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SECTION 09 90 00

PAINTING AND COATING

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**PART 1 - GENERAL**

1.1 SUMMARY

- A. Section Includes: Provide painting and finishing of exposed items and surfaces requiring field painting and finishing including shop primed items.
  - 1. Specified surface preparation, priming and coats of paint are in addition to shop-priming and surface treatment specified under other sections of work.
  - 2. Painting and finishing includes field finishing of exterior and interior items not listed as "Surfaces not to be Painted" unless clearly indicated otherwise.
  - 3. Painting and finishing includes field finishing of select shop finished items where indicated as required to match adjacent surfaces, such as mechanical grilles and registers.
  - 4. Field paint exposed bare and covered pipes, ducts, and hangers, exposed steel and iron work, and primed metal surfaces of equipment installed under mechanical and electrical work in occupied spaces.
  - 5. Wood Doors: Contractor option to factory finish or field finish, coordinate with Section 08 14 00 - Wood Doors.
  - 6. Integral Color Plaster: Project requires field painting of integral color plaster (stucco).
- B. Surfaces Not To Be Painted:
  - 1. Finished items including finished metal surfaces.
  - 2. Walls and ceilings in concealed areas and generally inaccessible areas.
  - 3. Moving parts of operating mechanical and electrical units.
  - 4. Labels: Keep equipment identification and fire rating labels free of paint.
  - 5. Plastic smoke stops and weather-stripping at doors.
- C. Related Sections: Shop priming of ferrous metal items is included under various Specification sections.
  - 1. Section 06 40 00: Shop finishing of architectural woodwork.
  - 2. Section 09 24 00: Integral color plaster (to receive field painted finish).

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's technical information, including paint label analysis and application instructions for each material.

- B. Samples: Submit samples for review of color and texture; provide list of material and application for each coat of each finish sample.
  - 1. Brush-Outs: Submit samples of each color and material with texture to simulate actual conditions, on hardboard.
    - a. Submit 8" by 10" samples of wood finishes on actual wood surfaces; label and identify each as to location and application.
    - b. Submit samples of concrete masonry (maximum 4" square) defining filler, prime and finish coats.
  - 2. Field Samples: Duplicate painted finishes of approved samples on actual wall surfaces and components for approval prior to commencing work.
    - a. Size: Minimum 100 sf located where approved.
    - b. Components: One full component as directed.
    - c. Simulate finished lighting conditions for review.
- C. Manufacturer Certificates: Furnish certificates from each manufacturer stating materials are top quality lines and suitable for intended use on this Project.

### 1.3 QUALITY ASSURANCE

- A. Sustainability Requirements: Comply with CALGreen requirements including those relative to finish material pollution control for paints and coatings.

### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to job site in original, new and unopened packages and containers bearing manufacturer's name and label, with:
  - 1. Name of material, color and sheen.
  - 2. Manufacturer's name, stock number and date of manufacture.
  - 3. Contents by volume, for major pigment and vehicle constituents.
  - 4. Thinning and application instructions.

### 1.5 SITE CONDITIONS

- A. Apply water-base paints when temperature of surfaces and surrounding air are between 50 and 90 degrees F.
- B. Do not apply paint in rain, fog or mist; or when relative humidity exceeds 85 percent; or to damp or wet surfaces.
- C. Painting may be continued during inclement weather if areas to be painted are enclosed and heated within temperature limits specified.
- D. Provide additional temporary ventilation during interior application of paints to eliminate volatile organic compound (VOC) emissions from interior spaces as quickly as possible.

## PART 2 - PRODUCTS

### 2.1 SYSTEMS MANUFACTURERS

- A. Sherwin-Williams Co.
- B. Benjamin Moore & Co.
- C. Pittsburgh Paints, PPG Pittsburgh Paints, including Glidden Professional.
- D. Dunn-Edwards Corp.
- E. Substitutions: Refer to Section 01 25 00.

### 2.2 MATERIALS

- A. System Description: Provide painting and finishing of exposed items and surfaces requiring field painting and finishing including shop primed items.
  - 1. Definition: "Painting" and "coating" as used herein means systems including primers, emulsions, enamels, stains, sealers and fillers, whether used as prime, intermediate or finish coats.
- B. Regulatory Requirements:
  - 1. Volatile Organic Compound (VOC) Emissions: Furnish materials approved for use by applicable air quality management district for limitations of volatile organic compounds for architectural or special coatings as applicable.
  - 2. California Stair Stripes: Paint 2" stripes at stair nosing not otherwise marked, full tread and landing width, in accordance with California Code of Regulations, Title 24, Access Compliance requirements.
    - a. Exterior Stairs: Provide at landing and each tread in each stair run.
    - b. Interior Stairs: Provide at landing and last tread at each stair run.
- C. Material Quality: Provide top line quality commercial grade (professional painter) paints; materials not bearing manufacturer's identification as their top line product shall not be acceptable.
  - 1. Primers: Provide premium grade primers recommended by paint manufacturer for substrates indicated and for finish systems specified.
  - 2. Undercoats and Barrier Coats: Provide undercoat paints produced by same manufacturer as finish coats; use only thinners approved by paint manufacturer, and use only within recommended limits.
  - 3. Finish Coats: Provide finish coats capable of being washed with mild detergent without loss of color, sheen, or pigments.
    - a. Color pigments: Pure, non-fading, applicable types to suit substrates and service indicated; no lead content permitted.

4. Finish Coat Coordination: Provide finish coats which are compatible with prime paints, undercoats, and barrier coats used.
  - a. Review other Specification sections in which prime paints are provided; ensure compatibility of total coatings systems.
  - b. Upon request from other trades furnish information on characteristics of finish materials proposed for use.
  - c. Provide barrier coats over incompatible primers or remove and prime as required.
  - d. Notify Architect in writing of any anticipated problems in use of specified coating systems with substrates primed by others.
- D. Colors and Finishes: Prior to commencement of painting work, Architect will furnish color chips for surfaces to be painted.
  1. Use of proprietary names in color selection is not intended to imply exclusion of equivalent products of other manufacturers.
  2. Final acceptance of colors will be from samples applied on site.
  3. Colors: As indicated on Finish Schedules, as directed by Architect where not otherwise indicated.

## **PART 3 - EXECUTION**

### **3.1 PREPARATION**

- A. Inspection: Examine areas and conditions under which painting work is to be applied.
  1. Start of painting work indicates acceptance of surfaces and conditions of surfaces and conditions within any particular area.
  2. Where exposed items or surfaces are not specifically mentioned in Schedules, paint same as adjacent similar materials or areas.
  3. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to a durable paint film.
- B. Perform preparation and cleaning procedures in accordance with paint manufacturer's instructions and as specified for substrate condition.
- C. Remove hardware, accessories, and items in place and not to be painted, or provide protection prior to surface preparation and painting; after painting reinstall removed items.
- D. Clean surfaces before applying paint; remove oil and grease prior to mechanical cleaning; program cleaning so contaminants from cleaning process do not fall onto wet, newly painted surfaces.

- E. Cementitious Materials: Prepare by removing efflorescence, chalk, dirt, grease, oils, and by roughening as required to remove glaze.
  - 1. Determine alkalinity and moisture content of surfaces to be painted.
  - 2. If surfaces are found to be sufficiently alkaline to cause blistering and burning of finish paint, neutralize before application of paint.
  - 3. Do not paint over surfaces where moisture content exceeds manufacturer's printed directions.
- F. Wood: Clean wood surfaces of dirt, oil, and other foreign substances; sandpaper smooth surfaces exposed to view, and dust off.
  - 1. Scrape and clean seasoned knots and apply thin coat of recommended knot sealer, before application of priming coat.
  - 2. Prime, stain, or seal wood required to be job-painted immediately upon delivery to job; prime edges, ends, faces, undersides, and backsides of wood.
  - 3. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood-filler; sandpaper smooth when dry.
- G. Ferrous Metals: Touch up shop-applied prime coats wherever damaged using same type of primer as applied in shop or barrier coat compatible with finish paint.
  - 1. Bare Surfaces: Clean surfaces that are not galvanized or shop-coated, of oil, dirt, loose mill scale and other foreign substances by solvent or mechanical cleaning.
  - 2. Galvanized Surfaces: Clean free of oil and surface contaminants, using non-petroleum-based solvent; primer and touch-up primer to be zinc-rich primer.
- H. Mix painting materials in accordance with manufacturer's directions.
- I. Store materials in tightly covered containers; maintain containers used in storage, mixing and application of paint in a clean condition, free of foreign materials and residue.
- J. Stir materials before application to produce mixture of uniform density, and stir as required during application; do not stir surface film into material, if necessary, strain material before using.

### 3.2 APPLICATION

- A. Apply paint in accordance with manufacturer's directions; use applicators and techniques best suited for substrate and type of material being applied.
  - 1. Apply additional coats when stains or blemishes show through final coat, until paint is a uniform finish, color and appearance.
  - 2. Provide extra attention during application to assure dry film thickness at corners and crevices is equivalent to that of flat surfaces.

3. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces; paint surfaces behind permanently-fixed equipment and furniture with prime coat only.
  4. Finish doors on tops, bottoms and side edges same as faces.
  5. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
  6. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat, non-specular black paint.
  7. Sand lightly between coats when recommended by system manufacturer.
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated or prepared for painting as soon as practicable after preparation.
1. Allow time between successive coatings to permit proper drying.
  2. Do not recoat until paint feels firm and does not deform or feel sticky under moderate thumb pressure.
- C. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate, to establish a total dry film thickness as recommended by coating manufacturer.
- D. Prime Coats: Apply to items not previously primed; recoat primed and sealed surfaces where there is evidence of suction spots or unsealed areas in first coat.
- E. Finish Coats: Provide even texture; leave no laps, irregularity in texture, skid marks, or other surface imperfections.
1. Opaque Finishes: Provide opaque, uniform finish, color and coverage; cloudiness, spotting, holidays, brush marks, runs, sags, ropiness, and other surface imperfections are not acceptable.
  2. Transparent and Stained Finishes: Produce glass smooth surface film of even luster; provide with no cloudiness, color irregularity, runs, brush marks, orange peel, nail holes, and other surface imperfections.
- F. Completed Work: Match approved samples for color, texture and coverage; remove, refinish or repaint work not accepted.

### 3.3 PAINTING SCHEDULE

- A. Exterior Work: Provide following paint systems.
1. Metal: Semigloss sheen.
    - a. 1st Coat: Touch-up primer, prime if none.
    - b. 2nd and 3rd Coat: Exterior 100% acrylic enamel.
  2. Integral Color Plaster (To Be Field Painted): Flat sheen.
    - a. System: Parex USA/Parex Image Smooth acrylic finish system.

3. Concrete Masonry Units: Flat sheen.
    - a. 1st Coat: Surface filler.
    - b. 2nd and 3rd Coat: Heavy body waterproof acrylic emulsion.
    - c. Apply filler at rate to ensure coverage with pores filled.
  4. Traffic Line Paint (Exterior and Interior): Manufacturer's standard sheen; colors as required by line or symbol; blue for handicapped parking spaces.
    - a. 1st and 2nd Coat: Water based acrylic/epoxy traffic line paint; other systems subject to prior approval by Architect.
- B. Interior Work: Provide following paint systems.
1. Gypsum Board Systems: Eggshell (satin) sheen at walls, flat sheen at ceilings, semigloss sheen at toilet rooms, food preparation areas, laundry, and Guest Room Bathrooms.
    - a. 1st Coat: Universal primer.
    - b. 2nd and 3rd Coat: Interior latex or acrylic latex emulsion.
  2. Metal: Semigloss sheen.
    - a. 1st Coat: Touch-up primer, prime if none.
    - b. 2nd and 3rd Coat: 100% acrylic enamel.
  3. Opaque Finished Wood: Semigloss sheen.
    - a. 1st Coat: Primer undercoat.
    - b. 2nd and 3rd Coat: 100% acrylic enamel.
  4. Stained Wood: Satin rubbed sheen.
    - a. 1st Coat: Wood stain.
    - b. 2nd Coat: Sanding sealer.
    - c. 3rd and 4th Coat: Acrylic modified urethane.
    - d. Fill open grained wood with filler and wipe before 2nd coat.
  5. Transparent Finished Wood: Satin rubbed sheen.
    - a. 1st Coat: Bleached shellac.
    - b. 2nd and 3rd Coat: Acrylic modified urethane rubbing varnish.
    - c. Fill open grained wood with filler and wipe before 1st coat.
- C. Sheens: Comply with ASTM D523, reflectance of paint.
1. Flat: 1-10.
  2. Satin: 15-30.
  3. Eggshell: 30-45.
  4. Semigloss: 45-75.
  5. Gloss: 75-100.

**3.4 CLEAN-UP, PROTECTION, AND REPAIR**

- A. Clean-Up: During progress of work, remove discarded paint materials, rubbish, cans and rags from site at end of each work day.
  - 1. Clean glass and paint-spattered surfaces immediately by proper methods of washing and scraping, using care not to scratch or damage finished surfaces.
- B. Protection: Protect work of other trades, whether to be painted or not; correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.
  - 1. Provide "Wet Paint" signs to protect newly-painted finishes.
  - 2. Remove temporary protective wrappings provided by others for protection of their work, after completion of painting operations.
- C. Repair: At completion of work of other trades, touch-up and restore damaged surfaces or defaced painted surfaces.

**END OF SECTION**