SECTION 099100 PAINTING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Surface preparation and field application of paints and coatings.

1.2 REFERENCES

A. ASTM D16 - Definitions of Terms Relating to Paint, Varnish, Lacquer, and Related Products.
B. ASTM D2016 - Test Method for Moisture Content of Wood.
C. AWWA (American Water Works Association) - C204 -Chlorinated Rubber-Alkyd Paint Systems for the Exterior of Above Ground Steel Water Piping.
D. NACE (National Association of Corrosion Engineers) -Industrial Maintenance Painting.
E. NPCA (National Paint and Coatings Association) - Guide to U.S. Government Paint Specifications.
F. PDCA (Painting and Decorating Contractors of America) -Painting - Architectural Specifications Manual.
G. SSPC (Steel Structures Painting Council) – Steel Structures Painting Manual.

1.3 SYSTEM DESCRIPTION

A. Provide all labor, material and equipment for priming, painting, coating or staining the following:
   1. Exterior and (exposed to view) interior primed or unprimed ferrous metal.
   2. Exterior and (exposed to view) interior galvanized surfaces and sheet metal.
   3. Interior roof structure & metal deck. (Black color)
   4. Exterior and (exposed to view) interior wood.
   5. Exterior Cement Siding & Soffits.
   6. Interior Gypsum Board walls & ceilings.
   7. Aluminum roof vents, fans, hoods etc. at Metal Roof (match metal roof color).
   8. Exposed ductwork.
B. Following items are not to be painted:
   1. Pre-finished metal flashing/trim/siding & roofing.
   2. Stainless steel or aluminum items (including door frames).
   3. Copper (piping and flashing).
   4. Prefinished equipment that is factory primed and painted to suitable finish, unless specifically shown to be job painted for color coordination purposes.
   5. Grab bars/Plastic laminate covered doors & cabinetwork.
   6. Plumbing fixtures or toilet accessories.
   7. Exterior masonry surfaces.
   8. Finish flooring or Suspended Lay-in ceilings.
C. It is intended that all interior and exterior exposed surfaces be finished;

either factory prefinished or coated/painted on the job except unfinished items listed above as not to be painted. This includes wall/ceiling surfaces, etc., in ancillary spaces such as mechanical spaces.

D. Taping, floating, and texturing of drywall is covered under Section 09 29 00.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 33 00, Submittal Procedures.

B. Product Data: Manufacturer's data sheets on each paint and coating product should include:

1. Product characteristics.
2. Surface preparation instructions and recommendations.
3. Primer requirements and finish specification.
4. Storage and handling requirements and recommendations.
5. Application methods.
6. Clean-up Information.

C. Selection Samples: Submit a complete set of color chips that represent the full range of manufacturer's color samples available.

D. Coating Maintenance Manual: upon conclusion of the project, the Contractor or paint manufacturer/supplier shall furnish a coating maintenance manual, such as Sherwin- Williams "Custodian Paint Maintenance Manual" report or equal. Manual shall include an Area Summary with finish schedule, Area Detail designating where each product/color/finish was used, product data pages, Safety Data Sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.

1.5 DEFINITIONS

A. Conform to ASTM D16 for interpretation of terms used in this Section.

1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum ten years documented experience.

B. Applicator: Company specializing in performing the work of this section with minimum 5 years documented experience approved by manufacturer.

1.7 REGULATORY REQUIREMENTS

A. Conform to applicable code for flame and smoke rating requirements for finishes.

B. Materials used on this project shall contain no lead.

1.8 FIELD SAMPLES

A. Provide field sample of paint under provisions of Section 01 45 00.

B. Locate where directed.
C. Accepted sample may remain as part of the Work.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, protect and handle products to site under provisions of Section 01 60 00.
B. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
C. Container label to include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
D. Store paint materials at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.10 ENVIRONMENTAL REQUIREMENTS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
B. Do not apply exterior coatings during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
C. Minimum Application Temperatures for Latex Paints: 45 degrees F for interiors; 50 degrees F for exterior; unless required otherwise by manufacturer's instructions.
D. Minimum Application Temperature for Varnish Finishes: 65 degrees F for interior or exterior, unless required otherwise by manufacturer's instructions.
E. Provide lighting level of 60 ft candles measured mid-height at substrate surface.

1.11 EXTRA MATERIALS

A. Furnish under provisions of Section 01 70 00.
B. Provide 1 gallon of each color, type, and surface texture to Owner.
C. Label each container with color, type, texture, room locations, and in addition to the manufacturer's label.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers - Paint
   1. PPG.
   2. Benjamin Moore.
   3. Sherwin-Williams.

B. Manufacturers - Primer Sealers
   1. PPG
   2. Benjamin Moore.
   3. Sherwin-Williams.

C. Manufacturers - Field Catalyzed Coatings
   1. PPG
   2. Benjamin Moore.
   3. Sherwin-Williams.

D. Substitutions: Under provisions of Section 01 60 00.

2.2 MATERIALS

A. Coatings: Ready mixed, except field catalyzed coatings. Process pigments to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating; good flow and brushing properties; capable of drying or curing free of streaks or sags.

B. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.

C. Patching Materials: Latex filler.

D. Fastener Head Cover Materials: Latex filler.

2.3 FINISHES

A. Refer to schedule at end of section for surface finish schedule.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify site conditions.

B. Verify that substrate conditions are ready to receive work as instructed by the product manufacturer.

C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.

D. Test shop applied primer for compatibility with subsequent cover materials.

E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
   1. Masonry, Concrete, and Concrete Unit Masonry: 12 percent.

2. Interior Wood: 15 percent, measured in accordance with ASTM D2016.
3. Exterior Wood: 15 percent, measured in accordance with ASTM D2016.
4. Concrete Floors: 8 percent.
5. Plaster and Gypsum Wallboard: 12 percent.

3.2 PREPARATION

A. Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.

B. Correct defects and clean surfaces which affect work of this section.

C. Seal with shellac and seal marks which may bleed through surface finishes.

D. Impervious Surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

E. Aluminum Surfaces Scheduled for Paint Finish: Remove surface contamination by steam or high pressure water. Remove oxidation with acid etch and solvent washing. Apply etching primer immediately following cleaning.

F. Concrete Floors (if being painted): Remove contamination, acid etch, and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow to dry.

G. Gypsum Board Surfaces: Fill minor defects with filler compound. Spot prime defects after repair.

H. Galvanized Surfaces: Remove surface contamination and oils and wash with SSPC lacquer thinner or solvent wipe. Apply coat of etching primer.

I. Concrete and 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.

J. Uncoated Steel and Iron Surfaces: Remove grease, mill scale, weld splatter, dirt, and rust. Where heavy coatings of scale are evident, remove by power tool wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Spot prime paint after repairs.

K. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Prime metal items including shop primed items.

L. Interior and Exterior Wood Items Scheduled to Receive Paint Finish: Wipe off dust, grit, and foreign matter prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats.

M. Fiber Cement Board (Primed): Wipe off dust, grit, and foreign matter prior to painting.

3.3 APPLICATION

A. Apply products in accordance with manufacturer's instructions.
B. Do not apply finishes to surfaces that are not dry.
C. Apply each coat to uniform finish.
D. Apply each coat of paint slightly darker than preceding coat unless otherwise approved.
E. Sand wood and metal lightly between coats to achieve required finish.
F. Vacuum clean surfaces free of loose particles. Use tack cloth just prior to applying next coat.
G. Allow applied coat to dry before next coat is applied.
H. Where clear finishes are required, tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
I. Prime concealed surfaces of interior and exterior woodwork with primer paint.

3.4 FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT

A. Paint shop primed equipment.
B. Paint exposed conduit and electrical equipment occurring in finished areas.
C. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.
D. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
E. Paint interior surfaces of air ducts that are visible through grilles and louvers with one coat of flat black paint, to visible surfaces. Paint dampers exposed behind louvers, grilles, to match face panels.
F. Paint both sides and edges of plywood backboards for electrical and telephone equipment before installing equipment.
G. Prime and paint insulated and exposed pipes, conduit boxes, insulated and exposed ducts, hangers, brackets, collars and supports except where items are prefinished.

3.5 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed under provisions of Section 01 45 00.

3.6 CLEANING

A. Clean work under provisions of 01 70 00.
B. Collect waste material which may constitute a fire hazard, place in closed metal containers and remove daily from site.

3.7 SCHEDULE - SHOP PRIMED ITEMS FOR SITE FINISHING

A. Metal Fabrications (Section 05 50 00): Exposed surfaces of lintels, and other miscellaneous items.

3.8 SCHEDULE - EXTERIOR SURFACES (based on Sherwin-Williams)

A. Ferrous & Non-Ferrous Metals
Primer: Pro Industrial™ Pro-Cryl® Universal Primer, B66-310 Series Two coats: Pro Industrial Acrylic

3.9 SCHEDULE - INTERIOR SURFACES (based on Sherwin-Williams)

A. Meeting Room, Offices
1. Gypsum Board
Primer: ProMar 200 Zero VOC Latex Primer, B28W2600 Two coats: ProMar 200 Zero VOC Interior Latex
2. Wood – Paint
Primer: PrepRite ProBlock® Latex Primer/Sealer B51 Series Two coats: Pro Industrial Acrylic
3. Wood – Stain
Stain: Minwax® 250 Interior Stain
Two coats: Minwax Water Based Polyurethane Varnish
4. Ferrous & Non-Ferrous Metals
Primer: Pro Industrial™ Pro-Cryl® Universal Primer, B66-310 Series
Two coats: Pro Industrial Acrylic

B. Restrooms, Hall, Mechanical, Janitorial
1. Gypsum Board - Walls
Primer: ProMar 200 Zero VOC Latex Primer, B28W2600 Two coats: Pro Industrial Pre-Catalyzed Waterbased Epoxy
4. Gypsum Board – Ceilings and Soffits
Primer: ProMar 200 Zero VOC Latex Primer, B28W2600 Two coats: ProMar 200 Zero VOC Interior Latex
5. Ferrous & Non-Ferrous Metals
Primer: Pro Industrial Pro-Cryl Universal Primer, B66-310 Series Two coats: Pro Industrial Acrylic

3.10 SCHEDULE – COLORS

A. Colors to be selected by Owner.

END OF SECTION 099100