SECTION 09 91 13

EXTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Primers.
2. Finish coatings.
3. Paints.

1.3 DEFINITIONS

A. Blocking: Two painted surfaces sticking together such as a painted door sticking to a painted jamb.

B. PDCA: Painting & Decorating Contractors of America www.pdca.org.

C. SSPC: Scopes of SSPC Surface Preparation Standards and Specifications. www.sspc.org.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include preparation requirements and application instructions.
2. Indicate VOC content.

B. Samples for Verification: For each type of paint system and each color and gloss of topcoat.

1. Submit Samples on rigid backing, 8 inches square.
2. Apply coats on Samples in steps to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

C. Product Schedule: Use same designations indicated on Drawings and in the Exterior Painting Schedule to cross-reference paint systems specified in this Section. Include color designations.

D. Submittal procedures and quantities are specified in Section 01 33 00.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Paint Products: 3 percent, but not less than 1 gal. of each material and color applied.

1.6 QUALITY ASSURANCE

A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

1. Architect will select one surface to represent surfaces and conditions for application of each paint system.

a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft.
b. Other Items: Architect will designate items or areas required.

2. Final approval of color selections will be based on mockups.

a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.

3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

B. The intent and requirements of this section, is that existing materials, items and surfaces which are normally painted and finished in construction of this type and quality, shall be so included, whether or not said materials, items or surfaces are specifically called out and included in the schedules and notes on the drawings, or is, or is not, specifically mentioned in these specifications.

C. Paint exposed mechanical, plumbing and electrical construction, which is not factory finished.

D. Regulatory Requirements. The quantity of volatile organic compounds (VOC) used in paint products shall not exceed the limits permitted under the current regulations for architectural coatings of the Bay Area Air Quality Management District.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Delivery:

1. Deliver paint in manufacturer's labeled and sealed containers. Labels shall include manufacturer's name, brand, type, batch number, color of paint and instructions for reducing. Thin only in accordance with printed directions of manufacturer. Thinning shall comply with the regulations of the air pollution control district having jurisdiction.

2. Do not deliver or use materials other than those specified, or approved.

B. Storage and Handling: Store paint materials and equipment, when not in actual use, in places specifically assigned for that purpose. Ventilate storage space and provide fire protection. Mix and handle paint in these assigned areas; use metal containers for mixing and handling and designed for safety.

1. Remove paint materials, including rags, tarpaulins, mixers, and empty containers and filled or partially filled containers from the building areas at the close of each working day.

1.8 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 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 above the dew point; or to damp or wet surfaces.

1.9 WARRANTY

A. Provide an extended warranty under the provisions of Section 01 78 36.

B. Warrant painting and finishing against peeling, fading, cracking, blistering, or crazing for a period of 2 years from the date of "Substantial Completion". The written warranty shall include materials and labor. The warranty shall be signed by the paint manufacturer, the painter and the Contractor.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Products: Subject to compliance with requirements, provide products listed from one of the following manufacturers for the paint category indicated.

1. Benjamin Moore; Basis-of-Design colors.
2. Dunn-Edwards Corp.
3. PPG Paints.
4. Kelly-Moore Paint Co.
5. Sherwin-Williams Co.

B. Primer and sealer coats may be thinned no more than 10 percent, with paint manufacturer's thinner. Use other materials as they come from the can, except as otherwise approved.

C. Secure the Color Schedule before undercoating. Unless otherwise specified, tint undercoats slightly to approximate the color of the finish coat. Obtain approval of colors before proceeding with the finishing operations.

D. Where a specific name is not given for a product or ingredient, provide item of the best quality of the approved manufacturer, which is normally used for the intended purpose.

E. Source Limitations: Obtain each paint product from single source from single manufacturer.

2.2 PAINT PRODUCTS, GENERAL

A. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by topcoat manufacturer for use in paint system and on substrate indicated.

B. Colorants: The use of colorants containing hazardous chemicals, such as ethylene glycol, is prohibited.

2.3 COLOR SELECTION

A. The Architect will select the finish colors and determine the basic hues of all surfaces to be painted.

B. Colors: Custom colors as selected by the Architect.

C. After the actual painting and finishing has started, the Architect retains the right to make minor modifications in tone and shade on the various surfaces to suit the actual lighting conditions encountered. Submit additional samples, as required, to assist the Architect in his final selection.

D. The number of colors to be used on any given building, and on the entire project, will be determined by the Architect.

2.4 MATERIALS

A. Substitutions: Materials will be considered for substitution subject to requirements specified in Section 01 25 13. Submit chemical formulations of materials proposed for substitution to demonstrate that formulation of substitution is similar to formulation of specified product; or results of test showing that performance of substitution is equivalent to performance of specified product.

B. Acceptable Products: Unless otherwise specified in the Paint Schedule, acceptable products include the following or equal:

1. Galvanized Metal Primer: Must remove Passivators

   Benjamin-Moore; P04 Acrylic Metal Primer
   Dunn-Edwards Corp.; UGPR00 Ultra-Grip / ULGM00 Ultrashield Int./Ext. Galvanized Metal Primer
   PPG PAINTS; 4020 Pitt Tech Plus (91 g/L VOC)
   Kelly-Moore Paint Co.; 5725 DTM Acrylic Primer/Finish
   Sherwin Williams Co.; B66 Pro Industrial Pro-Cryl Universal Acrylic Primer

2. Ferrous Metal Primer:

   Benjamin-Moore; P04 Acrylic Metal Primer
   Dunn Edwards Corp.; BRPR00-1 Bloc Rust / ENPR00 Enduraprime
   PPG PAINTS; 4020 Pitt Tech Plus (91 g/L VOC)
   Kelly-Moore Paint Co.; 5725 DTM Acrylic Primer/Finish
   Sherwin-Williams Co.; Pro Industrial ProCryl Universal Metal Primer B66-310

3. Aluminum Primer:

   Benjamin-Moore; P04 Acrylic Metal Primer
   Dunn-Edwards Corp.; ULGM00, Ultrashield, Int./Ext. Galvanized Metal Primer
   PPG PAINTS; 4020 Pitt Tech Plus (91 g/L VOC
   Kelly-Moore Paint Co.; 5725 DTM Acrylic Primer/Finish
   Sherwin-Williams Co.; Pro Industrial ProCryl Universal Metal Primer B66-310

4. Stainless-Steel Primer:

   Benjamin-Moore: Corotech WB Bonding Primer (V175)
   Dunn-Edwards Corp.; Super-Loc® Premium Interior/Exterior Bonding Primer SLPR00-2- WH
   PPG Paints: Amerlock® 2 VOC, High Solids Epoxy Coating @ 4.0-8.0 mils DFT

Kelly-Moore Paint Co.; Amerlock® 2 VOC, High Solids Epoxy Coating @ 4.0-8.0 mils DFT
Sherwin-Williams Co.; DTM Wash Primer

5. Wood Primer - Exterior:

Benjamin-Moore; 166 Superspec Busan 100% Acrylic Exterior Primer
Dunn Edwards Corp.; EZPR00 E-Z Prime Exterior Wood Primer
PPG PAINTS; 3210 Gripper (90.3 g/L VOC) OR 17-921 Seal Grip Universal Primer
Kelly-Moore Paint Co.; 255 Acry-Shield Exterior Wood Primer
Sherwin-Williams Co.; Ext Latex Wood Primer B42W8041

6. Concrete and Plaster Primer - Exterior:

Benjamin-Moore; 066 Acrylic Masonry Sealer
Dunn-Edwards Corp.; ESPR00 Eff Stop Masonry Primer/Sealer
PPG Paints; 4-603 Perma-Crete Int/Ext Alkali Resistant Primer (88 g/L VOC)
Kelly-Moore Paint Co.; 247 Acry-Shield 100% Acrylic Masonry Primer
Sherwin-Williams Co.; Loxon Exterior Acrylic Masonry Primer A24 Series

7. Intermediate Metal Undercoat - Exterior:

Benjamin-Moore; P04 Acrylic Metal Primer
Dunn Edwards: N/A
PPG PAINTS; 4020 Pitt Tech Plus (91 g/L VOC)
Kelly-Moore Paint Co.; 5725 DTM Acrylic Primer/Finish
Sherwin-Williams Co.; Pro Industrial ProCryl Universal Metal Primer B66-310

8. Acrylic Gloss Enamel:

Benjamin-Moore; Ultra Spec EXT 449 Gloss Finish
Dunn-Edwards Corp.; EVSH60 Evershield Gloss / SSHL60 Spartashield Gloss
PPG Paints; Advantage 900 Int/Ext Specialty Gloss (<50 g/L VOC)
Kelly-Moore Paint Co.; Devcryl 1449 Waterborne Gloss
Sherwin-Williams Co.; A-100 Acrylic Gloss A8 Series

9. Acrylic Finish Coat - Flat - Exterior:

Benjamin-Moore; 447 Ultra Spec EXT Flat Finish
Dunn-Edwards Corp.; EVSH10 Evershield Flat / SSHL10 Spartashield Flat
PPG PAINTS; 2200XI Fortis 350 Exterior Flat (49.25 g/L VOC); OR Acri-Shield Max 100% Premium Ext Flat (<50 g/L VOC)
Kelly-Moore Paint Co.; 1200 Premium Professional Exterior 100% Acrylic Flat
Sherwin-Williams Co.; A-100 Exterior Latex A6

10. Wood Trim Enamel - Semi-Gloss:

Benjamin-Moore; 448 Ultra Spec EXT Satin Finish
Dunn-Edwards Corp.; EVSH50 Evershield Semi-Gloss / SSHL50 Spartashield
PPG PAINTS; Acri-Shield Max 100% Premium Ext Semi-Gloss (<50 g/L VOC)
Kelly-Moore Paint Co.; 1215 Premium Professional Exterior 100% Acrylic Semi-Gloss
Sherwin Williams Co.; A 100 Exterior Latex Gloss A8 Series

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete: 12 percent. bm
2. Wood: 15 percent.
3. Portland Cement Plaster: 12 percent.

C. Portland Cement Plaster Substrates: Verify that plaster is fully cured.

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

E. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions applicable to substrates and paint systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and 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.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems specified in this Section.

D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions, including pH testing to determine that alkalinity is within limits established by the manufacturer.

E. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer, but not less than the following:

1. SSPC-SP 1, "Solvent Cleaning."
2. SSPC-SP 2, "Hand Tool Cleaning."
3. SSPC-SP 11, "Power Tool Cleaning to Bare Metal."

F. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

G. Galvanized-Metal Substrates:

1. Clean all galvanized metal with an appropriate Metal Prep and Passivator Remover.
2. To ensure passivators removal, perform the following test:
   a. With a 2% to 5% copper sulfate solution, place a swab or droplets on the prepared area. If the copper sulfate causes the galvanized to blacken, passivator has been removed and is ready for paint applications.
   b. If the copper sulfate has no effect on the galvanized, continue with metal prep solution OR use a Scotch Pad to abrade it being careful not to remove the galvanization itself.
3. Then apply required primer, allow drying as described in the product data sheets and test adhesion prior to applying finish coat(s).

H. Aluminum Substrates: Remove loose surface oxidation.

I. Stainless Steel Substrates:

1. Remove all prior coatings for best longevity of the new coating system.
2. Prepare via SSPC SP-16 / “Brush-Off Blast Non Ferrous Metal”, or power sanding similar to SSPC-SP-11 “Power Tool Commercial Cleaning” creating a 1-mil profile.

J. Wood Substrates:

1. Scrape and clean knots, and apply coat of knot sealer before applying primer.
2. Sand surfaces that will be exposed to view, and dust off.
3. Prime edges, ends, faces, undersides, and backsides of wood.
4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

3.3 APPLICATION

A. Apply paints in accordance with manufacturer's written instructions and recommendations in "MPI Manual."

1. Use applicators and techniques suited for paint and substrate indicated.
2. The number of coats scheduled is the minimum number of coats required. Additional coat(s) shall be applied at no additional cost to the Owner, to completely hide base material, provide uniform color, and to produce satisfactory finish results.
3. Apply coatings without thinning except as specifically required by label directions, or required by these specifications. In such cases, thinning shall be the minimum reduction permitted.
4. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
5. Paint exterior side and edges of exterior doors and entire exposed surface of exterior door frames.
6. Paint entire exposed surface of window frames and sashes, if previously painted.
7. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
8. Primers specified in the Exterior Painting Schedule may be omitted on items that are factory primed or factory finished if compatible with intermediate and topcoat coatings and acceptable to intermediate and topcoat paint manufacturers.

B. Tint undercoats same color as topcoat, but tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Provide sufficient difference in shade of undercoats to distinguish each separate coat.

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

D. 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.

E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:

1. Paint the following work where exposed to view:

a. Equipment, including panelboards and switch gear.
b. Uninsulated metal piping.
c. Uninsulated plastic piping.
d. Pipe hangers and supports.
e. Metal conduit.
f. Plastic conduit.
g. Tanks that do not have factory-applied final finishes.

3.4 CLEANING AND PROTECTION

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

1. Do not clean equipment with free-draining water and prevent solvents, thinners, cleaners, and other contaminants from entering into waterways, sanitary and storm drain systems, and ground.
2. Dispose of contaminants in accordance with requirements of authorities having jurisdiction.
3. Allow empty paint cans to dry before disposal.
4. Collect waste paint by type and deliver to recycling or collection facility.

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.

3.5 EXTERIOR PAINTING SCHEDULE

A. Exterior Surfaces:

1. Galvanized Metals - Gloss: (Galvanized surfaces exposed to sight and/or weather, unless indicated to be unpainted).

1 coat Galvanized Metal Primer
2 coats Acrylic Gloss Enamel

2. Iron and Steel - Gloss: (All other iron and steel surfaces exposed to sight and/or weather).

1 coat Ferrous Metal Primer*
1 coat Intermediate Metal Undercoat - Exterior
1 coat Acrylic Gloss Enamel

*Omit first coat on shop-primed surfaces.

3. Aluminum - Gloss: (All surfaces not indicated or specified to receive factory finish).

   1 coat Aluminum Primer
   1 coat Intermediate Metal Undercoat - Exterior
   1 coat Acrylic Gloss Enamel

3. Stainless Steel Flashing – Gloss (Benjamin Moore system):

   1 coat Corotech WB Bonding Primer (V175)
   2 coats Ultra Spec® HP DTM Acrylic Gloss Enamel (HP28)

4. Stainless Steel Flashing – Gloss (Dunn-Edwards system):

   1 coat Super-Loc® Premium Interior/Exterior Bonding Primer SLPR00-2-WH
   2 coats ENDURACOAT®, Interior/Exterior Gloss Industrial Maintenance Coating ENCT60

5. Stainless Steel Flashing – Gloss (PPG Paints system):

   1 Coat Amerlock® 2, 400 VOC @ 4.0-8.0 mils DFT. Defect Free, no holidays, runs or sags.
   1 Coat PSX® 700 @ 4.0-7.0 mils DFT for Gloss. Two-component, engineered siloxane coating.

6. Stainless Steel Flashing – Gloss (Kelly-Moore system):

   1 coat Amerlock® 2VOC, High Solids Epoxy Coating
   2 coats PSX® ONE, High Solids, Single Pack Acrylic Polysiloxane

7. Stainless Steel Flashing – Gloss (Sherwin Williams system):

   1 coat DTM Wash Primer
   2 coats Pro Industrial™ Acrylic Gloss B66-600 Series

8. Wood - Painted Semi-Gloss:

   1 coat Wood Primer - Exterior
   2 coats Wood Trim Enamel - Semi-Gloss

9. Wood - Painted Flat:

   1 coat Wood Primer - Exterior
   2 coats Acrylic Finish Coat - Flat - Exterior

10. Concrete - Painted Flat:

    1 coat Concrete and Plaster Primer - Exterior
    1 coat Acrylic Finish Coat - Flat - Exterior

11. Cement Plaster:

    1 coat Concrete and Plaster Primer - Exterior
    1 coat Acrylic Finish Coat - Flat – Exterior

END OF SECTION

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