

DIVISION 9

SECTION 09900 – PAINTING

PART 1 – GENERAL

1.01 Work Included

- A. Prepare surfaces to receive opaque painted finishes as specified.
- B. Finish surfaces as indicated in the schedule at the end of this Section. Generally, the scope of work shall include painting all exposed surfaces, whether specifically noted or not, and certain concealed surfaces, except where materials are prefinished or where intended to remain unfinished as described in paragraph 1.02 below.

Related work specified elsewhere:

- C. 1. N/A

1.02 Work Not Included

- A. Unless otherwise indicated, painting is not required on surfaces in concealed areas and inaccessible areas such as furred spaces, foundation spaces, utility tunnels, pipe spaces and duct shafts.
- B. Metal surfaces of anodized aluminum, stainless steel, chromium plate, copper, bronze and similar finished materials will not require painting under this Section, except as may be so specified.
- C. Materials, fixtures and equipment specified or supplied by the manufacturer as prefinished shall not be painted, unless otherwise indicated in the Schedule at the end of this Section.
- D. Materials supplied with factory-applied primer coats shall be field finished by this Section, unless otherwise indicated. Do not paint moving parts of operating units, mechanical or electrical parts such as valve operators, linkages, sensing devices and motor shafts, unless otherwise indicated. Priming or finishing of certain surfaces may be specified to be factory-applied or installer performed under other Sections.
- E. Priming or finishing of certain surfaces may be specified to be factory-applied or installer-performed under other Sections.

1.03 Quality Assurance

- A. Finish work shall be performed only by qualified personnel employed by firms specializing in work of this type, with a minimum of five (5) years successful experience in projects of similar size and complexity.
- B. Materials shall be applied with appropriate equipment and tools as specified herein, or as required to provide the specified quality.
- C. Coordination of Paint Finishes, Primers and Substrates:
 - 1. Provide finish coats which are compatible with the prime coats actually used.
 - 2. Review other Sections of these Specifications as required, verifying the prime coats to be used and assuring compatibility of the total coating system for the various substrates.
 - 3. Upon request, furnish information on the characteristics of the specific finish materials to assure that compatible prime coats are used.
 - 4. Provide barrier coats over non-compatible primers or remove the primer and reprime as required.

5. Notify the Architect in writing of anticipated problems in using the specified coating systems over prime coatings or substrates supplied under other Sections.
- D. Certification: Supplier shall certify that all paint materials supplied contain no lead or other toxic substances.

1.04 Submittals

- A. Product Data: Submit manufacturer's product literature and specifications to show compliance with the specified requirements.
- B. Materials List: Submit materials list of all items proposed to be provided under this Section.

1.05 Delivery, Storage and handling

- A. Deliver paint materials in original, sealed and labeled containers bearing manufacturer's name, type of paint, brand name, color, designation and instructions for mixing and/or reducing.
- B. Provide adequate storage facilities to store materials at minimum ambient temperature of 45° F in a well-ventilated area.
- C. Take precautionary measures to prevent fire hazards and spontaneous combustion.

1.06 Environmental Conditions

- A. General: Follow manufacturer's written specifications and recommendations for product handling and application. Adhere to all applicable OSHA regulations related to product application and handling of removed paint, rinse water and other residual materials.
- B. Ensure that surface temperature or the surrounding air temperature is above 40° F before applying finishes. Minimum application temperatures for latex paints for interior work is 45° F; 50° F for exterior work.
- C. Provide adequate continuous ventilation and sufficient heating facilities to maintain temperatures above 45° F for 24 hours before, during and 48 hours after application of finishes.
- D. Provide minimum 15 foot-candles of lighting on surfaces to be finished.

1.07 Protection

- A. Adequately protect other surfaces from paint and damage. Repair damage as a result of inadequate or unsuitable protection.
- B. Furnish sufficient drop cloths, shields and protective equipment to prevent spray or droppings from soiling surfaces not being painted and, in particular, surfaces within storage and preparation area.
- C. Place cotton cloths and any material which may constitute a fire hazard in closed, metal containers and remove daily from the site.
- D. Remove 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 solvents to clean hardware that may remove permanent lacquer finish.

1.08 Maintenance Materials

- A. Contractor shall furnish Owner additional maintenance stock of not less than one (1) gallon shall be adequate for all accent and trim colors.
- B. Containers are to be tightly sealed and clearly labeled for identification.

PART 2 – PRODUCTS

2.01 Finish Materials

- A. Paints, Enamels and Fillers: Type and brand scheduled herein, ready-mixed, except field catalyzed coatings. Pigments fully ground maintaining a soft paste consistency, capable of readily and uniformly being dispersed to a complete homogeneous mixture. Paints shall have good flowing and brushing properties and be capable of drying or curing free of streaks or sags.
 - 1. Paint materials shall contain no lead or other toxic substances. Refer to paragraph 1.03.c.
- B. Paint Accessory Materials: Linseed oil, shellac, turpentine and other materials not specifically indicated herein but required to achieve the finishes specified, of high quality and approved manufacturer.
- C. Color(s) as selected by the Architect from manufacturer's full color selection, unless otherwise indicated. Painter shall prepare samples for the Architect's approval of each paint color selected. Remake samples until approved, at no additional cost to the Owner.
- D. Approved Manufacturers: Use the same brand throughout the project for each type of paint material specified:
 - 1. Sherwin-Williams ProMar 200, as basis of design.
 - 2. Paint: Pittsburgh, Diamond Vogel, ICI Dulux, Fuller O'Brien, Benjamin Moore, Kelly
 - 3. Moore, Kwal-Howell and Sophir Morris. Using product lines of same quality, function and performance are acceptable only as approved by the Architect prior to bidding.
 - 4. Powder coating: Refer to Section 09901.
 - 5. Strippers and Paint Removers: Refer to Section 09905.

2.02 APPLICATION EQUIPMENT

- A. For application of the specified paint, use only such equipment as is recommended for application of the particular paint by the manufacturer.
- B. Prior to use of application equipment, verify that the proposed equipment is actually compatible with the material to be applied and that integrity of the finish will not be jeopardized by use of this equipment.

2.03 COLOR SCHEDULES

- A. The Architect will prepare marked-up elevations or a color schedule with samples for guidance in painting. Contractor shall furnish samples of all other related finish materials for coordination in preparation of the color schedule.
- B. The Architect may select, allocate and vary colors on different surfaces throughout the work, subject to the following:
 - 1. A maximum of three (3) different colors will be used, plus variations for miscellaneous work.

PART 3 – EXECUTION

3.01 Inspection

- C. Subcontractor shall thoroughly examine surfaces scheduled to be painted or finished prior to commencing work. Notify the Architect of any condition that may potentially affect proper application and final appearance. Do not commence work until such defects have been corrected to the satisfaction of the painting subcontractor. Beginning work shall be considered acceptance of surfaces.

3.02 Preparation of Surfaces

- A. General: All preparatory work shall be subject to evaluation and acceptance by the Architect. Painting subcontractor will accept responsibility for the preparation of all surfaces, as specified herein, prior to finishing.
- B. Ensure that the Contractor has corrected defects in all surfaces which may adversely affect work of this Section, including but not limited to:
 - 1. Metal doors and frames.
 - 2. Metal stair components.
 - 3. Gypsum wallboard surfaces and texturing.
 - 4. Plaster surfaces and finishing.
 - 5. Welding and other attachments.
 - 6. Steel plate connectors at exposed wood trusses.
- C. Remove surface contamination and oils from galvanized surfaces and wash with solvent. Apply a coat of etching-type primer.
- D. Remove grease, rust, scale, dirt and dust from steel, ferrous metal and iron surfaces. Where heavy coatings of scale are evident, remove by wire brushing, sandblasting or any other necessary method.
 - 1. Clean unprimed surfaces by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring that weld joints, bolts and nuts are similarly cleaned. Prime surfaces as required.
 - 2. Sand and scrape shop-primed surfaces to remove loose primer and rust. Feather out edges to make touch-up patches inconspicuous. Clean surfaces with solvent and prime surfaces as required.
 - 3. Back-prime structural steel and ferrous metal surfaces to be in contact with concrete, unless furnished by other Sections.
 - 4. Ensure that excess weld slag or flux deposits are removed, and that all exposed welds are ground or sanded to specified appearance.
- E. Remove all hardware from doors before painting. Masking of hardware is unacceptable.
- F. Schedule painting prior to installation of prefinished materials, specialties, furnishings and fixtures to the extent possible, including but not limited to:
 - 1. Finish hardware.
 - 2. Cabinetry and casework.
 - 3. Surface-mounted mechanical and electrical devices such as thermostats, prefinished grilles and diffusers, switch plates and outlet cover plates, etc.

3.03 Application

- A. General: Apply finish materials in accordance with the manufacturer's instructions and recommendations. Ensure that surfaces have been properly prepared and primed prior to application of finish coats.
- B. Apply each coat at the proper consistency. Allow each coat of finish to dry before the following coat is applied, unless directed otherwise by manufacturer. Sand lightly between coats to achieve the required finish.
- C. Brush Applications:

1. Brush out and work the brush coats onto the surface in an even film.
 2. Finish coats shall be finished by roping the paint, moving from wet to dry areas.
 3. Cloudiness, spotting, holidays, laps, brush marks, runs, sags and other surface imperfections will not be acceptable.
- D. Spray Applications:
1. Except as specifically otherwise approved by the Architect, confine spray application to metal framework and similar surfaces where hand brush work would be inferior.
 2. Gypsum wallboard walls, ceilings and soffits shall be finished by spray application, then back-rolled with roller equipment to result in specified mil thickness, moving from wet to dry areas.
 3. Where spray application is used, apply each coat to provide the hiding equivalent of brush coats.
 4. Do not double back with spray equipment to build up film thickness of two (2) coats in one (1) pass.
- E. For completed work, match the approved samples as to texture, color and coverage. Remove, refinish or repaint work not in compliance with the specified requirements.

3.04 Painting Mechanical and Electrical Equipment

- A. General: Painting of exposed equipment, louvers, ductwork, piping, conduits, etc. shall be work of this Section, unless otherwise indicated.
1. Paint all ductwork, piping, conduit and devices to be exposed to view in the completed project, unless prefinished or in concealed areas as defined in paragraph 1.02.
 2. Coordinate extent of field finishing of mechanical and electrical equipment with the Architect as necessary.
 3. Architect retains the right to require prefinished diffusers, grilles and other mechanical or electrical devices to be field finished, whether or not specifically called for.
 4. Prime and paint insulated and bare pipes, conduits, boxes, insulated and bare ducts, hangers, brackets, collars and supports in exposed locations, except where items are plated or covered with a prefinished coating, or where located in mechanical chase spaces. Finish paint primed equipment to color selected.
- B. Color Coding: Refer to Mechanical and Electrical Sections for requirements concerning color coding, identification branding of equipment, ducting, piping and conduit, if required.
1. Color code equipment, piping, conduit and exposed ductwork in accordance with requirements indicated.
 2. Color banding and identification (flow arrows, naming, numbering, etc.).
- C. Remove grilles, covers and access panels for mechanical and electrical systems from location and paint separately.
- D. Paint face(s) and edges of plywood backboards for electrical equipment before installing backboards and mounting equipment on them.
1. Replace identification markings on mechanical or electrical equipment when painted over or spattered.
- E. Do not paint gas meters, electric meters and similar exterior equipment provided by outside utility providers, if not permitted by those agencies. Coordinate requirements with the appropriate Subcontractor prior to painting.

1. Exposed gas piping leading to the gas meters shall be painted.
2. Exterior surface-mounted meter centers, disconnects, CT cabinets and similar equipment shall be painted, where not specifically excluded above.
3. Interior panel board cabinet frames and doors shall not be painted, unless specified elsewhere.

3.05 Areas of Special Concern

- A. The bus shelter light poles and lights, street sign and railings shall be powder coated with touch up by the painting subcontractor using materials provided by powder coating subcontractor.

3.06 Cleaning

- A. Promptly remove paint from adjacent materials or surfaces as work proceeds where spilled, splashed or splattered.
- B. During progress of work, keep premises free from any unnecessary accumulation of tools, equipment, surplus materials and debris.
- C. Place cotton cloths and material which may constitute a fire hazard in closed metal containers and remove daily from the site.
- D. Upon completion of work, leave premises neat and clean, to the satisfaction of the Architect.

3.06 Quality Control

- A. Painted finishes shall be subject to evaluation and approval to the satisfaction of the Architect, including but not limited to, the following characteristics:
 1. Consistency and smoothness of surface.
 2. Coverage and mil thickness.
 3. Color match between adjacent areas.
 4. Compliance with approved sample(s).

PART 4 – SCHEDULES

4.01 Exterior Painting and Finishing Schedule

NOTE: MWF indicates minimum wet film thickness which is a per coat measurement in mils thickness. Systems are based on Sherwin-Williams (S-W) or as noted.

- A. Exterior Exposed Steel Surfaces:
 1. Location: Exposed surfaces of exterior steel structures and railings.
- B. Exterior Metal Surfaces:
 1. Location: Metal doors and frames.
 2. Primer: One (1) coat shop prime or inhibitive metal primer, MWF 3.6 mils.
 3. Finish: Two (2) coats alkyd enamel, semi-gloss, MWF 4.4 mils.
 4. Product: SoW Industrial Enamel.
 5. Color(s): To be selected.
- C. Metal Boxes, Conduits and Mechanical Equipment:
 1. Location: As shown on the Drawings.

2. Primer: One (1) coat, factory primed.
 3. Finish: Two (2) coats acrylic latex, MWF 3.6 mils where not factory finished.
 4. Product: \$-W A-100 Satin Latex House and Trim.
 5. Color: To match adjacent surfaces.
- D. Louvers and Vents: Paint where not prefinished by manufacturer.
1. Exterior Signage: Prefinished by manufacturer.

END OF SECTION