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26 **PART 1 – GENERAL**

27 **1.1 RELATED DOCUMENTS**

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

30 **1.2 SUMMARY**

- 31 A. Section includes traffic coatings and pavement markings for the following applications:
32 1. Vehicular traffic.
33 B. Related Requirements:
34 1. Section 03 30 00 "Cast-In-Place Concrete" for surface finish of substrate to receive traffic coating.

35 **1.3 PRE-INSTALLATION MEETINGS**

- 36 A. Preinstallation Conference: Conduct conference at Project site.

37 **1.4 ACTION SUBMITTALS**

- 38 A. Product Data: For each type of product, including installation instructions.
39 B. Shop Drawings: For traffic coatings.
40 1. Include details for treating substrate joints and cracks, flashings, deck penetrations, and other
41 termination conditions.
42 2. Include plans showing layout of pavement markings, lane separations, and defined parking spaces.
43 Indicate, with international symbol of accessibility, spaces allocated for people with disabilities.

44 **1.5 INFORMATIONAL SUBMITTALS**

- 1 A. Qualification Data: For Installer.
- 2 B. Product Certificates: For each type of traffic coating.
- 3 C. Sample Warranty: For special warranty.

4 **1.6 QUALITY ASSURANCE**

- 5 A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

6 **1.7 FIELD CONDITIONS**

- 7 A. Environmental Limitations: Apply traffic coatings within the range of ambient and substrate temperatures
- 8 recommended in writing by manufacturer. Do not apply traffic coatings to damp or wet substrates, when
- 9 temperatures are below 40 deg F, when relative humidity exceeds 85 percent, or when temperatures are
- 10 less than 5 deg F above dew point.
- 11 1. Do not apply traffic coatings in snow, rain, fog, or mist, or when such weather conditions are imminent
- 12 during the application and curing period. Apply only when frost-free conditions occur throughout the
- 13 depth of substrate.
- 14 B. Do not install traffic coating until items that penetrate membrane have been installed.
- 15 C. Pavement-Marking Paint: Proceed with pavement marking only on clean, dry surfaces and at a minimum
- 16 ambient or surface temperature of 40 deg F for oil-based materials or 50 deg F for water-based materials,
- 17 and not exceeding 95 deg F.

18 **1.8 WARRANTY**

- 19 A. Manufacturer's Warranty: Manufacturer agrees to repair or replace traffic coating that fails in materials or
- 20 workmanship within specified warranty period.
- 21 1. Failures include, but are not limited to, the following:
- 22 a. Adhesive or cohesive failures.
- 23 b. Abrasion or tearing failures.
- 24 c. Surface crazing or spalling.
- 25 d. Intrusion of water, oils, gasoline, grease, salt, deicer chemicals, or acids into deck substrate.
- 26 2. Warranty Period: Five years from date of Substantial Completion.

27 **PART 2 – PRODUCTS**

28 **2.1 MATERIALS, GENERAL**

- 29 A. Material Compatibility: Provide primers; base-, intermediate-, and topcoat; and accessory materials that are
- 30 compatible with one another and with substrate under conditions of service and application, as
- 31 demonstrated by manufacturer based on testing and field experience.
- 32 B. Source Limitations:
- 33 1. Obtain traffic coatings from single source from single manufacturer.
- 34 2. Obtain primary traffic-coating materials, including primers, from traffic-coating manufacturer. Obtain
- 35 accessory materials including aggregates, sheet flashings, joint sealants, and substrate repair materials
- 36 of types and from sources recommended in writing by primary material manufacturer.
- 37 3. Obtain pavement-marking paint from single source from single manufacturer.

38 **2.2 TRAFFIC COATING**

- 39 A. Traffic Coating: Manufacturer's standard, traffic-bearing, seamless, high-solids-content, cold liquid-applied,
- 40 elastomeric, waterproofing membrane system with integral wearing surface for vehicular traffic; according to
- 41 ASTM C 957.
- 42 1. Traffic Coating – Car Stall:
- 43 2. Traffic Coating – Drive Lanes:
- 44 B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- 45 1. Advanced Polymer Technology Corporation.

- 1 2. BASF Corporation; Construction Systems.
- 2 3. Neogard; a division of Jones-Blair, Inc.
- 3 4. Tremco Incorporated.
- 4 5. Requests for substitutions will be considered in accordance with provisions of Section 012513 - Product
- 5 Substitution Procedures.
- 6 C. Primer: Liquid waterborne or solvent-borne primer recommended for substrate and conditions by traffic
- 7 coating manufacturer.
- 8 1. Material: Epoxy.
- 9 D. Preparatory and Base Coats: epoxy.
- 10 1. Thicknesses: Minimum dry or wet film thickness as recommended in writing by manufacturer for
- 11 substrate and service conditions indicated.
- 12 E. Intermediate Coat: Polyurethane.
- 13 1. Thicknesses: Minimum dry or wet film thickness as recommended in writing by manufacturer for
- 14 substrate and service conditions indicated, measured excluding aggregate.
- 15 2. Aggregate Content: As recommended in writing by traffic-coating manufacturer for substrate and
- 16 service conditions indicated.
- 17 F. Topcoat: Polyurethane.
- 18 1. Thicknesses: Minimum dry or wet film thickness as recommended in writing by manufacturer for
- 19 substrate and service conditions indicated, measured excluding aggregate.
- 20 2. Aggregate Content: As recommended in writing by traffic-coating manufacturer for substrate and
- 21 service conditions indicated and as required to achieve slip-resistant finish .
- 22 3. Color: As selected by Architect from manufacturer's full range.
- 23 G. Aggregate: Manufacturer's standard aggregate for each use indicated of particle sizes, shape, and minimum
- 24 hardness recommended in writing by traffic-coating manufacturer.
- 25 H. Concrete Sealer: ~~Floor concrete sealer at level U4.~~
- 26 1. Silane and siloxane product chemistry developed to penetrate concrete surfaces to repel water and
- 27 liquids.
- 28 2. Basis of Design: Chemstop WB Regular as manufactured by Euclid Chemical Co.
- 29 3. Requests for substitutions will be considered in accordance with provisions of Section 012513 - Product
- 30 Substitution Procedures.

31 **2.3 ACCESSORY MATERIALS**

- 32 A. Joint Sealants: As specified in Section 07 92 00 "Joint Sealants."
- 33 B. Sheet Flashing: Nonstaining sheet material recommended in writing by traffic-coating manufacturer.
- 34 1. Thickness: Minimum 60 mils.
- 35 C. Adhesive: Contact adhesive recommended in writing by traffic-coating manufacturer.
- 36 D. Reinforcing Strip: Fiberglass mesh recommended in writing by traffic-coating manufacturer.

37 **2.4 PAVEMENT MARKINGS**

- 38 A. Pavement-Marking Paint: Latex, waterborne emulsion, lead and chromate free, ready mixed, complying with
- 39 FS TT-P-1952, Type II, with drying time of less than [three][45] minutes.
- 40 1. Color: As indicated.
- 41 B. Pavement-Marking Paint: MPI #97 Latex Traffic Marking Paint.
- 42 1. Color: As indicated.

43 **PART 3 – EXECUTION**

44 **3.1 EXAMINATION**

- 45 A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for
- 46 surface smoothness, surface moisture, and other conditions affecting performance of traffic-coating work.
- 47 B. Verify that substrates are visibly dry and free of moisture.
- 48 1. Test for moisture according to ASTM D 4263.
- 49 2. Test for moisture content by method recommended in writing by traffic-coating manufacturer.

- 1 C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of traffic-coating
- 2 work.
- 3 D. Proceed with installation only after substrate construction and penetrating work have been completed and
- 4 unsatisfactory conditions have been corrected.
- 5 1. Begin coating application only after minimum concrete-curing and -drying period recommended in
- 6 writing by traffic-coating manufacturer has passed and after substrates are dry.
- 7 2. Application of coating indicates acceptance of surfaces and conditions.

8 **3.2 PREPARATION**

- 9 A. General: Before applying traffic coatings, clean and prepare substrates according to ASTM C 1127 and
- 10 manufacturer's written instructions to produce clean, dust-free, dry substrate for traffic-coating application.
- 11 Remove projections, fill voids, and seal joints if any, as recommended in writing by traffic-coating
- 12 manufacturer.
- 13 B. Schedule preparation work so dust and other contaminants from process do not fall on wet, newly coated
- 14 surfaces.
- 15 C. Mask adjoining surfaces not receiving traffic coatings to prevent overspray, spillage, leaking, and migration
- 16 of coatings. Prevent traffic-coating materials from entering deck substrate penetrations and clogging weep
- 17 holes and drains.
- 18 D. Concrete Substrates: Mechanically abrade surface to a uniform profile acceptable to manufacturer,
- 19 according to ASTM D 4259. Do not acid etch.
- 20 1. Remove grease, oil, paints, and other penetrating contaminants from concrete.
- 21 2. Remove concrete fins, ridges, and other projections.
- 22 3. Remove laitance, glaze, efflorescence, curing compounds, concrete hardeners, form-release agents,
- 23 and other incompatible materials that might affect coating adhesion.
- 24 4. Remove remaining loose material to provide a sound surface, and clean surfaces according to ASTM D
- 25 4258.

26 **3.3 TERMINATIONS AND PENETRATIONS**

- 27 A. Prepare vertical and horizontal surfaces at terminations and penetrations through traffic coatings and at
- 28 expansion joints, drains, and sleeves according to ASTM C 1127 and manufacturer's written instructions.
- 29 B. Provide sealant cants at penetrations and at reinforced and nonreinforced, deck-to-wall butt joints.
- 30 C. Terminate edges of deck-to-deck expansion joints with preparatory base-coat strip.
- 31 D. Install sheet flashings at deck-to-wall expansion and dynamic joints, and bond to deck and wall substrates
- 32 according to manufacturer's written recommendations.

33 **3.4 JOINT AND CRACK TREATMENT**

- 34 A. Prepare, treat, rout, and fill joints and cracks in substrates according to ASTM C 1127 and manufacturer's
- 35 written recommendations. Before coating surfaces, remove dust and dirt from joints and cracks according to
- 36 ASTM D 4258.
- 37 1. Comply with recommendations in ASTM C 1193 for joint-sealant installation.
- 38 B. Apply reinforcing strip in traffic-coating system where recommended in writing by traffic-coating
- 39 manufacturer.

40 **3.5 TRAFFIC-COATING APPLICATION**

- 41 A. Apply traffic coating according to ASTM C 1127 and manufacturer's written instructions.
- 42 B. Start traffic-coating application in presence of manufacturer's technical representative.
- 43 C. Verify that wet film thickness of each coat complies with requirements every 100 sq. ft..
- 44 D. Uniformly broadcast aggregate on coats specified to receive aggregate. Embed aggregate according to
- 45 manufacturer's written instructions. After coat dries, sweep away excess aggregate.
- 46 E. Apply traffic coatings to prepared wall terminations and vertical surfaces to height indicated; omit aggregate
- 47 on vertical surfaces.
- 48 F. Cure traffic coatings. Prevent contamination and damage during application and curing stages.

- 1 G. Apply number of coats of specified compositions for each type of traffic coating at locations as indicated on
2 Drawings.
3 1. Traffic Coating – Car Stall:
4 2. Traffic Coating – Drive Lanes:

5 **3.6 PAVEMENT MARKINGS**

- 6 A. Do not apply pavement-marking paint for striping and other markings until layout, colors, and placement
7 have been verified with Architect and traffic coating has cured.
8 B. Sweep and clean surface to eliminate loose material and dust.
9 C. Apply pavement-marking paint with mechanical equipment to produce markings of dimensions indicated with
10 uniform straight edges. Apply at manufacturer's recommended rates for a 15-mil-minimum, wet film
11 thickness.
12 1. Apply graphic symbols and lettering with paint-resistant, die-cut stencils, firmly secured to surface. Mask
13 an extended area beyond edges of each stencil to prevent paint application beyond stencil. Apply paint
14 so that it cannot run beneath stencil.

15 **3.7 FIELD QUALITY CONTROL**

- 16 A. Testing Agency: Owner will engage a qualified testing agency to perform the following field tests and
17 inspections:
18 1. Materials Testing:
19 a. Samples of material delivered to Project site shall be taken, identified, sealed, and certified in
20 presence of [Owner and] Contractor.
21 b. Testing agency shall perform tests for characteristics specified, using applicable referenced testing
22 procedures.
23 c. Testing agency shall verify thickness of coatings during traffic-coating application for each [600 sq.
24 ft.] <Insert dimension> of installed traffic coating or part thereof.
25 2. If test results show traffic coating does not comply with requirements, remove and replace or repair the
26 membrane as recommended in writing by traffic-coating manufacturer and make further repairs after
27 retesting until traffic-coating installation passes.
28 B. Final Traffic-Coating Inspection: Arrange for traffic-coating manufacturer's technical personnel to inspect
29 membrane installation on completion.
30 1. Notify Architect or Owner 48 hours in advance of date and time of inspection.
31 C. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of
32 replaced or additional work with specified requirements.
33 D. Prepare test and inspection reports.

34 **3.8 PROTECTING AND CLEANING**

- 35 A. Protect traffic coatings from damage and wear during remainder of construction period.
36 B. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended
37 by manufacturer of affected construction.
38

39 **END OF SECTION**