SECTION 099000 - PAINTING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes surface preparation, painting, and finishing of designated interior and exterior items and surfaces. Surface preparation, priming, and finish coats specified in this Section are in addition to shop-priming and surface treatment specified under other Sections.
- B. Paint only designated surfaces. If paint or finish is not designated, do not paint. Note requirements regarding exposed unfinished, unprimed steel in interior spaces.
- C. Painting is not required on prefinished or factory finished items, finished metal surfaces, concealed surfaces, operating parts, and labels.
- D. Related Sections: The following Sections contain requirements that relate to this Section:
 - Division 03 Sections related to concrete finish.
 - Division 05 Sections for shop-priming ferrous metals.
 - 4. Section 074646 – Mineral-Fiber Cement Siding
 - 5. Division 08 Sections for shop-priming doors and frames.
 - Division 22, 23 and 26 for specifications for painting mechanical and electrical work.
- E. Paint colors and finishes are specified in the "Finish Schedule" located in the drawings.

1.2 SUBMITTALS

- Submit the following according to Conditions of Contract and Division 01 Sections:
 - Product data for each paint system specified, including block fillers and primers. Provide the manufacturer's technical information including label analysis and instructions for handling, storage, and application of each material proposed for use. List each material and crossreference the specific coating, finish system, and application. Identify each material by the manufacturer's catalog number and general classification. Include Certification by the manufacturer that products supplied comply with VOC limits specified.
 - VOC Content: Provide PDS from product manufacturers for each paint, coating and primer highlighting the VOC content.
 - Chemical Component Content: Provide manufacturer certification, signed by an authorized company representative, indicating that chemical content for each interior paint system meets or exceeds allowable limits established by Green Seal Paints Standard GS-11.
 - Samples: Resubmit until required sheen, color, and texture are achieved. Submit samples on the following substrates for the Architect's review of color and texture only:
 - GWB: (3) 8-1/2" x 11" paintouts on heavy paper of each color and finish.

QUALITY ASSURANCE

A. Applicator Qualifications: Engage an experienced applicator who has completed painting system applications similar in material and extent to those indicated for the Project that have resulted in a construction record of successful in-service performance.

JOB CONDITIONS

- A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 deg F and 90 deg F.
- B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 deg F and 95 deg F.
- C. Do not apply paint in snow, rain, fog, or mist; or when the relative humidity exceeds 85 percent; or at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

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PART 2 - PRODUCTS

2.1 REQUIREMENTS

A. Refer to VOC limit tables in Section 018119 for VOC limits for finish products in this section.

2.2 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide products by manufacturers named in Part 3.

2.3 PAINT MATERIALS, GENERAL

- A. Material Compatibility: Provide related materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by the manufacturer based on testing and field experience.
- B. Material Quality: Paint material containers not displaying manufacturer's product identification will not be acceptable.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions under which painting will be performed for compliance with paint application requirements. Surfaces receiving paint must be thoroughly dry before paint is applied. Do not begin to apply paint until unsatisfactory conditions have been corrected. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. Notify the Architect about anticipated problems using the materials specified over substrates primed by others.

3.2 PREPARATION

- A. General: Remove hardware and accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted or provide surface-applied protection prior to surface preparation and painting. Remove these items, if necessary, to completely paint the items and adjacent surfaces. Following completion of painting operations in each space or area, have items reinstalled by workers skilled in the trades involved.
- B. Cleaning: Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various coatings. Remove oil and grease prior to cleaning. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- C. Surface Preparation: Clean and prepare surfaces to be painted according to the manufacturer's instructions for each particular substrate condition and as specified.
 - 1. Provide barrier coats over incompatible primers or remove and reprime.
 - 2. Cementitious Materials, <u>including mineral-fiber cement siding</u>: Prepare concrete, CMU, and plaster surfaces to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen, as required, to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
 - a. Use abrasive blast-cleaning methods if recommended by the paint manufacturer.
 - b. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish paint to blister and burn, correct this condition before application. Do not paint surfaces where moisture content exceeds that permitted in manufacturer's printed directions.

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- 3. Wood: Clean surfaces of dirt, oil, and other foreign substances as required. Sand surfaces exposed to view smooth and dust off.
 - a. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
 - b. Prime, stain, or seal wood to be painted immediately upon delivery. Prime edges, ends, faces, undersides, and backsides of wood, including cabinets, counters, cases, and paneling.
 - c. When transparent finish is required, back-prime with spar varnish.
 - Backprime paneling on interior partitions where masonry, plaster, or other wet wall construction occurs on backside.
 - e. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately upon delivery.
- 4. Ferrous Metals: Clean ungalvanized ferrous metal surfaces that have not been shop-coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with recommendations of the Steel Structures Painting Council (SSPC). Spec #SSPC-SP-3 Power Tool.
- 5. Exterior Structural Steel Preparation: Prepare exterior structural steel using the following methodology: SSRC-SP1 Solvent Cleaning, followed by SSPC-SP6 Commercial Blast Cleaning followed by proprietary metal treatment wash coat before priming. All shop and field weld areas should be treated with phosphoric acid solution. Protect adjacent surfaces.
- 6. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so that the surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
- D. Materials Preparation: Carefully mix and prepare paint materials according to manufacturer's directions. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue. Stir material before application to produce a mixture of uniform density; stir as required during application. Do not stir surface film into material. Remove film and, if necessary, strain material before using. Use only thinners approved by the paint manufacturer and only within recommended limits.
- E. Tinting: Tint each undercoat a lighter shade to facilitate identification of each coat where multiple coats of the same material are applied. Tint undercoats to match the color of the finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.3 APPLICATION

A. General: Apply paint <u>or stain</u> according to manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.

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- B. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
 - The number of coats and the film thickness required are the same regardless of the application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. Sand between applications where sanding is required to produce a smooth even surface according to the manufacturer's directions.
 - 2. Apply additional coats if undercoats, stains, or other conditions show through final coat of paint until paint film is of uniform finish, color, and appearance. Give special attention to ensure that surfaces, including edges, corners, crevices, welds, and exposed fasteners, receive a dry film thickness equivalent to that of flat surfaces.
 - 3. The term exposed surfaces includes areas visible when permanent or built-in fixtures, convector covers, covers for finned tube radiation, grilles, and similar components are in place. Extend coatings in these areas, as required, to maintain the system integrity and provide desired protection.
 - 4. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before the final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 - 5. Finish exterior doors on tops, bottoms, and side edges same as exterior faces.

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- Sand lightly between each succeeding enamel or varnish coat.
- Omit primer on metal surfaces that have been shop-primed and touch-up painted.
- C. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration. Allow sufficient time between successive coats to permit proper drying. Do not recoat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where application of another coat of paint does not cause the undercoat to lift or lose adhesion.
- D. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to the manufacturer's directions.
- E. Minimum Coating Thickness: Apply materials no thinner than the manufacturer's recommended spreading rate. Provide the total dry film thickness of the entire system as recommended by the manufacturer or specified herein.
- F. Mechanical and Electrical Work: Do not paint mechanical or electrical work in interior, except as noted. Paint electrical conduit on exterior of building unless adjacent to galvanized finish.
- G. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by the manufacturer, to material that is required to be painted or finished and that has not been prime-coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn-through or other defects due to insufficient sealing.
- H. Pigmented (Opaque) Finishes: Completely cover to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- Transparent (Clear) Finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, cloudiness, color irregularity, runs, brush marks, orange peel, nail holes, or other surface imperfections.
- Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with specified requirements.

FIELD QUALITY CONTROL

- A. The Owner reserves the right to invoke the following test procedure at any time and as often as the Owner deems necessary during the period when paint is being applied:
 - The Owner will engage the services of an independent testing agency to sample the paint material being used. Samples of material delivered to the Project will be taken, identified, sealed, and certified in the presence of the Contractor.
 - If test results show material being used does not comply with specified requirements, the Contractor may be directed to stop painting, remove noncomplying paint, pay for testing, repaint surfaces coated with rejected paint, and remove rejected paint from previously painted surfaces if, upon repainting with specified paint, the two coatings are incompatible.

3.5 CLEANING AND PROTECTION

- A. Cleanup: At the end of each work day, remove empty cans, rags, rubbish, and other discarded paint materials from the site. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.
- B. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.
- C. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

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3.6 INTERIOR PAINT SYSTEMS

- A. Gypsum Board:
 - 1. Water Based Epoxy-Acrylic:
 - a. Janitor Rooms, Break Room, Bike Assembly: One primer coat, two finish coats.
 - 1) Primer: Ultra Spec 500 Interior Primer 534; 1.3 DFM.
 - 2) Intermediate coat: Same as top coat.
 - 3) Top coat: Ultra Spec Scuff-X Satin 486; 2.5 3.0 DFM.
 - b. Hall adjacent to Restrooms: One primer coat, two finish coats.
 - 1) Primer: Ultra Spec 500 Interior Primer 534; 1.3 DFM.
 - 2) Intermediate coat: Same as top coat.
 - 3) Top coat: Ultra Spec Scuff-X Eggshell 485; 2.5 3.0 DFM.
 - c. Restrooms, Shower Room: One primer coat, two finish coats.
 - 1) Primer: Ultra Spec 500 Interior Latex Primer; 1.3 DFM.
 - 2) Intermediate coat: Same as top coat.
 - Top coat: Corotech Precatalyzed Epoxy Semi-Gloss V341; 2.5 3.0 DFM.
 - 2. Eggshell Latex (walls, all spaces, except as noted in 1): One primer coat, two finish coats.
 - a. Primer: Benjamin Moore Ultra Spec Interior Primer 534, 1.8 DFM / Sherwin Williams Harmony Interior Latex Primer; 1.3 DFM.
 - b. Intermediate coat: Same as top coat.
 - Top coat: Benjamin Moore Ultra Spec 500 Eggshell; 1.6 DFM / Sherwin Williams Harmony Interior Latex Eg-Shel; 1.6 DFM.
 - 3. Latex, flat: Ceilings: One primer coat, two finish coats.
 - a. Primer: Benjamin Moore Ultra Spec 500 Interior Primer 534, 1.8 DFM / Sherwin Williams Harmony Interior Latex Primer; 1.3 DFM.
 - b. Intermediate coat: Same as top coat.
 - c. Top coat: Benjamin Moore Ultra Spec 500 Interior Flat 536, 1.6 DFM / Sherwin Williams Harmony Interior Latex Flat; 1.6 DFM.
 - Primer (wall at Cashier area where graphics are to be applied and all areas receiving stencilapplied graphics):
 - Rust-Oleum "Zinsser Shieldz" White Pigment Universal Wall covering Primer. No substitutions allowed.
 - b. Two coats.
 - Product to be left on-site for verification by graphic panel installers. Refer to plans for location.
 - d. Prior to application of each layer, remove dust and debris from surface and ensure previous layer has cured per manufacturer requirements.
- B. Wood Opaque Finish System:
 - 1. Painted Wood: Two finish coats over primer.
 - a. Primer: Benjamin Moore Ultra Spec 500 Interior Primer 534, 1.8 DFM / Sherwin Williams Harmony Interior Latex Primer; 1.3 DFM.
 - b. Intermediate coat: Same as top coat.
 - c. Top coat: Benjamin Moore Ultra Spec 500 Semi-Gloss 539, 1.6 DFM / Sherwin Williams Harmony Interior Latex Semi Gloss; 1.6 DFM.
- C. MDO Flush Doors:
 - 1. Painted: Two finish coats over primer.
 - a. Primer: Benjamin Moore Fresh Start 024 Alkyd Primer / Preservative 20-96 Overlay Primer, Alkyd.
 - b. Finish: Benjamin Moore Ultra Spec 500 Semi-Gloss 539 / Preservative 3 series Metropolitan Enamel, Alkyd.
- D. Wood Transparent Finish System:
 - 1. Polyurethane:
 - a. Finish: Benjamin Moore Lenmar Megavar 1B.502 Dull Rubbed WB Polyurethane / Rust-Oleum "Ultimate Polyurethane with Soft Touch", matte finish; 2 coats.
 - b. Sand between coats as recommended by the manufacturer.

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2. Application: Wood trim and wall paneling scheduled to receive transparent finish.

E. Metals:

- Includes H.M. doors, frames, relites: 1.
 - Water Based Acrylic Urethane, semi-gloss meeting Green Seal Paints Standard GS-11 for total VOC and chemical component limits.
 - Primer: None required.
 - 2) Intermediate coat: Same as top coat.
 - Top coat: Benjamin Moore Ultra Spec HP DTM HP 29 / Sierra Performance Coatings S37 Metalmax DTM Plus, semi-gloss; 1.5 DFM.
- Clear Coat over unprimed or unpainted steel columns: Two coats Triple S (800/862-5958) AL-70 Quick Dry Lacquer; flat finish. Clear Coat full height of columns to underside of structure.

Floor Striping:

- Benjamin Moore Insl-x Latex Traffic Paint TP-2224 (Yellow), TP2220 (Black); (4-8 mils dft).
- The Sherwin Williams Co. (Cleveland, OH; 800-474-3794) "SetFast Low VOC Acrylic Traffic Marking Paint"; TM5627 (Yellow), TM5629 (Black).
- Provide manufacturers recommended non-slip additive. 3.

G. Mineral-Fiber Cement Siding:

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- Semi-transparent stain compatible with cementitious substrates, flat, color per finish schedule.
 - Primer: Ultra-Spec Masonry Interior/Exterior Acrylic Masonry Sealer (608/609).
 - Intermediate coat: Same as top coat.
 - Top coat: Benjamin Moore Ultra-Spec EXT Solid Color Stain (450). C.

H. Anti-Graffiti Coating:

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Rust-oleum OKON Graffiti Barrier Coat (GBC), OKN-16, minimum two coats per manufacturer's instructions.

END OF SECTION