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DIVISION 9

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EPOXY FLOOR COATING STONKOTE GS4

1. GENERAL

1.1 Related Sections

- .1 Cast-In-Place Concrete: Section 03300
- .2 Concrete Unit Masonry: Section 04220
- .3 Joint Sealers: Section 07900

1.2 References

- .1 Reference is made to specification standards produced by various organizations to conform to edition of standards specified, or, if not specified, to last edition as amended and revised to date of Contract.
- .2 Cure Rate (at 25°C) allow: 4 to 5 hours for tack free surface; 24 hours for normal operations
- .3 Fire Resistance of Dry Film: Self Extinguishing
- .4 Heat Resistance Limitation: 60°C (for continuous exposure); 93°C (for intermittent exposure)
- .5 Percent Solids: 100 percent
- .6 Pot Life at 25°C: 35 minutes

1.3 Submittals

- .1 Product Data: submit manufacturer's technical data, installation instructions, and general recommendations for each epoxy flooring material required.
- .2 Samples: submit, for verification purposes, 300 mm x 300 mm (12 inch x 12 inch) square sample of each type of epoxy flooring required, applied to a rigid backing, in colour and finish indicated.

1.4 Quality Assurance

- .1 Single Source Responsibility: obtain primary epoxy flooring 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 must 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.
- .2 Arrange a meeting not less than 30 days prior to starting Work.

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1.5 Delivery, Storage, and Handling

- .1 Deliver material to jobsite. Flooring contractor will check material for completeness and shipping damage prior to job start.
- .2 All materials must 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.
- .3 Store material in a dry, enclosed area protected from exposure to moisture. Temperature of storage area shall be maintained between 16°C and 32°C.

1.6 Mock-Up

- .1 At Site, under manufacturer's supervision, apply for approval 9 m² of complete floor finish in area designated, to match submitted samples. When approved, Site applied sample to be standard for appearance, colour, texture, workmanship, etc., and all Work to conform to this sample.

1.7 Project Conditions

- .1 Environment Requirements:
 - .1 Concrete substrate must be properly cured for a minimum of 30 days.
 - .2 Temperature: utilities, including electric, water, heat (air temperature between 16°C and 32°C) and finished lighting to be supplied by General Contractor. Maintain ambient temperature of not less than 18°C and a floor temperature of not less than 16°C from 7 days before installation to at least 48 hours after completion of Work and maintain relative humidity not higher than 40 percent during same period.
 - .3 Moisture: ensure substrate is within moisture limits prescribed by flooring manufacturer.
 - .4 Safety: comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding the use, handling, storage, and disposal of hazardous materials.
 - .5 Job area to be free of other trades during, and for a period of 24 hours, after floor installation.
 - .6 Protection of finished floor from damage by subsequent trades is the responsibility of the General Contractor.
 - .7 Manufacturer's representative must be on-site at start of installation.

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2. PRODUCTS

2.1 Colours

- .1 As selected by Contract Administrator from manufacturer's standard colours.

2.2 Epoxy Floor Coating

- .1 100 percent solids, 0 VOC, two-component general service epoxy coating. Acceptable manufacturer: Stonhard, STONKOTE GS4

3. EXECUTION

3.1 Preparation

- .1 Substrate: prepare concrete by mechanical means by using a shot blast machine for removal of bond inhibiting materials such as curing compounds or laitance.

3.2 Application

- .1 Coating: mix coating according to manufacturer's recommended procedures. Squeegee apply and backroll first coat. When surface is tack free, apply second coat to an actual dry film thickness of 200 - 250 microns (8 - 10 mil). Manufacturer: Stonhard, STONKOTE GS4.
- .2 Cove base: Height: 100 mm; trowelled epoxy coving.

3.3 Field Quality Control

- .1 The right is reserved to invoke the following material testing procedure at any time, and any number of times during period of flooring application.
- .2 The City will engage the service of an independent testing laboratory to sample materials being used on the jobsite. Samples of material will be taken, identified and sealed, and certified in the presence of the Contractor.
- .3 Testing laboratory will perform tests for any of the characteristics specified, using applicable testing procedures referenced herein, or if non referenced, in manufacturer's product data.
- .4 If test results show materials being used do not comply with specified requirements, Contractor may be directed by the City to stop Work; remove non-complying materials; pay for testing; reapply flooring materials to properly prepared surfaces which had been previously coated with unacceptable materials.

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3.4 Curing, Protection, and Cleaning

- .1 Cure epoxy flooring 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.
- .2 Protect epoxy flooring 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 methods of application. Contractor is responsible for protection and cleaning of surfaces after final coats.
- .3 Cleaning: remove temporary covering and clean epoxy flooring just prior to final inspection. Use cleaning materials and procedures recommended by epoxy flooring manufacturer.

END OF SECTION

PAINTING AND FINISHING

1. GENERAL

1.1 Work Included

- .1 Prepare surfaces which are to receive finish.
- .2 Finish surfaces as indicated in the schedule at the end of this Section.

1.2 Related Sections

- .1 Cast-in-Place Concrete: Section 03300
- .2 Concrete Unit Masonry: Section 04220
- .3 Steel Joists: Section 05210
- .4 Metal Deck: Section 05311
- .5 Metal Fabrications: Prime painting: Section 05500
- .6 Room Finish Schedule: Architectural Drawings
- .7 Process Piping: Division 13
- .8 Mechanical Piping and Ductwork: Division 15

1.3 Quality Assurance

- .1 Acceptable manufacturers, materials, workmanship and all items affecting the Work of this Section is to be in accordance with Canadian Painting Contractors Association (CPCA) "Architectural Painting Specification Manual".
- .2 Prior to ordering paints, submit to the Contract Administrator for review a complete schedule of paint materials proposed for use. This schedule shall include manufacturers name, brand name or code number, type and recommended application.

1.4 Colour Schedule

- .1 Paint colours shall be as per room finish schedule and as selected by the Contract Administrator.
- .2 Prior to commencement of Work, the Contract Administrator will furnish three (3) copies of colour schedule.

1.5 Samples

- .1 Prepare 300 mm x 200 mm samples of paint type finishes when requested by Contract Administrator. Apply finishes on identical type materials to which they will be applied on job.

PAINTING AND FINISHING

- .2 Identify each sample as to finish, colour name and number and sheen name and gloss units.

1.6 Delivery

- .1 Deliver paint materials in sealed original labelled containers, bearing manufacturers name, type of paint, brand name, colour designation and instructions for mixing or reducing.

1.7 Storage

- .1 Provide adequate storage facilities. Store paint materials at a minimum ambient temperature of 8°C and in a well ventilated area.
- .2 Take all precautionary measures to prevent fire hazards and spontaneous combustion.

1.8 Environmental Conditions

- .1 Ensure surface temperatures or the surrounding air temperature is above 5°C before applying finishes. Minimum application temperatures for latex paints for interior Work is 7°C and for exterior Work 10°C.
- .2 Provide adequate continuous ventilation and sufficient heating facilities to maintain temperatures above 7°C for 24 hours before, during and 48 hours after application of finishes.
- .3 Provide minimum 25 foot candles of lighting on surfaces to be finished.

1.9 Protection

- .1 Adequately protect other surfaces from paint and damage. Make good any damage as a result of inadequate or unsuitable protection.
- .2 Furnish sufficient drop cloths, shields and protective equipment to prevent spray or droppings from fouling surfaces not being painted and in particular, surfaces within storage and preparation area.
- .3 Place cotton waste, cloths and material which may constitute a fire hazard in closed metal containers and remove daily from site.
- .4 Remove all electrical plates, surface hardware, fittings and fastenings, prior to painting operations. These items are to be carefully stored, cleaned and replaced on completion of work in each area. Do not use solvent that may remove the permanent lacquer finish to clean hardware.

2. PRODUCTS

2.1 Materials

- .1 Paint materials to be products of a single manufacturer.

PAINTING AND FINISHING

- .2 All painting materials shall be the best quality and shall be accepted by the Contract Administrator.
- .3 Paint shall not be settled, caked or thickened in the container, shall be readily dispersed with a paddle to a smooth consistency, and shall have excellent application properties.
- .4 Paint shall arrive on the job colour-mixed except for tinting of undercoats and possible thinning.
- .5 All thinning and tinting materials shall be as recommended by the manufacturer for the particular material thinned or tinted.
- .6 Mixed colours shall match colour selection made by the Contract Administrator prior to application of the coating.
- .7 Paint shall be ready mixed except field catalyzed coatings. Process pigments to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.
- .8 Paint shall have good flow and brushing properties; capable of drying or curing free of streaks or sags.
- .9 Paint Accessory Materials: Linseed oil, shellac, turpentine, and other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.
- .10 Acceptable manufacturers: Pratt & Lambert, Benjamin Moore, C.I.L.
- .11 Acceptable manufacturers for galvanized areas: Carboline

3. EXECUTION

3.1 Conditions of Surfaces

- .1 Thoroughly examine all surfaces schedule to be painted prior to commencement of Work. Report in writing to the Contract Administrator any condition that may potentially affect proper application. Do not commence until all such defects have been corrected.
- .2 Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below maximums established by the paint manufacturer.
- .3 Beginning of installation means acceptance of existing surfaces.

3.2 Preparation of Surfaces

- .1 Impervious Surfaces: remove mildew by scrubbing with a solution of T.S.P. and bleach. Rinse with clean water and allow surface to dry completely.

PAINTING AND FINISHING

- .2 Insulated Surfaces: remove dirt, grease and oil from canvas and cotton insulated coverings.
- .3 Aluminum Surfaces Scheduled for Paint Finish: remove contamination by steam, high pressure water, or solvent washing. Remove acid etch and solvent washing. Apply etching primer immediately following cleaning.
- .4 Galvanized surfaces: remove surface contamination and oils from surfaces and wash with solvent. Apply a coat of etching type primer.
- .5 Zinc coated surfaces: remove surface contamination and oils from surfaces and prepare for priming in accordance with metal manufacturers recommendations.
- .6 Remove stains caused by weathering of corroding metals from concrete with a solution of sodium metasilicate after being thoroughly wetted with water. Allow to thoroughly dry.
- .7 Steel and iron surfaces: remove grease, rust, scale, dirt and dust from surfaces. Where heavy coatings of scale are evident, remove by wire brushing, sandblasting or any other necessary method. Ensure all steel surfaces are satisfactory before paint finishing.
- .8 Wood Items and Millwork: wipe off dust and grit from all miscellaneous wood items and millwork prior to priming. Spot coat knots, pitch streaks and sappy sections with sealer. Fill all nail holes and cracks after primer has dried and sand between coats. Back prime interior and exterior woodwork.
- .9 Unprimed Steel Surfaces: clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts and nuts are similarly cleaned. Prime surfaces to identify defects. Prime paint after defects have been remedied.
- .10 Copper Surfaces Scheduled for a Paint Finish: remove contamination by steam, high pressure water, or solvent washing. Apply vinyl etch primer immediately following cleaning.
- .11 Concrete and Unit Masonry Surfaces Scheduled to Receive Paint Finish: remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter. Remove oil and grease with a solution of tri-sodium phosphate, rinse well and allow to dry. Remove stains caused by weathering of corroding metals with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.

3.3 Applications

- .1 Apply paint and other finishes in accordance with good trade practice.
- .2 Finishes specified are intended to cover surfaces satisfactorily when applied in accordance with manufacturer's recommendations.
- .3 Apply each coat at the proper consistency.
- .4 Each coat of paint is to be slightly darker than the preceding coat unless otherwise acceptable to the Contract Administrator.
- .5 Sand lightly between coats to achieve required finish.

PAINTING AND FINISHING

- .6 Do not apply finishes on surfaces that are not sufficiently dry.
- .7 Allow each coat of finish to dry before a following coat is applied, unless directed otherwise by manufacturer.

3.4 Process, Mechanical, and Electrical Equipment

- .1 Refer to Process, Mechanical, and Electrical sections with respect to painting and finishing requirements.
- .2 Remove grilles, covers and access panels for mechanical and electrical systems from location and paint separately.
- .3 Finish paint primed equipment.
- .4 Prime and paint insulated and exposed pipes, conduits, boxes, hangers, brackets, collars and supports to match adjacent Work, except where items are plated or pre-finished unless otherwise noted as being painted as separate colour than surrounding Work - refer to Section 15010.
- .5 Replace identification markings on mechanical or electrical equipment when painted over or spattered.
- .6 Paint interior surfaces of air ducts, convector and baseboard heating cabinets that are visible through grilles and louvres with one coat of flat black paint to limit of sight line. Paint dampers exposed behind louvres, grilles, convector and baseboard cabinets to match face panels.
- .7 Paint exposed conduit and electrical equipment occurring in finished areas including baseboard heaters and force flow heaters. Colour and texture are to be selected by Contract Administrator.
- .8 Paint both sides and edges of plywood backboards for electrical equipment before installing backboards and before mounting equipment on them.
- .9 Colour coding equipment, piping, conduit and exposed ductwork and all colour banding and identification (flow arrows, naming, numbering, etc.) shall be performed to the requirements of Divisions 13 and 15. Piping and ductwork not required to be coded shall be painted in accordance with Mechanical and Process colour schedules.
- .10 Paint all exposed exterior mechanical and electrical equipment that has not been factory finished.
- .11 Ductwork and piping in truck bay to be finished with epoxy paint.

3.5 Protection

- .1 Protect other surfaces from paint or damage. Repair damage.

PAINTING AND FINISHING

- .2 Furnish drop cloths, shields, and protective methods to prevent spray or droppings from disfiguring other surfaces.
- .3 Collect cotton waste, cloths and material which may constitute a fire hazard, place in closed metal containers and remove daily from Site.

3.6 Cleaning

- .1 As Work proceeds and upon completion, promptly remove all paint where spilled, splashed or spattered.
- .2 During the progress of Work keep the premises free from any unnecessary accumulation of tools, equipment, surplus materials and debris.
- .3 Upon completion of Work leave premises neat and clean, to the satisfaction of the Contract Administrator.

3.7 Painting and Finishing Schedule

- .1 Exterior Painting
 - .1 Primed Metal Surface:
 - .1 Touch up with zinc chromate primer
 - .2 Two (2) coats exterior alkyd semi-gloss enamel
 - .2 Galvanized coated metal surfaces:
 - .1 One (1) coat zinc chromate primer
 - .2 Two (2) coats exterior alkyd semi-gloss enamel
 - .3 Steel - Unprimed
 - .1 One (1) coat zinc chromate primer
 - .2 Two (2) coats alkyd enamel semi-gloss
- .2 Interior Painting:
 - .1 Primed Metal Surfaces:
 - .1 One (1) coat enamel undercoat
 - .2 Two (2) coats alkyd semi-gloss enamel

PAINTING AND FINISHING

- .2 Galvanized Metal Surfaces:
 - .1 One (1) coat Galvoseal WB
 - .2 Two (2) coats Carbogard 890
- .3 Concrete Block and Concrete
 - .1 One (1) coat latex block filler
 - .2 Two (2) coats alkyd enamel semi-gloss finish

END OF SECTION

SPECIALTY COATINGS FOR CONCRETE

1. GENERAL

1.1 Work Included

- .1 Supply and installation of specialty coatings for concrete, pre-cast concrete, and metal used on the liquid-retaining side of structures.
- .2 Supply and installation of specialty coatings for concrete and metal used for other areas as indicated on the Drawings.

1.2 Qualification

- .1 Installation is to be done by an established firm having at least ten years of proven, satisfactory experience in this trade and employing skilled personnel. The firm is to be authorized by the coating manufacturer to install the specified product and product line.
- .2 Submit proof of qualifications and authorization in writing to the Contract Administrator, four weeks prior to commencement of Work.

1.3 Design Standards, Code Requirements

- .1 Conform to requirements of Steel Structures Painting Council (SSPC) Publications and visual standards, explanatory notes, comments and appendixes:
 - .1 SSPC-PA-1 Shop, field and maintenance painting
 - .2 SSPC-SP-1 Solvent cleaning
 - .3 SSPC-SP-2 Hand cleaning
 - .4 SSPC-SP-3 Power tool cleaning
 - .5 SSPC-SP-5 White Metal Blast Cleaning
 - .6 SSPC-SP-6 Commercial blast cleaning
 - .7 SSPC-SP-7 Brush off blast cleaning
 - .8 SSPC-SP-10 Near white metal blast cleaning
 - .9 SSPC-SP-13 Surface Preparation of Concrete

1.4 Submittals

- .1 Submit Submittals in accordance with Section 01300.
- .2 Submit colour samples of coating, minimum colour sample size 50 mm x 100 mm with finish indicated.

SPECIALTY COATINGS FOR CONCRETE

- .3 Indicate location of where the specific coating is to be applied.
- .4 Submit manufacturer's product data sheets and installation guides. A minimum of one (1) copy of the reviewed product data sheets and installation guides shall remain on-site at all times for all to view.
- .5 Prepare 300 mm x 200 mm samples of each coating type to Contract Administrator. Apply finishes on identical type materials to which they will be applied.

1.5 Inspection and Testing

- .1 Allow ample time for notification, review, and corrective Work, if required, before scheduling coating installation.
- .2 Inspection, and testing is to be performed by a CSA and SSPC certified inspection and testing firm. Testing of substrate required to be performed prior to the application of the coating and while the coating is being applied and curing is to be paid for by the Contractor. Testing of coating once the coating is cured, will be paid for by the City. Provide unencumbered access to all portions of Work and cooperate with appointed firm.
- .3 Notify the Contract Administrator at least 48 hours in advance of any coating installation or final substrate preparation.
- .4 Repair all areas where concrete surfaces and coatings were tested.
- .5 Testing of concrete will be performed in accordance with the indicated SSPC design standards. Test results are to be issued to the Contractor, the Contract Administrator, and the City.
- .6 The Contractor is to pay costs for required retesting due to defective materials or workmanship.
- .7 A minimum of two (2) complete SSPC tests are to be performed on each wall of each cell for the Equalization Tank, SBR 1 and SBR 2.
- .8 A minimum of two (2) complete SSPC tests are to be performed on the pre-cast double tee's in each cell for the Equalization Tank, SBR 1 and SBR 2.
- .9 A minimum of one (1) complete SSPC test is to be performed for each cast-in-place sump pit, pre-engineered or pre-cast sump pit for each different substrate being coated.

1.6 Maintenance Data

- .1 Provide maintenance data for coatings complete with pertinent details, data sheets, and warnings against harmful maintenance materials and practices for incorporation into maintenance manual.

SPECIALTY COATINGS FOR CONCRETE

2. PRODUCTS

- .1 The same manufacturer is to be used for the entire project.
- .2 Colours to be selected by the City from submitted samples.
- .3 Abbreviations; P = primer, I = intermediate coat and F = finish coat, DFT = dry film thickness, WFT = wet film thickness.
- .4 Coating Formulas:
 - .1 Liquid side of cast-in-place concrete for Equalization Tank, SBR 1 and SBR 2 – Formula 10.
 - .2 On liquid side of cast-in-place concrete sump pits - Formula 10.
 - .3 Pre-cast double tee's above Equalization Tank, SBR 1 and SBR 2 – Formula 20.
 - .4 Methanol Facility cast-in-place concrete – Formula 30.
- .5 Cleaning agent for concrete surfaces required to be power washed: Surface Cleaner 3 as manufactured by Carboline.
- .6 Power wash using potable water.
- .7 Formula Designations
 - .1 Formula 10
 - .1 Preparation: SSPC-13, Table 1, Severe Service.
 - .2 Coating option:
 - .1 Fill and seal the surface with Carboguard 501.

P = Carboguard 671, 5 mils DFT.

F = Polbrid 705, 80 mils DFT.

Carbogard 501, Carbogard 671 and Polibrid 705 as manufactured by Carboline.
 - .2 Formula 20
 - .1 Preparation: SSPC-13, Table 1, Severe Service.
 - .2 Coating option:
 - .1 Fill and seal the surface with Carboguard 501.

SPECIALTY COATINGS FOR CONCRETE

P = Carboguard 671, 5 mils DFT.

F = Polbrid 705, 80 mils DFT.

Carbogard 501, Carbogard 671 and Polibrid 705 as manufactured by Carboline.

.3 Formula 30

.1 Preparation: Shot blast to minimum 60 grit profile.

.2 Coating option:

.1 Coating system, Stonchem 678 as manufactured by Stonhard for horizontal applications. Coating system, Stonchem 678V as manufactured by Stonhard for vertical applications.

.2 Nominal coating system thickness: 140 mils DFT.

3. EXECUTION

3.1 Pre-Installation Conference

.1 Pre-installation conference for specialty coating products: prior to installation of specialty coating products, conduct a meeting with applicator, installers of Work adjacent to or that penetrates the specialty coating products, the Contract Administrator and manufacturer's technical representative to review the following:

.1 General project requirements.

.2 Manufacturer's product data sheets and installation guides.

.3 Substrate conditions, moisture content, procedures for substrate preparation, and product installations.

.4 The manufacturer's technical representative is to issue reports to the Contract Administrator confirming that the substrate conditions and installation procedures are being followed for each area where the specific product is being utilized.

.5 Responsibility and costs associated with verification and correlation of field dimensions, fabrication processes, techniques of construction, installation, and coordination of Work and manufacturer's technical representative for all parts of the Work rests with the Contractor.

3.2 General

.1 Notify the Contract Administrator of any conditions which would prejudice proper installation of this Work.

SPECIALTY COATINGS FOR CONCRETE

- .2 Commencement of this Work implies acceptance of existing conditions.
- .3 Apply cleaning agent to concrete surfaces that were in contact with flushing water used for leakage testing purposes. Brush surface to remove deposits. Power wash surface clean with potable water prior to application of the coating and SSPC testing. Cleaning agent to remain on concrete surface so that no beads of water remain after power washing with potable water.
- .4 Apply each coat as a continuous film of uniform thickness. Recoat thin spots or bare areas before next coat of paint is applied.
- .2 Remove weld spatter, weld slag and flux from metal before painting.
- .3 Remove concrete spatter and droppings before coating is applied.
- .4 Remove defective or damaged coatings as required by the Contract Administrator. Cost for defective or damaged coating removal and replacement will be at the Contractor's expense.
- .5 Relative humidity of the concrete surface for Formula 10 and 20 is to conform to SSPC-SP13 Table 1 Severe Service, using the ASTM F 2170 test method except that the relative humidity is to be less than 50 percent after surface preparation.
- .6 Relative humidity of the concrete surface for Formula 30 is to conform to SSPC-SP13 Table 1 Light Service, using the ASTM D 4263 test method except that the relative humidity is to be less than 50 percent after surface preparation.
- .7 The ambient humidity is to be less than 85 percent prior to and during the application of Formula 30.
- .8 Concrete surface tensile strength shall be 2.1 MPa minimum. Remediation of the concrete for values lower than 2.1 MPa will be at the Contractor's expense.
- .9 pH readings following final rinse are not to be more than 1.0 pH unit lower or 2.0 pH units higher than the pH of the rinse water tested at the beginning and end of the final rinse cycle.
- .10 Provide a minimum 19 mm deep saw cut at the termination points of the coating on a concrete surface. Termination of the coating to be in accordance with the manufacturers written instructions.

3.3 Protection

- .1 Protect other surfaces from substrate preparation, coatings and damage. Repair damage.
- .2 Furnish drop cloths, shields, and protective methods to prevent spray or droppings from disfiguring other surfaces.
- .3 Collect waste, cloths and material which may constitute a fire hazard, place in closed metal containers and remove daily from Site.

SPECIALTY COATINGS FOR CONCRETE

3.4 Brush Application

- .1 Where spray applications is not practical, work paint into cracks, crevices and corners and paint surfaces by brush.
- .2 Brush out runs and sags.
- .3 Remove runs, sags and brush marks from finished Work and repaint.

3.5 Spray Application

- .1 Provide and maintain specialized equipment that is suitable for intended purpose, capable of properly atomizing paint to be applied, and equipped with suitable pressure regulators and gauges.
- .2 Provide traps or separators to remove oil and water from compressed air and drain periodically during operations.
- .3 Test equipment for proper mixing proportion prior to application of coating following manufacturer's written instructions.
- .4 Apply paint in uniform layer, with overlapping at edges of spray pattern.
- .5 Brush out immediately runs and sags.
- .6 Use brushes to work paint into cracks, crevices and places which are not adequately painted by spray. In areas not accessible to spray gun, use brushes, daubers or sheepskins.
- .7 Remove runs, sags and brush marks from finished Work and repaint.

3.6 Shop Painting

- .1 Do shop painting after fabrication and before damage to surface occurs from weather or other exposure.
- .2 Do not shop paint metal surfaces which are to be embedded in concrete.
- .3 Copy previous erection marks and weight marks on areas that have been shop painted as required.

3.7 Field Painting

- .1 Paint steel structures as soon as practical after erection.
- .2 Touch up metal which has been shop coated with same type of paint and to same thickness as shop coat. This touch-up to include cleaning and painting of field connections, welds, rivets, nuts, washers, bolts, and damaged or defective paint and rusted areas.

SPECIALTY COATINGS FOR CONCRETE

- .3 Field paint surfaces which are accessible before erection but which are not to be accessible after erection.
- .4 Do not apply specialty coatings until concrete Work is completed and cured as required by the coating manufacturer, except as directed by Contract Administrator. If concreting or other operations damage paint, clean and repaint damaged area.

3.8 Warranty

- .1 Provide a five year warranty against delamination of the coating and coating system, delamination of the coating and coating system from the concrete substrate, defective coating and coating system application and defects in the coating and coating system. The warranty shall not be voided by the use of the flushing water used for leakage testing purposes prior to the application of the coating.

END OF SECTION