SECTION 09 91 00

PAINTING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Surface preparation.

B. Painting schedules, including painting of exposed surfaces, interior and exterior, except as otherwise specified or indicated.

1.2 RELATED SECTIONS

A. Section 09 29 00 – Gypsum Board.

B. Divisions 25 – 28 – Electrical.

1.3 REFERENCES

A. The publications listed below form a part of this Section to the extent referenced. The publications are referred to in the text by the basic designation only. Refer to Division 01 for definitions, acronyms, and abbreviations.

B. Standards, manuals, and codes refer to the latest edition of such standards, manuals, and codes in effect as of the date of issue of this Project Manual, unless indicated otherwise in CBC Chapter 35 and CFC Chapter 80.

C. Referenced Standards, Manuals and Codes:

1. ASTM D523 – Standard Test Method for Specular Gloss.

2. The Master Painters Institute, MPI Gloss and Sheen Levels.

1.4 SUBMITTALS

A. Submit product data under provisions of Division 01.

B. Provide product data on all painting products and accessories.

C. Submit four brush-out samples 8 inches by 10 inches in size illustrating color selected for each surface finishing product scheduled.

D. During the Contract Closeout period, provide two copies of coating maintenance manual including, but not limited to, location of manufacturer's paint store closest to the project site, area summary with finish schedule, area detail designating where each product, color, and finish was used, product data sheets and material safety data sheets for each product used, color formulations for each color used, cleaning instructions, touch-up procedures, and color samples of each color and finish used.

1.5 QUALITY ASSURANCE

A. Product Manufacturer: Company specializing in manufacturing quality paint and finish products with sufficient documented experience.

B. Applicator: Company specializing in commercial painting and finishing with sufficient documented experience.

C. Gloss Levels: Per Master Painters Institute (MPI) gloss standards "MPI Gloss and Sheen Levels," measured in accordance with ASTM D523.

GLOSS LEVEL	DESCRIPTION	GLOSS AT 60 DEGREES ASTM D523	SHEEN AT 85 DEGREES ASTM D523
G1	A traditional matte finish – flat.	5 units, maximum	and 10 units, maximum
G2	A high side sheen flat - "a velvet-like" finish.	10 units, maximum	and 10 - 35 units
G3	A traditional "eggshell-like" finish.	10 - 25 units	and 10 - 35 units
G4	A "satin-like" finish.	20 - 35 units	and 35 units, minimum
G5	A traditional semi-gloss.	35 - 70 units	-
G6	A traditional gloss.	70 - 85 units	-
G7	A high gloss.	More than 85 units	-

1.6 REGULATORY REQUIREMENTS

A. Conform to California Building Code for flame spread and smoke density requirements for finishes.

B. Furnish certification that all paint coatings furnished for the location of the project comply with the EPA clean air act for permissible levels of volatile organic content for architectural coatings applied in California as designated by California Air Resources Board (CARB).

1.7 DELIVERY, STORAGE AND HANDLING

A. Deliver products to site in manufacturer's original unopened, labeled containers; inspect to verify acceptance.

B. Store and protect products from abuse and contamination.

C. Container labeling is to include manufacturer's name, type of paint, brand name, brand code, coverage, surface preparation, drying time, cleanup, color designation and instructions for mixing and reducing.

D. Store paint materials at minimum ambient temperature of 50 degrees F and a maximum of 90 degrees F, in well-ventilated area, unless required otherwise by manufacturer's instructions.

E. Take precautionary measures to prevent fire hazards and spontaneous combustion.

1.8 ENVIRONMENTAL REQUIREMENTS

A. Provide continuous ventilation and heating facilities to maintain surface and ambient temperatures above 50 degrees F for 24 hours before, during and 48 hours after application of finishes, unless required otherwise by manufacturer's instructions.

B. Do not apply exterior coatings during rain or snow, or when relative humidity is above fifty percent, unless required otherwise by manufacturer's instructions.

C. Minimum Application Temperatures for Latex Paints: 50 degrees F for interior work and exterior work, unless required otherwise by manufacturer's instructions.

D. Provide lighting level of 80 foot candles measured mid-height at substrate surface.

1.9 EXTRA STOCK

A. Provide a new and unopened one-gallon container of each type, color and sheen to Owner.

B. Label each container with color, in addition to the manufacturer's label.

PART 2 PRODUCTS

2.1 PAINT SYSTEMS, 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 manufacturers of topcoat for use in paint system and on substrate indicated.

2.2 ACCEPTABLE MANUFACTURERS – PAINT

A. Refer to Table at the end of this Section.

B. Substitutions: Per District approval

2.3 ACCEPTABLE MANUFACTURERS – PRIMER SEALERS

A. Refer to Table at the end of this Section.

B. Substitutions: Under provisions of Division 01.

2.4 MATERIALS

A. All paint materials shall be provided from a single manufacturer unless noted otherwise in this Section.

B. Coatings: Ready mixed. Process pigments to a soft paste consistency capable of being readily and uniformly dispersed to a homogeneous coating.

C. Coatings: Good flow and brushing properties; capable of drying or curing free of streaks or sags.

D. Accessory Materials: All other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.

2.5 FINISHES

A. Refer to schedule at end of Section for surface finish schedule. Refer to Drawings for color schedule.

PART 3 EXECUTION

3.1 INSPECTION

A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

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

C. 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. Gypsum Wallboard: 18 percent.

D. Beginning of application constitutes acceptance of existing surfaces.

3.2 PREPARATION

A. Remove electrical plates, hardware, light fixture trim, and fittings prior to preparing surfaces for painting.

B. Correct minor defects and clean surfaces that affect work of this Section.

C. Seal marks that 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. Gypsum Board Surfaces: Latex fill minor defects. Spot-prime defects after repair.

F. Galvanized Surfaces: Remove passivators, oil, grease, acid residue, and surface contamination; wash with solvent. Apply coat of etching primer, unless otherwise recommended by finish coating system manufacturer.

G. Shop-Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces as recommended by primer manufacturer. Prime shop-primed steel items with steel primers specified in this Section.

3.3 PROTECTION

A. Protect elements surrounding the work of this Section from damage or disfiguration.

B. Repair damage to other surfaces caused by work of this Section.

C. Furnish drop cloths, shields and protective methods to prevent spray or droppings from disfiguring other surfaces.

D. Remove empty paint containers from site.

3.4 APPLICATION

A. Apply products in accordance with manufacturer's instructions.

1. Paint mil thicknesses shall not be less than the minimums recommended by the paint manufacturers.

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 lightly between coats to achieve required finish.

F. Allow applied coat to dry before next coat is applied.

3.5 FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT

A. See Divisions 21 – 23 and 25 – 28 for other items requiring painting.

B. Paint interior surfaces of air ducts and convector heating cabinets that are visible through grilles and louvers with one) coat of flat black paint, to limit of sight line. Paint dampers exposed behind grilles to match face panels. Paint all interior and exterior exposed ductwork and ductwork supports. Paint all conduit, pipes and conduit/pipe supports in exposed interior and exterior locations.

C. Reinstall electrical plates, hardware, light fixture trim, and fittings removed for surface preparation or painting.

D. Do not paint factory-finished mechanical and electrical equipment.

3.6 CLEANING

A. As Work proceeds, promptly remove paint where spilled, splashed, or spattered.

B. During progress of Work, maintain premises free of unnecessary accumulation of tools, equipment, surplus materials and debris.

C. Collect cotton waste, cloths, and material which may constitute a fire hazard, place in closed metal containers and remove from site daily.

3.7 PAINTING SCHEDULE – EXTERIOR SURFACES

A. Ferrous Metal:

1. 1st coat – Acrylic Flat Primer
2. 2nd and 3rd coats – 100 percent Acrylic Semi-Gloss

B. Ferrous Metal (Industrial) – For use at exterior metal architectural features/exposed structure:

1. 1st coat – Epoxy Flat Primer
2. 2nd and 3rd coats – Aliphatic Urethane Gloss Enamel

C. Galvanized Metal and Aluminum:

1. 1st coat – Etch Prep
2. 2nd coat – Acrylic Flat Primer
3. 3rd and 4th coats – 100 percent Acrylic Semi-Gloss

3.8 PAINTING SCHEDULE – INTERIOR SURFACES

A. Gypsum Board:

1. 1st coat – PVA Primer Sealer
2. 2nd and 3rd coats – Latex Semi-Gloss Enamel

B. Gypsum Board:

1. 1st coat – PVA Primer Sealer
2. 2nd and 3re coats – Latex Eggshell Enamel

C. Ferrous Metal:

1. 1st coat – Acrylic Flat Primer
2. 2nd and 3rd coats – Latex Eggshell Enamel

D. Ferrous Metal:

1. 1st coat – Acrylic Flat Primer
2. 2nd and 3rd coats – Latex Semi-Gloss Enamel

			MANUFACTURERS				
APPLICATION	TYPE	MPI Gloss Level	Dunn Edwards	PPG Paints	Sherwin Williams	Kelly Moore/ Devoe	Vista
PRIMERS							
Exterior Ferrous Metal	Acrylic	G1	BRPR00-1	4020	B66W00310	5725	9600
Exterior Ferrous Metal (Industrial)	Epoxy	G1	Carboline Rustbond	Amerlock2 VOC	B58W00620	Bar-Rust 235V	Carboline Rustbond
Exterior Galvanized Metal and Aluminum	Acrylic	G1	ULGM00	4020	B66W00310	5725	4800
Zero VOC Interior Gypsum Board	Acrylic	G1	VNSL00	9-900	B28 2600	971	5001
Interior Gypsum Board	PVA	G1	VNSL00	1030	B28 2600	971	5001
Interior Ferrous Metal	Acrylic	G1	BRPR00	4020	B66W00310	5725	9600
FINISHES							
Exterior Ferrous and Galvanized Metal, Aluminum	100 percent Acrylic	G5	SSHL50	2406V	A77 Solo	1250	7000
Exterior Ferrous Metal (Industrial)	Aliphatic Urethane Enamel	G6	Carbothane 134VOC	Amershield	B66W300	Devthane 379H	Carbothane 134VOC
Zero VOC Interior Gypsum Board	100 percent Acrylic	G3	SZRO30	9-300	B09-1000	1510	7500
Zero VOC Interior Gypsum Board	100 percent Acrylic	G5	SZRO50	9-500	B10-1051	1520	7000
Interior Gypsum Board	100 percent Acrylic	G3	SZRO30	1402N	A75W51 Solo	1610	7500
Interior Gypsum Board	100 percent Acrylic	G5	SZRO50	6-8510	A76W53 Solo	1650	7000
Interior Ferrous Metal and Aluminum	100 percent High Performance Acrylic	G3	EVSH30	4212	B66W00661 HP Acrylic	1686	8300
Interior Ferrous Metal and Aluminum	100 percent High Performance Acrylic	G5	EVSH50	4216	B66W00651 HP Acrylic	5885	8400
MISCELLANEOUS							
Exterior Heavy Duty Cleaner	Water-Based	N/A	Krud Kutter Gloss-Off	88		Devprep 88	Krud Kutter Gloss-Off
Exterior Galvanized Metal Etch Prep.	N/A	N/A	Krud Kutter Metal Clean and Etch, Dissco Eco-Prime 100, or Jasco Prep & Prime				

END OF SECTION

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