DIVISION 09

FINISHES

Part 1 General

1.1 REFERENCES

.1 American Society for Testing and Materials (ASTM)
- .1 ASTM C206, Standard Specification for Finishing Hydrated Lime.
- .2 ASTM 897, Standard Specification for Aggregate for Job-Mixed Portland Cement-Based Plaster

.2 Canadian Standards Association (CSA)
- .1 CAN/CSA-A3000, Cementitious Materials Compendium (Consists of A5, A8, A23.5, A362, A363, A456.1, A456.2, A456.3).
- .2 CSA-A123.2, Asphalt Coated Roofing Sheets.

Part 2 Products

2.1 MATERIALS

.1 Portland cement: Type 10 to CAN/CSA-A5.

.2 White cement: proprietary brand as commercially available conforming to CAN/CSA A5.

.3 Hydrated finishing lime: to ASTM C206, Type S.

.4 Sand: clean, well graded fresh water sand to ASTM C897.

.5 White sand: clean, well screened to ASTM C897, or proprietary white sand as commercially available.

.6 Water: clean, potable and free from deleterious matter, acids or alkalis.

.7 Metal lath: diamond mesh, 2.5 lbs/yd², galvanized for exterior work, rust inhibitive coating for interior work.

.8 Tie wire: zinc coated annealed steel wire, minimum 16 gauge diameter.

.9 Cornerite: expanded 26 gauge thick sheet steel, 2½" legs, galvanized finish.

.10 Striplath: expanded 26 gauge thick sheet steel, 6" wide, galvanized finish.

.11 Nails: common nails or roofing nails, galvanized.

2.2 ACCESSORIES

.1 Stucco stops: square, 26 gauge galvanized sheet steel or pure zinc, perforated or expanded flanges.

.2 Corner beads: standard 26 gauge galvanized sheet steel or pure zinc, perforated or expanded flanges.

.3 Control joints: "M" type for flat or corner application, 26 gauge galvanized steel, perforated or expanded flanges, ground depth to suit.
- .1 Acceptable material: Keene #30 Cornermaster, Keene #15 Expansion Joint.

2.3 MIXING

.1 Do not use detergent, soap, or other additives in stucco mixes.

.2 Proportion parts by volume; accurately measure ingredients, including water. Proportion successive batches alike.

.3 Adjust cement and lime content by volume based on strength, workability and finishing requirements.

.4 Scratch coat: 1 part cement; 3/4 to 1½ parts lime; 2½ to 4 parts sand (volume of sand per sum of cementitious material).

.5 Parge coat: 1 part cement; 3/4 to 1½ parts lime; 3 to 5 parts sand (volume of sand per sum of cementitious material).

Part 3 Execution

3.1 ACCESSORIES

.1 Erect accessories straight, plumb or level, rigid and at proper plane. Use full length pieces wherever possible. Make joints tight, accurately aligned and rigidly secured. Mitre and fit corners accurately, free from rough edges.

.2 Provide metal corner beads at all external angles.

.3 Provide casing beads wherever stucco terminates and abuts other surfaces and where specifically called for on drawings.

.4 Provide continuous base screed at bottom of stucco panels where panels terminate.

3.2 CEMENT STUCCO APPLICATION

.1 Scratch coat:
- .1 Apply full scratch coat in sufficient thickness with sufficient pressure to form positive bond. Cross scratch and allow to set.
- .2 Damp cure for not less than 48 hours. Permit to dry.

.2 Parging coat:
- .1 Apply parging coat on scratch coat no sooner than 48 hours after installation of scratch coat.
- .2 Apply over dampened scratch coat with sufficient pressure to form positive bond.
- .3 Bring out to grounds, straighten to true surface, and provide medium brush dash finish.
- .4 Damp cure for not less than 48 hours.

3.3 STUCCO THICKNESS

.1 Thickness of finish or top coats specified below are minimum thickness. Increase thickness as required to suit specified textured finishes.

.2 Cement parging (two coat system) on vertical surfaces on metal reinforcement on solid base:
- .1 Scratch coat: 1/2"
- .2 Finish (parge) coat: 1/4"
- .3 Total: 5/8”

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Section 03 30 00 - Cast-In-Place Concrete: floor finishing.

1.2 SUBMITTALS

.1 Submit in accordance with Section 01 33 00 – Submittal Procedures.

.2 Manufacturer’s instructions: special handling criteria, mixing, application and cleaning procedures.

1.3 DELIVERY, STORAGE AND HANDLING

.1 Deliver and store materials in manner to prevent damage.

.2 Ensure materials remain in original wrapping and containers until used.

1.4 ENVIRONMENTAL REQUIREMENTS

.1 Safety: comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of materials.

.2 Temperature: maintain temperature and structural base temperature within manufacturer's limits for 24 hours prior to, during, and for 24 hours following installation.

Part 2 Products

2.1 MATERIALS

.1 Epoxy floor coating: waterborne acrylic epoxy coating, high build, low odour, non-yellowing and fade resistant, chemical and moisture-resistant. Apply 150 mm up wall along vertical face of curb.

.2 Acceptable material:

.1 H.B. Tneme-Tufcoat 113 (satin), available from A.I.F.C. Coatings, Winnipeg, Tel. 990-8744 attn: Cal Winter.

.2 Sika Sikafloor 261 System 1.

.3 Devoe Tru-Glaze WB4408.

.4 Stonhard's Stonkote GS4.

.3 Slip-resistant aggregate: fine silicone sand particles.

.4 Primers, fillers and patching compounds: for surface preparation, of type recommended by flooring manufacturer. Fully compatible with finish coatings and supplied by same manufacturer.

Part 3 Execution

3.1 EXAMINATION

.1 Schedule 40 days for concrete drying before receiving coatings.

.2 Verify that surfaces are smooth and flat and are ready to receive work.

.3 Examine surfaces to receive coatings for defects and/or site conditions detrimental to proper application and performance of flooring system.

.4 Verify:
- .1 Concrete surfaces are fully cured and exhibit negative alkalinity, carbonization, or dusting.
- .2 Moisture content of substrates are within coating manufacturer's maximum limits
- .3 Work of others such as pipes and conduit penetrating substrates is complete.

.5 Report defects and non-conforming work to Contract Administrator and await remedial measures.

3.2 PREPARATION

.1 Prepare substrates to manufacturer's recommendations.

.2 Clean concrete mechanically or acid etch to manufacturer's recommendations.

.3 Remove treatments and other contaminants to expose substrate.

.4 Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes, and other defects with sub-floor filler. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Grind irregularities above the surface level. Prohibit traffic until filler is cured.

.5 Clean surfaces and apply primer.

3.3 APPLICATION

.1 Check correct grade on structural to get drainage.

.2 Apply floor coating to produce smooth surface, uniform in sheen, color and finish, free from marks, dirt, particles, runs, crawls, curling, holes, air pockets and other defects and to achieve smooth, even finish.

.3 Apply coating with roller or airless sprayer, minimum two coats, 4.0 to 6.0 mils dry film thickness each coat.

.4 Apply 3-4 coats to provide uniform, slip resistant surface.

.5 Provide textured slip resistant surface over entire area.

.6 Allow proper cure time for each installation procedure.

3.4 PROTECTION

.1 Prohibit traffic on floor finish until fully cured.

.2 Barricade area to protect flooring until cured.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Shop priming:
- .1 Structural steel: Section 05 12 00.
- .2 Metal fabrications: Section 05 50 00.
- .3 Cast-in-Place Concrete: Section 03 30 00.

1.2 REFERENCES

.1 Master Painters Institute (MPI)
- .1 Architectural Painting Specifications Manual.

.2 Society for Protective Coatings (SSPC)
- .1 Systems and Specifications Manual, SSPC Painting Manual, Volume Two.

.3 Environmental Protection Agency (EPA)
- .1 Test Method for Measuring Total Volatile Organic Compound Content of Consumer Products, Method 24 (for Surface Coatings) of the Environmental Protection Agency (EPA).

1.3 QUALITY ASSURANCE

.1 Contractor shall have a minimum of five years proven satisfactory experience. When requested, provide a list of last three comparable jobs including, job name and location, specifying authority, and project manager.

.2 Qualified journeymen who have a "Tradesman Qualification Certificate of Proficiency" shall be engaged in painting work. Apprentices may be employed provided they work under the direct supervision of a qualified journeyman in accordance with trade regulations.

1.4 PRODUCT DATA SUBMITTALS

.1 Submit product data and manufacturer’s installation/application instructions for each paint and coating product to be used in accordance with Section 01 33 00 – Submittal Procedures.

.2 Upon completion, submit records of products used. List products in relation to finish system and include the following:
- .1 Product name, type and use.
- .2 Manufacturer’s product number.
- .3 Color numbers.
- .4 Manufacturer’s Material Safety Data Sheet (MSDS).

1.5 QUALITY CONTROL

.1 When requested by Contract Administrator, prepare and paint designated surface, area, room or item to the requirements specified herein.

1.6 DELIVERY, HANDLING AND STORAGE

.1 Labels shall clearly indicate:
- .1 Manufacturer's name and address.
- .2 Type of paint or coating.
- .3 Compliance with applicable standard.

.4 Color number in accordance with established color schedule.

.2 Remove damaged, opened and rejected materials from site.

.3 Provide and maintain dry, temperature controlled, secure storage.

.4 Observe manufacturer's recommendations for storage and handling.

.5 Store materials and supplies away from heat generating devices.

.6 Store materials and equipment in a well ventilated area with temperature range 7°C to 30°C.

.7 Store temperature sensitive products above minimum temperature as recommended by manufacturer.

.8 Remove paint materials from storage only in quantities required for same day use.

.9 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling storage, and disposal of hazardous materials.

1.7 SITE REQUIREMENTS

.1 Heating, Ventilation and Lighting:

.1 Perform no painting work unless adequate and continuous ventilation and sufficient heating facilities are in place to maintain ambient air and substrate temperatures above 10 °C for 24 hours before, during and after paint application until paint has cured sufficiently.

.2 Perform no painting work when the maximum moisture content of the substrate exceeds:

.1 12% for concrete and masonry (clay and concrete brick/block).

.3 Conduct moisture tests using a properly calibrated electronic Moisture Meter, except test concrete floors for moisture using a simple "cover patch test".

1.8 WASTE MANAGEMENT AND DISPOSAL

.1 Where paint recycling is available, collect waste paint by type and provide for delivery to recycling or collection facility.

.2 Set aside and protect surplus and uncontaminated finish materials: Deliver to or arrange collection by employees, individuals, or organizations for verifiable re-use or re-manufacturing.

.3 Close and seal tightly partly used sealant and adhesive containers and store protected in well ventilated fire-safe area at moderate temperature.

Part 2 Products

2.1 MATERIALS

.1 Paint materials for paint systems shall be products of a single manufacturer.

.2 Paints, coatings, adhesives, solvents, cleaners, lubricants, and other fluids, shall:

.1 be water-based water soluble water clean-up.

.2 be non-flammable biodegradable.

.3 be manufactured without compounds which contribute to ozone depletion in the upper atmosphere.

.4 be manufactured without compounds which contribute to smog in the lower atmosphere.

.5 do not contain methylene chloride, chlorinated hydrocarbons, toxic metal pigments.

2.2 COLORS

.1 Selection of colors may be from several different manufacturers. Match color samples exactly regardless of manufacturer.

.2 Allow for 25% of all painted surfaces to be deep to medium tone colors.

.3 Second coat in a three coat system to be tinted slightly lighter color than top coat to show visible difference between coats.

.4 Colors for site painted exterior steel components:
.1 Black: all steel components, except as specified below.

2.3 INTERIOR PAINTING SYSTEMS

.1 Concrete Vertical Surfaces: including horizontal soffits
.1 INT 3.1M - Institutional low odour/low VOC G5 finish premium grade.

.2 Concrete Masonry Units: smooth block and brick
.1 INT 4.2E - Institutional low odour/low VOC G5 finish premium grade.

.3 Structural Steel and Metal Fabrications: columns, beams, joists, etc.
.1 INT 5.1CC – Waterborned dry fall finish (over quick dry. shop primer).
.2 INT 5.1S - Institutional low odour/low VOC G5 finish premium grade.

.4 Galvanized Metal: doors, frames, railings, miscellaneous steel fabrications, pipes, overhead decking, ducts, etc.
.1 INT 5.3H – Waterborne dry fall G1 finish premium grade. For overhead decking and ducts, etc.
.2 INT 5.3N – Institutional low odour/low VOC G5 finish premium grade.

Part 3 Execution

3.1 GENERAL

.1 Perform preparation and operations for interior painting.

.2 Apply paint materials in accordance with paint manufacturers' written application instructions.

.3 Paint all work, except prefinished items or where indicated otherwise.

3.2 PROTECTION

.1 Protect existing building surfaces and adjacent structures from paint spatters, markings and other damage by suitable non-staining covers or masking. If damaged, clean and restore such surfaces as directed by Contract Administrator.

.2 Protect items that are permanently attached such as Fire Labels on doors and frames.

.3 Protect factory finished products and equipment.

3.3 APPLICATION

.1 Apply paint by brush, roller, air sprayer, airless sprayer. Conform to manufacturer's application instructions unless specified otherwise.

.2 Brush and Roller Application:

.1 Apply paint in a uniform layer using brush and/or roller of types suitable for application.
.2 Work paint into cracks, crevices and corners.
.3 Paint surfaces and corners not accessible to brush using spray, daubers and/or sheepskins. Paint surfaces and corners not accessible to roller using brush, daubers or sheepskins.
.4 Brush and/or roll out runs and sags, and over-lap marks. Rolled surfaces shall be free of roller tracking and heavy stipple unless approved by Project Administrator.
.5 Remove runs, sags and brush marks from finished work and repaint.

.3 Spray application:
.1 Provide and maintain equipment that is suitable for intended purpose, capable of properly atomizing paint to be applied, and equipped with suitable pressure regulators and gauges.
.2 Keep paint ingredients properly mixed in containers during paint application either by continuous mechanical agitation or by intermittent agitation as frequently as necessary.
.3 Apply paint in a uniform layer, with overlapping at edges of spray pattern.
.4 Brush out immediately all runs and sags.
.5 Use brushes to work paint into cracks, crevices and places which are not adequately painted by spray.

.4 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by manufacturer.

.5 Sand and dust between coats to remove visible defects.

.6 Doors and frames:
.1 Finish top, bottom, edges and cutouts of doors after fitting as specified for door surfaces.
.2 Finish surfaces of doors and frames that will be concealed behind protective plates and coverings, door frame guards. Use same finish formula specified for visible portion of door.
.3 For exterior doors and frames indicated for painting/staining, use exterior quality paint/stain on both interior and exterior sides of door and frame.

.7 Do not paint door and miscellaneous hardware, unless indicated otherwise.

.8 Do not paint nameplates, signage, fire labels, or other markers or signs indicated to remain.

.9 Do not paint copper, bronze, chromium plate, nickel, stainless steel, aluminum, lead and other bright metals, unless specified otherwise.

.10 Clean shop applied paint surfaces that become marked. Touch up with primer and paint as required.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Architectural concrete masonry units: Section 04 22 00.

1.2 SAMPLE APPLICATION

.1 Contract Administrator will provide samples of substrate materials for sample application.

.2 Before full-scale application, apply graffiti resistant coatings to samples of substrate materials to determine coverage rates, compatibility, effectiveness, and aesthetics.

.3 Apply graffiti resistant coatings to samples in accordance with manufacturer's written instructions. Allow 5 days curing time prior to applying graffiti paint to test samples. Apply graffiti paint to test samples and allow at least 24 hours longer for paint to cure.

.4 Apply manufacturer's recommended cleaner to test for ease of removal of graffiti. Repeat cycles of cleaning as directed by Contract Administrator.

.5 Do not proceed with coating work until Contract Administrator has reviewed and accepted sample application.

1.3 SUBMITTALS

.1 Submit product data in accordance with Section 01 33 00 – Submittal Procedures.

.2 Submit manufacturer's product data for specified graffiti resistant coatings and cleaners, specifications and application instructions. Submit description for protection of surrounding areas and non-masonry surfaces, surface preparation, application and final cleaning.

1.4 ENVIRONMENTAL CONDITIONS

.1 Maintain ambient and structural base temperature at installation area within limits specified by coating manufacturer.

.2 Apply coating during dry weather.

.3 Do not apply coating to wet or damp surfaces.

1.5 PROTECTION

.1 Protect plants and vegetation that might be damaged by coating.

.2 Protect surfaces not intended to have application of 1coatings.

.3 Provide adequate ventilation or isolation measures to protect against toxic fumes.

Part 2 Products

2.1 MATERIALS

.1 Graffiti-resistant coating: one component, water based, non-sacrificial, clear penetrating sealer.

.2 Acceptable material:
- .1 Sika Anti-Graffiti Sealer.
- .2 Fabrishield Paint Repellent.

.3 Professional Water Sealant & Anti-Graffitiant.

Part 3 Execution

3.1 PREPARATION

.1 Prepare and clean substrate surfaces in accordance with coating manufacturer's printed instructions.

.2 Mix and prepare coatings to manufacturer’s instructions.

.3 Take moisture tests on substrates to receive coating to ensure moisture levels are within limits specified by coating manufacturer.

3.2 APPLICATION

.1 Apply coating using brush, roller or low pressure spraying apparatus, in accordance with manufacturer's printed instructions.

.2 Apply at manufacturer’s recommended coverage rates for substrate. Adjust for substrate porosity and absorption characteristics.

.3 Apply in uniform, even coats to fully wet substrate, without flooding or rundowns.

.4 Allow area to dry completely before applying additional coats.

3.3 SCHEDULE

.1 Apply graffiti-resistant coating to exposed surfaces of exterior masonry veneer and stucco surfaces, full height from grade to top of parapet walls.

END OF SECTION