

## SECTION 09900

### PAINTING

#### PART 1 - GENERAL

##### 1.01 DESCRIPTION

- A. This Section describes the requirements for painting and finishing of interior and exterior exposed items and surfaces.
1. Surface preparation, priming and coats of paint specified are in addition to shop-priming and surface treatments specified in other Sections.
  2. Work includes painting exposed pipes and ducts, hangers, exposed steel and iron, and primed metal surfaces of Mechanical and Electrical equipment, and general sheet metal work, except as otherwise indicated or specified.
  3. Work includes painting hardware specified as primed (USP or 600).
  4. Work includes sanding shop-primed surfaces and applying specified primer and finish coats.
  5. "Paint" means coating systems materials, including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediate or finish coats.
- B. Surfaces Not to Be Painted:
1. Pre-finished items, including but not limited to acoustic materials, casework, and finished mechanical and electrical equipment, including light fixtures, switchgear and distribution cabinets.
  2. Concealed surfaces such as walls or ceilings in concealed areas and inaccessible areas, furred areas, pipe spaces, and duct shafts.
  3. Finished metal surfaces such as anodized aluminum, stainless steel, chromium plate, copper, bronze and similar finished materials, exterior aluminum entrances, storefronts, and windows.
  4. Moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sensing devices, motor and fan shafts.
- C. Following categories of work are included under other Sections:
1. Shop priming ferrous metal items including structural steel, metal fabrications, hollow metal work and similar items. The work of this Section includes sanding and applying specified primer on all shop-primed surfaces exposed to view in the completed work.
  2. Shop priming of fabricated components such as architectural woodwork, wood casework and shop-fabricated or factory-built mechanical and electrical equipment or accessories.
  3. Piping identification is specified in Division 15.
  4. Graffiti-resistant coatings are specified in Section 09965.
- D. Do not paint over code-required labels, equipment identification, performance rating, name, or nomenclature plates.

##### 1.02 SUBMITTALS

- A. Certification: Furnish certification by the paint manufacturer that products supplied comply with local regulations controlling the use of volatile organic compounds (VOCs).

- B. Samples: Furnish samples of each color and material to be applied, with texture to simulate actual conditions, on representative samples of the actual substrate.
  - 1. Provide stepped samples, defining each separate coat, including block fillers and primers. Use representative colors when preparing samples for review. Resubmit until required sheen, color, and texture is achieved.
- C. Product Data: Specified paint systems are those of Frazee. If other paint manufacturers are proposed and accepted by the Architect, furnish product comparison charts showing that proposed paint systems are equal to the specified materials in number of coats, type of paint, and sheen.

#### 1.03 QUALITY ASSURANCE

- A. Applicators Qualifications: Engage an experienced applicator who has completed painting system applications similar in material and extent.
- B. Single Source Responsibility: Provide primers and other undercoat paint produced by same manufacturer as finish coats. Use thinners approved by paint manufacturer, and use within recommended limits.
- C. Coordination of Work: Review other Sections in which prime paints are to be provided to ensure compatibility of coatings system for various substrates. Upon request, furnish information or characteristics of finish materials to be used.
- D. Requirements of Regulatory Agencies: Comply with applicable rules and regulations of governing agencies for air quality control.
  - 1. Comply with current applicable regulations of California Air Resources Board (CARB) and the Environmental Protection Agency (EPA).
  - 2. Regulatory changes may affect the formulation, availability, or use of specified coatings. Confirm availability of coatings to be used prior to start of painting.
- E. Field Samples: On interior and exterior wall surfaces provide full-coat finish samples on at least 100-sq. ft. of surface, as directed, until required sheen, color and texture is obtained; simulate finished lighting conditions for review of in-place work. Approved samples will be used as a standard for the Project.

#### 1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to job site in original, new and unopened packages and containers bearing manufacturer's name, batch number, color, and directions.
- B. Store materials in tightly covered containers. Maintain containers in a clean condition, free of foreign materials and residue.
- C. Keep storage area neat and orderly. Remove oily rags and waste daily. Ensure that workers and work areas are adequately protected from fire hazards and health hazards resulting from handling, mixing and application of paints.

#### 1.05 JOB CONDITIONS

- A. Apply water-base paints when temperature of surfaces to be painted and surrounding air temperatures are between 50-deg. F. and 90-deg. F., unless otherwise permitted by paint manufacturer's printed instructions.
- B. Apply solvent-thinned paints only when temperature of surfaces to be painted and surrounding air temperatures are between 45-deg. F. and 90-deg. F., unless otherwise permitted by paint manufacturer's printed instructions.
- C. Do not apply paint in rain, fog or mist, or when relative humidity exceeds 85-percent, or to damp or wet surfaces, unless otherwise permitted by paint manufacturer's printed instructions.
- D. Provide adequate ventilation during interior painting using as close to 100-percent outside air as possible.

#### 1.06 EXTRA MATERIALS

- A. In addition to materials for completion of the work, furnish 5-gallons of additional materials for each type and color of opaque paint used.

- B. Furnish extra materials from same production lots or color runs used in the work. Furnish in containers factory sealed and labeled. Identify each container with Project name and type of material.
- C. Deliver materials and an inventory list just prior to Substantial Completion and store where directed by Owner.

## PART 2 - PRODUCTS

### 2.01 APPROVED MANUFACTURERS

- A. Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, Frazee, Sherwin Williams, Benjamin Moore or approved equal.
- B. Frazee products are specified as a standard of quality against which the equivalency of other products will be determined by the Architect.

### 2.02 MATERIALS

- A. Material Compatibility: Provide block fillers, primers, finish coat materials, and related materials that are compatible with one another and the substrates indicated under conditions of service and application.
- B. Material Quality: Provide best quality grade of coatings as regularly manufactured by acceptable paint materials manufacturers. Materials not displaying manufacturer's identification as a standard, best-grade product will not be acceptable.

### 2.03 COLORS

- A. Colors shall match color chips furnished by the Architect. At least 15-percent of required colors may be deep tone colors.
- B. Colors of paints, including shades of stain, shall match color samples approved by Architect.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine substrates and conditions under which painting is to be applied. Surfaces receiving paint shall be thoroughly dry before paint is applied.
  - 1. Provide barrier coats over incompatible primers or remove and re-prime as required. Notify Architect prior to applying barrier coats.
  - 2. Clean surfaces before applying paint or surface treatments. Remove oil and grease prior to mechanical cleaning.
  - 3. Start of painting will be construed as the applicator's acceptance of surfaces and conditions within a particular area.

### 3.02 PROTECTION

- A. Protection: Protect work of other Sections against damage by painting and finishing work. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.
  - 1. Provide "Wet Paint" signs as required to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work, after completion of painting operations.
  - 2. Remove or protect hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish-painted, or provide surface-applied protection prior to surface preparation and painting. Following completion of painting, reinstall removed items.
  - 3. At completion of work of other Sections, touch-up and restore damaged or defaced painted surfaces.

### 3.03 SURFACE PREPARATION

- A. Concrete and Masonry:
1. Prepare surfaces to be painted by removing surface contaminates.
    - a. Remove efflorescence with stiff bristle brush, wire brushing, wiping, sandblasting or acid washing and rinsing. Allow to dry.
    - b. Remove chalk, dust, dirt, asphalt, tar or excessive mortar by scraping or wire brushing.
    - c. Remove rust, grease or oil by solvent cleaning or sandblasting.
    - d. Treat concrete surfaces which are highly glazed or where traces of form release agents are present with a preparation of one-part concentrated muriatic acid, 4-parts water and one-part detergent or as recommended by parting compound manufacturer. Remove acid with water. Allow to dry.
    - e. Remove stains on concrete resulting from weathering or corroded metals, with a solution of 2-oz. sodium methasilicate in one-gallon water. Wet stained areas with water before application of solution. Allow to dry.
- B. Plaster:
1. Clean surfaces free from grit, loose plaster and surface irregularities.
  2. Determine alkalinity and moisture content by performing appropriate tests. Do not paint over surfaces where moisture content exceeds that permitted in manufacturer's literature or where pH exceeds 10.
- C. Ferrous Metal: 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 Society for Protective Coatings (SSPC).
1. Blast surfaces clean as recommended by the paint system manufacturer and according to requirements of SSPC specification SSPC-SP 10.
  2. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.
  3. Sand shop-applied prime coats to a smooth surface, ready to receive specified primer and finish coats.
- D. Galvanized Metals: Clean with non-petroleum-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.
- E. Gypsum Wallboard: Clean surfaces of dust, dirt, grease, oil and other foreign matter and dust clean.
- F. Existing Surfaces to be Repainted: Thoroughly clean and de-gloss surfaces to be repainted by sanding or other means prior to painting. Patched and bare areas shall be shop-primed with same alkyd primer as specified for new work.
- G. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
1. 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 dry.
  2. Prime, stain, or seal wood to be painted immediately upon delivery. Prime edges, ends, faces, undersides, and backsides of wood.

### 3.04 MATERIALS PREPARATION

- A. Mix and prepare painting materials in accordance with manufacturer's directions.
- B. Maintain containers used in mixing and application of paint in a clean condition, free of foreign materials and residue.
- C. Stir materials before application to produce a mixture of uniform density, and stir as required during application. Do not stir surface film into material. Remove film and strain material before using.
- D. Use thinners approved by 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.

### 3.05 APPLICATION

- A. General: Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.
  - 1. Provide finish coats compatible with prime coats.
  - 2. The number of coats required is the same regardless of the application method. Do not apply following coats until the previous coat has cured as recommended by the manufacturer. Sand between applications where required to produce a smooth even surface.
  - 3. Apply additional coats when undercoats, stains or other conditions show through final coat, until paint film is of uniform finish, color and appearance. Edges, corners, crevices, welds, and exposed fasteners shall receive a dry film thickness equivalent to that of flat surfaces.
  - 4. Paint surfaces behind movable equipment and furniture.
  - 5. Paint surfaces behind permanently-fixed equipment or furniture with prime coat before final installation of equipment.
  - 6. Paint visible surfaces of ducts where visible through registers or grilles with a flat, non-specular black paint.
  - 7. Paint back sides of access panels, and removable or hinged covers to match exposed surfaces.
  - 8. Finish doors on top, bottom and side edges same as faces. Where openings into rooms have different finishes, finish door edges as directed by the Architect.
  - 9. Omit primer on metal surfaces that have been shop-primed and touch-up painted, unless otherwise indicated.
- B. Scheduling Painting: Apply first-coat material to surfaces that have been cleaned, pretreated or otherwise prepared for painting as soon as practicable after preparation.
  - 1. Allow sufficient time between successive coatings to permit proper drying.
- C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's instructions.
  - 1. Brushes: Use brushes best suited for the material applied.
  - 2. Rollers: Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by the manufacturer for the material and texture required.
  - 3. Spray Equipment: Use airless spray equipment with orifice size as recommended by the manufacturer for the material and texture required.

- D. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate.
- E. Mechanical and Electrical Work: Painting mechanical and electrical work is limited to items exposed in mechanical equipment rooms and in occupied spaces. Finish to match adjoining wall or ceiling surfaces.
  - 1. Mechanical items to be painted include, but are not limited to, piping, hangers, and supports; heat exchangers; tanks; ductwork; insulation; supports; motors and mechanical equipment; air grilles and diffusers; and accessory items.
  - 2. Electrical items to be painted include, but are not limited to conduit and fittings, panels, and switchgear.
- F. Block Filler: Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores completely filled flush, free of pinholes. Provide multiple coats if required.
- G. Prime Coats: Before applying finish coats, apply a prime coat. Re-coat primed and sealed surfaces where there is evidence of suction spots or unsealed areas to assure a finish coat with no burn-through or other defects.
- H. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness and other surface imperfections will not be acceptable.
- I. Completed Work: Match approved samples for color, texture and coverage. Remove, refinish or repaint work not in compliance with specified requirements.

3.06 CLEANING

- A. Clean-Up: During progress of work, remove discarded paint materials, rubbish, cans and rags at end of each work day.
- B. Upon completion of painting work, clean window glass and other paint-spattered surfaces. Remove spattered paint by washing and scraping; do not scratch or damage finished surfaces.

3.07 EXTERIOR PAINT SCHEDULE

- A. Specified products are those of Frazee.
- B. Ferrous Metal, Acrylic Semigloss:
 

First Coat:	661F774 Metal Prime
Second and Third Coats:	128 Satin Glide II
- C. Galvanized and Zinc Alloy Metal, Acrylic Semigloss:
 

Pretreatment:	Jasco Prep-N-Prime
First Coat:	661F774 Metal Prime
Second and Third Coats:	128 Satin Glide
- D. Plaster, 100% Acrylic Emulsion Flat:
 

First Coat:	266 Epotilt
Second & Third Coats:	209 Acri-Kote
- E. Concrete, 100% Arcylic Emulsion Flat:
 

First Coat:	266 Epotilt
Second and Third Coats:	209 Acri-Kote

3.08 INTERIOR PAINT SCHEDULE

- A. Specified products are those of Frazee.
- B. Concrete Block and Brick, Low Odor/Zero VOC Acrylic Semigloss:
  - First Coat: 262 Acrylic Block Filler
  - Second and Third Coats: 032 Envirokote SG
- C. Gypsum Wallboard, Low Odor/Zero VOC Acrylic Semigloss:
  - First Coat: 061 Aqua Seal Wall Sealer
  - Second and Third Coats: 032 Envirokote SG
- D. Ferrous Metal, Low Odor/Zero VOC Acrylic Semigloss:
  - First Coat: 661 Metal Prime
  - Second and Third Coats: 032 Envirokote SG
- E. Wood, Stain and Clear Satin Finish (at wood doors at Stair Vestibules):
  - First Coat: 685 Wood Stain
  - Second, Third and Fourth Coats: 922 Acri-Satin

END OF SECTION