. Primer: Manufacturer's standard factory-formulated primer recommended for substrate and conditions indicated.
   4. Base Coat: Single- or multi-component aromatic liquid urethane elastomer.
   5. Intermediate Coat: Single- or multi-component aromatic liquid urethane elastomer.
   6. Topcoat: Single- or multi-component aliphatic liquid urethane elastomer or aromatic liquid urethane elastomer with UV inhibitors.
      a. Color: Grey.
   7. Component Coat Thicknesses: As recommended by traffic coating manufacturer for substrate and ser-vice conditions indicated.
   8. Aggregate: Uniformly graded washed silica sand of particle sizes, shape, and minimum

hardness recommended in writing by traffic coating manufacturer.

9. Basis of Design: Neogard Peda-Gard consisting of the following:
   a. Primer: Concrete and metal primers as recommended by Neogard for concrete porosity and applications.
   b. Flashing Tape: 86218 (62ZJB) flashing tape.
   c. Reinforcing Fabric: 86220 (63BJB) reinforcing fabric (Tietex T-272).
   d. Sealant: 70991 (47XJB) urethane sealant.
   e. Aggregate: 7992 (66010) 16/30 mesh silica quartz sand, broadcast at a rate of approximately 10 lbs/100 ft2.
   f. Base Coat: 70410 (45010) urethane coating, minimum 24 WFT.
   g. Intermediate Coat: 7430 (57040) series urethane coating, minimum 8 WFT
   h. Topcoat: 7430 (57040) series urethane coating, minimum 10 WFT.
   i. Integral base mortar as recommended by Neogard for concrete porosity and applications.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Acceptance of Surfaces and Conditions: Examine substrates to receive products and systems and as-sociated work for compliance with requirements and other conditions affecting performance. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents. Starting work within a particular area will be construed as acceptance of surface conditions.

1. Verify compatibility with and suitability of substrates.
2. Begin coating application only after minimum concrete curing and drying period recommended by traffic coating manufacturer has passed.
3. Verify that substrate is visibly dry and within the moisture limits recommended in writing by manufacturer. Test for capillary moisture by plastic sheet method according to ASTM D 4263 or as recommended by traffic coating manufacturer.

3.2 APPLICATION, GENERAL

A. Application Quality Standards: In addition to standards listed elsewhere, perform Work according to following, unless otherwise specified:

1. Respective manufacturer’s written application instructions.
2. Accepted submittals.
3. Contract Documents.

3.3 PREPARATION

A. General: Comply with manufacturer’s instructions, recommendations, and specifications for cleaning and surface preparation. Surfaces shall have no defects, contaminants, or errors which would result in poor or potentially defective application or would cause latent defects in Work.

B. Mask adjoining surfaces not receiving traffic coatings, deck drains, and other deck substrate penetrations to prevent spillage, leaking, and migration of coatings.

C. Concrete Substrates: Mechanically abrade concrete surfaces to a uniform profile according to ASTM D 4259 using self-contained recirculating blast cleaning apparatus and manufacturer's recommendations. Do not acid etch.

1. Remove grease, oil, paints, and other penetrating contaminants from concrete.
2. Remove concrete fins, ridges, and other projections.
3. Remove laitance, glaze, efflorescence, curing compounds, concrete hardeners, form-release agents, and other incompatible materials that might affect coating adhesion.
4. Remove remaining loose material to provide a sound surface, and clean surfaces according to ASTM D 4258.

3.4 TERMINATIONS AND PENETRATIONS

A. Prepare vertical and horizontal surfaces at terminations and penetrations through traffic coatings and at expansion joints, drains, and sleeves according to ASTM C 1127 and manufacturer's written recommendations.

B. Provide sealant cants at penetrations and at reinforced and nonreinforced deck-to-wall butt joints.

C. Terminate edges of deck-to-deck expansion joints with preparatory base-coat strip.

D. Install sheet flashings at deck-to-wall expansion and dynamic joints, and bond to deck and wall substrates according to manufacturer's written recommendations.

3.5 JOINT AND CRACK TREATMENT

A. Prepare, treat, rout, and fill joints and cracks in substrates according to ASTM C 1127 and traffic coating manufacturer's written recommendations. Before coating surfaces, remove dust and dirt from joints and cracks according to ASTM D 4258.

1. Comply with recommendations in ASTM C 1193 for joint-sealant installation.

3.6 TRAFFIC COATING APPLICATION

A. Apply traffic coating material according to ASTM C 1127 and manufacturer's written recommendations.

1. Start traffic coating application in presence of manufacturer's technical representative.
2. Mix materials according to manufacturer's instructions.
3. Apply primer over prepared substrate at manufacturer's recommended spreading rate.
4. Apply coatings by spray, roller, notched squeegee, or other applicators according to manufacturer's recommendations.
5. Apply total dry film thickness of traffic coating as indicated, but to not less than the minimum thickness recommended by the manufacturer. Apply each coating to the thickness recommended by the manufacturer.
6. Apply aggregate into wet coating according to manufacturer's recommendations.
7. Verify wet film thickness of each component coat every 100 sf (9 sm).
8. Apply traffic coatings to prepared wall terminations and vertical surfaces to height indicated and omit aggregate on vertical surfaces.

a. Integral wall base cove shall be approximately 19mm in diameter. Form mortar and use sealant to form integral cove base.

B. Apply primer, base, intermediate, and topcoats and aggregate according to traffic coating manufacturer's recommendations and as specified:

3.7 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Manufacturer's qualified technical representative shall periodically inspect Work to ensure installation is proceeding in accordance with manufacturer's designs, recommendations, instructions, and warranty requirements. Representative shall submit written reports of each visit indicating observations, findings, and conclusions of inspection.

1. Manufacturer's Technical Representative Qualifications: Direct employee of technical services department of manufacturer with experience in providing recommendations, observations, evaluations, and problem diagnostics.

B. Verify applied thickness before material attains final set, by use of mil-thickness gage as work progresses. Immediately apply additional coating to produce required thickness where readings indicate thick-ness less than that specified.

C. Visually inspect all areas for voids, damage, or rupture. Repair as required.

D. Flood Test:
1. Waterproofed area shall be flood tested for 48 hours, after system has cured 48 hours.
2. Plug drains on deck surface and use sand bags or other means to contain water.
3. Flood test to a depth of 2 inches for the duration of the test.
4. Repair any leaks that may appear.

E. Owner reserves the right to engage a qualified testing agency to perform the following field quality-control testing:

1. Samples of material delivered to Project site shall be taken, identified, sealed, and certified in presence of Contractor.
2. Testing agency shall perform tests for characteristics specified, using applicable referenced testing procedures or, if not referenced, using tests cited in manufacturer's product data.
3. Testing agency shall verify thickness of coatings during traffic coating application.
4. Testing agency shall verify water tightness of traffic system.
5. If test results show traffic coating materials do not comply with requirements, remove noncomplying materials, prepare surfaces, and reapply traffic coatings.
6. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.8 CURING AND PROTECTING

A. Cure traffic coatings according to manufacturer's written recommendations. Prevent contamination and damage during application and curing stages.

B. Protect traffic coatings from damage and wear during remainder of construction period.

END OF SECTION