SECTION 099113 - EXTERIOR PAINTING

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes surface preparation and the application of paint systems on the following exterior substrates:
   1. Steel.
   2. Galvanized metal.

B. Related requirements include the following:
   1. Section 099123 "Interior Painting" for surface preparation and the application of paint systems on interior substrates.

1.3 DEFINITIONS

A. Gloss Level 1 (Flat): Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D523.

B. Gloss Level 3 (Eggshell): 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D523.

C. Gloss Level 4 (Satin): 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D523.

D. Gloss Level 5 (Semigloss): 35 to 70 units at 60 degrees, according to ASTM D523.

E. Gloss Level 6 (Gloss): 70 to 85 units at 60 degrees, according to ASTM D523.

F. Gloss Level 7 (High Gloss): More than 85 units at 60 degrees, according to ASTM D523.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Paint Schedule: Provide a paint schedule indicating surface and actual paint product to be used on that surface for each surface and product.

C. Samples for Initial Selection: For each type of topcoat product indicated.

D. Samples for Verification: For each type of paint system and each color and gloss of topcoat indicated.
   1. Submit Samples on rigid backing, 8 inches (203.2 mm) square.
   2. Step coats on Samples to show each coat required for system.
   3. Label each coat of each Sample.
   4. Label each Sample for location and application area.

1.5 INFORMATION SUBMITTALS

A. Qualification Data: For application.

1.6 QUALITY ASSURANCE

A. Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.

B. Source Limitations: Obtain primers for each coating system from the same manufacturer as the finish coats.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
   1. Maintain containers in clean condition, free of foreign materials and residue.
   2. Remove rags and waste from storage areas daily.

1.8 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 65 and 80 deg F.

B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

C. This Project contains existing surfaces requiring additional preparation from new/unpainted surfaces. Prepare existing surfaces in accordance with “Preparation of Existing Surfaces” specified elsewhere in this Specification.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Products: Subject to compliance with requirements, provide one of the products listed in other Part 2 articles.

B. Manufacturers' Names: Shortened versions (shown in parentheses) of the following manufacturers' names are used in other Part 2 articles:
   1. Benjamin E. Moore (More)
   2. Pittsburgh Paints (PITT) – formerly PPG Paints
   3. Sherwin Williams (S/W)

2.2 PAINT, GENERAL

A. Material Compatibility: Provide primers and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.

C. Colors: As selected by Architect from manufacturer's full range.

D. Accent Painting: Accent painting is defined as painting of indicated surfaces with a different color than adjacent surfaces. Contractor shall assume the following surfaces will receive accent painting:
   1. All metal door and view window frames.

E. For projects containing more than one facility/building, contractor shall assume different colors will be selected for each facility/building including accent colors.

2.3 EXTERIOR PRIMERS

A. Exterior Ferrous-Metal Primer: Factory-formulated epoxy metal primer for exterior application. Apply at a spreading rate recommended by the manufacturer but not less than a dry film thickness of 2.0 mils (0.0508 mm).
   1. Moore HP1550 Concrete and Metal Epoxy
   2. PITT PPG Amerlock 2 High Solids Epoxy
   3. S/W B67-5 Series Recoatable Epoxy Primer

B. Exterior Galvanized Metal Primer: Factory-formulated epoxy metal primer for exterior application. Apply at a spreading rate recommended by the manufacturer but not less than a dry film thickness of 2.0 mils (0.0508 mm).
   1. Moore HP1550 Concrete and Metal Epoxy Prime

2. PITT PPG Amerlock 2 High Solids Epoxy
3. S/W B67-5 Series Recoatable Epoxy Primer

2.4 EXTERIOR FINISH COATS

A. Exterior Full-Gloss Acrylic Aliphatic Urethane for Ferrous and Other Metals: Factory-formulated full-gloss acrylic-aliphatic urethane coating for exterior application. Apply at a spreading rate recommended by the manufacturer but not less than a dry film thickness of 2.0 mils (0.0508 mm) per coat.
   1. Moore HP5000 Aliphatic Urethane Gloss
   2. PITT 95-812 Pitt-thane Ultra Acrylic Aliphatic Urethane Gloss
   3. S/W B65-300 High Solids Polyurethane

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

B. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
   1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

C. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
   1. Notify Architect about anticipated problems when using the materials specified over substrates primed by others.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.

B. Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
   1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
   2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.

C. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.
   1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.

D. Steel Substrates: Remove rust and loose mill scale. Clean using methods recommended in writing by paint manufacturer.

E. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

3.3 PREPARATION OF EXISTING SURFACES:

A. General: All surfaces must be cleaned and be free of mildew and construction dust and dirt. Remove all gum and tape and subsequent residue. Repair cracks and remove old, deteriorated caulk in masonry walls. Bare wood and metal must be spot primed. All loose paint must be scraped and/or sanded to provide sound substrate. Rusty metal must be wire brushed and scraped to remove any loose paint.

B. Priming on Existing Surfaces: Unless required by manufacturer, specified primers may be omitted on existing surfaces where existing finishes are in good condition and are not otherwise removed. Any areas of peeling paint removal or removal of any existing finishes down to bare substrates and shall be re-primed prior to installing new paint finishes. If existing surfaces require priming, new primers shall be as recommended by paint manufacturer for the existing surfaces/conditions present.

C. All Existing Metal Door and Window Frames: Using a grease cutting detergent, clean all surfaces to be painted. Sand with a fine grit sandpaper, wipe off dust, and apply a metal primer to any bare metal surfaces

3.4 APPLICATION

A. Apply paints according to manufacturer's written instructions.
   1. Use applicators and techniques suited for paint and substrate indicated.
   2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.

B. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.
   1. Painting includes field painting of exposed bare and covered pipes and ducts (including color coding), hangers, exposed steel and iron supports, and surfaces of mechanical and electrical equipment that do not have a factory-applied final finish.

C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
   1. Prefinished items include the following factory-finished components:
      a. Finished mechanical and electrical equipment.
      b. Light fixtures.
      c. Prefinished aluminum storefront.
      d. Prefinished metal roofing and flashing.
   2. Finished metal surfaces include the following:
      a. Anodized aluminum.
      b. Stainless steel.
      c. Chromium plate.
      d. Copper and copper alloys.
      e. Bronze and brass.
   3. Operating parts include moving parts of operating equipment and the following:
      a. Valve and damper operators.
      b. Linkages.
      c. Sensing devices.
      d. Motor and fan shafts.
      e. Door hardware.
   4. Labels: Do not paint over UL, FMG, or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

D. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

E. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks

3.5 FIELD QUALITY CONTROL

A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure at any time and as often as Owner deems necessary during the period when paints are being applied:

1. Owner will engage the services of a qualified testing agency to sample paint materials being used. Samples of material delivered to Project site will be taken, identified, sealed, and certified in presence of Contractor.
2. Testing agency will perform tests for compliance of paint materials with product requirements.
3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying-paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

3.6 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.7 EXTERIOR PAINTING SCHEDULE

A. Ferrous Metal: Provide the following finish systems over exterior ferrous metal.
   1. Full-Gloss Acrylic Aliphatic Urethane Finish: Two finish coats over a rust-inhibitive primer.
      a. Primer: Exterior ferrous-metal primer.
      b. Finish Coats: Exterior full-gloss acrylic aliphatic urethane coating.

B. Zinc-Coated Metal: Provide the following finish systems over exterior zinc-coated metal surfaces:
   1. Full-Gloss Acrylic Aliphatic Urethane Finish: Two finish coats over a galvanized metal primer.
      a. Primer: Exterior galvanized metal primer.
      b. Finish Coats: Exterior full-gloss acrylic aliphatic urethane coating.

END OF SECTION 099113

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