SECTION 099114 - EXTERIOR PAINTING (MPI STANDARDS)

Revise this Section by deleting and inserting text to meet Project-specific requirements.

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed.

1. GENERAL
	* + 1. SUMMARY
				1. Section Includes:

Surface preparation and application of paint systems on[ **exterior substrates.][ the following exterior substrates:]**

Concrete.

Fiber-cement board.

Clay masonry.

Concrete masonry units (CMUs).

Steel and iron.

Galvanized metal.

Aluminum (not anodized or otherwise coated).

Copper.

Stainless steel.

Wood.

Fiberglass.

Plastic.

Portland cement plaster (stucco).

Gypsum board.

Cotton or canvas insulation covering.

Bituminous-coated surfaces.

* + - * 1. Work under this Contract shall also include, but not necessarily be limited to:

Labor, materials, tools and other equipment, services and supervision required to complete all exterior painting and decorating work as indicated on Finish Schedules and to the full extent of the drawings and specifications.

Moisture testing of substrates.

Surface preparation of substrates as required for acceptance of paint, including cleaning, small crack repair, patching, caulking, and making good surfaces and areas to the limits defined under MPI Architectural Painting Manual Preparation requirements.

Specific pre-treatments noted herein or specified in the MPI Architectural Painting Manual.

Sealing / priming surfaces for painting in accordance with MPI Architectural Painting Manual requirements.

Provision of safe and adequate ventilation as required over and above temporary ventilation supplied by others, where toxic and/or volatile / flammable materials are being used.

* + - * 1. Related Requirements:

Retain subparagraphs below to cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections.

Primers in other Sections must be coordinated for compatibility with finish coats specified in this Section. Review other Sections for shop-primed exterior products, and insert references to this Section to establish primer requirements.

[**Section 051200 "Structural Steel Framing"] [Section 051213 "Architecturally Exposed Structural Steel Framing"]** for shop priming of metal substrates.

Section 055000 "Metal Fabrications" for shop priming metal fabrications.

Section 055116 "Metal Floor Plate Stairs" for shop priming metal floor plate stairs.

Section 055119 "Metal Grating Stairs" for shop priming metal grating stairs.

Section 055213 "Pipe and Tube Railings" for shop [**priming**] [**painting**] pipe and tube railings.

Section 099300 "Staining and Transparent Finishing" for surface preparation and application of wood stains and transparent finishes on exterior wood substrates.

[**Section 099600 "High-Performance Coatings**"] for tilelike coatings.

* + - * 1. Refer to drawings and schedules (e.g., Finish Schedule) for type, location and extent of exterior painting required.
			1. REFERENCES
				1. Master Painters Institute Inc., MPI Architectural Painting Manual. www.specifypaint.us..
			2. DEFINITIONS

Retain this article if paints are specified by manufacturers' trade names rather than by MPI paint numbers. Definitions of MPI Gloss Levels below are from "MPI Architectural Painting Specification Manual" (hereafter, "MPI Manual").

Retain terms that remain after this Section has been edited for a project.

* + - * 1. MPI Gloss Level 1 (Matte or Flat): Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D523.
				2. MPI Gloss Level 3 (Eggshell): 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D523.
				3. MPI Gloss Level 4 (Satin): 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D523.
				4. MPI Gloss Level 5 (Semi-Gloss): 35 to 70 units at 60 degrees, according to ASTM D523.
				5. MPI Gloss Level 6 (Gloss): 70 to 85 units at 60 degrees, according to ASTM D523.
				6. MPI Gloss Level 7 (High Gloss): More than 85 units at 60 degrees, according to ASTM D523.
			1. SUBMITTALS
				1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
				2. Manufacturer’s installation instructions shall be provided along with product data.
				3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
				4. Painting Schedule: Cross-referenced Painting Schedule listing all exterior and interior substrates to be painted and specified finish paint type designation; product name and manufacturer, recommended primers and product numbers, and finish paint color designation for each substrate to be painted.

Designate exterior substrates by building name and number, substrate to be painted and surface location.

* + - * 1. Product Data: For each type of product.

Include preparation requirements and application instructions.

See "Writing Guide" Article in the Evaluations for discussion of first subparagraph below.

Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.

Indicate VOC content.

Manufacturer’s standard colors in the form of actual fan decks.

* + - * 1. Sustainable Design Submittals:

Retain "Samples" paragraph below for single-stage Samples, with a subordinate list if applicable. Retain "Samples for Initial Selection" and "Samples for Verification" paragraphs for two-stage Samples. Delete "Samples" and "Samples for Initial Selection" paragraphs if colors and other characteristics are preselected and specified or scheduled and only verification Samples are required.

* + - * 1. Samples: For each type of topcoat product.
				2. Samples for Initial Selection: For each type of topcoat product.
				3. Samples for Verification: For each type of paint system and each color and gloss of topcoat.

Color and gloss of Samples change as they age; seven-day old Samples appear different from freshly dried Samples.

Submit Samples on rigid backing, 8 inches square.

Apply coats on Samples in steps to show each coat required for system.

Label each coat of each Sample.

Label each Sample for location and application area.

* + - * 1. Contractor’s Qualifications: Submit documentation demonstrating compliance with requirements in Quality Assurance Article.
				2. Certification of Volatile Organic Compounds: Submit certified list demonstrating compliance requirements in Quality Assurance Article.
			1. MAINTENANCE MATERIAL SUBMITTALS
				1. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

If necessary, replace percentage in "Paint" Subparagraph below with a specific number of gallons (liters) or cases and include an expanded description of the quantity of each material and color.

Paint: 5 percent, but not less than 1 gal. of each material and color applied.

* + - 1. QUALITY ASSURANCE
				1. Volatile Organic Compounds (VOCs) Regulatory Requirements: Chapter III of Title 6 of the official compilation of Codes, Rules and Regulations of the State of New York (Title 6 NYCRR), Part 205 Architectural Surface Coatings.

Certificate of Compliance: List of each paint product to be delivered and installed. List shall include written certification stating that each paint product listed complies with the VOC regulatory requirements in effect at the time of job site delivery and installation.

* + - * 1. Contractor shall have a minimum of five (5) years proven satisfactory experience and shall show proof before commencement of work that he will maintain a qualified crew of painters throughout the duration of the work. When requested by the Director’s Representative, Contractor shall provide a list of the last three comparable repainting jobs including, name, location, specifying authority / project manager, start / completion dates and value of the work.
				2. All materials, preparation and workmanship shall conform to the standards contained in the latest edition of the Master Painters Institute (MPI) Architectural Painting Manual (herein referred to as the MPI Manual).
				3. The painting contractor shall receive written confirmation of the specific surface preparation procedures and primers used for all fabricated steel items from the fabricator / supplier to ascertain appropriate and manufacturer compatible finish coat materials to be used before painting such work.
				4. 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.

Director’s Representative will select one surface to represent surfaces and conditions for application of each paint system.

Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft..

Other Items: Director’s Representative will designate items or areas required.

Final approval of color selections will be based on mockups.

If preliminary color selections are not approved, apply additional mockups of additional colors selected by Director’s Representative at no added cost to the State.

Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Director’s Representative specifically approves such deviations in writing.

Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

* + - * 1. Compatibility of Paint Materials: Primers and intermediate paints shall be products manufactured or recommended by the finish paint manufacturer.
			1. REGULATORY REQUIREMENTS
				1. Conform to work place safety regulations for storage, mixing, application and disposal of all paint related materials to requirements of those authorities having jurisdiction.
				2. To reduce the amount of contaminants entering waterways, sanitary / storm drain systems or into the ground the following procedures shall be strictly adhered to:

Retain cleaning water for water based materials to allow sediments to be filtered out. In no case shall equipment be cleaned using free draining water.

Retain cleaners, thinners, solvents and excess paint and place in designated containers and ensure proper disposal.

Return solvent and oil-soaked rags used during painting operations for contaminant recovery, proper disposal, or appropriate cleaning and laundering.

Dispose of contaminants in an approved legal manner in accordance with hazardous waste regulations.

Empty paint cans are to be dry prior to disposal or recycling (where available).

Close and seal tightly partly used cans of materials including sealant and adhesive containers and store protected in well ventilated fire safe area at moderate temperature.

* + - 1. DELIVERY, STORAGE, AND HANDLING

If necessary, in paragraph below, insert special requirements for fire protection, heating, ventilation, and other conditions for storage areas on-site.

* + - * 1. Deliver painting materials in sealed, original labeled containers bearing manufacturer's name, brand name, type of paint or coating and color designation, standard compliance, materials content as well as mixing and/or reducing and application requirements.
				2. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.

Maintain containers in clean condition, free of foreign materials and residue.

Remove rags and waste from storage areas daily.

* + - * 1. Where toxic and/or volatile / explosive / flammable materials are being used, provide adequate fireproof storage lockers and take necessary precautions and post adequate warnings (e.g. no smoking) as required.
				2. Take necessary precautionary and safety measures to prevent fire hazards and spontaneous combustion and to protect the environment from hazard spills. Materials that constitute a fire hazard (paints, solvents, drop clothes, etc.) to be stored in suitable closed and rated containers or removed from the site on a daily basis.
				3. Comply with requirements of authorities having jurisdiction, in regard to the use, handling, storage and disposal of hazardous materials.
			1. FIELD CONDITIONS
				1. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.
				2. 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.
				3. Perform no painting work unless a minimum lighting level of 323 Lux (30-foot candles) is provided on surfaces to be repainted.
				4. Apply paint only to dry, clean, and adequately prepared surfaces in areas where dust is no longer generated by construction activities such that airborne particles will not affect the quality of finished surfaces.
				5. The following items are not to be painted unless otherwise specified, noted or directed:

Exposed stainless steel, chrome, copper, bronze, brass, and aluminum.

Steel to be encased in cast-in-place concrete.

Top flanges of structural beams and girders in composite concrete-steel construction.

Factory prefinished items.

Exposed structural wood floor joists, subflooring, rafters, roof sheathing and other framing lumber.

Galvanized items not exposed in finished spaces.

* + - 1. MAINTENANCE MATERIALS
				1. Except as noted below, provide a minimum of 1 gallon of each type and color of paint from same production run (batch mix) used in unopened cans, properly labeled and identified. Store where directed.

Paint Type EAL-1: Four gallons, each type.

Paint Types EAL-2: Two gallons, each type.

Other Paint Types: One gallon, each type.

1. PRODUCTS

Manufacturers and products listed in SpecAgent and MasterWorks Paragraph Builder are neither recommended nor endorsed by the AIA or Deltek. Before inserting names, verify that manufacturers and products listed there comply with requirements retained or revised in descriptions and are both available and suitable for the intended applications.

* + - 1. PAINT MATERIALS, GENERAL
				1. MPI Standards: Provide products complying with MPI standards indicated and listed in its "MPI Approved Products List."

Generally, retain "Material Compatibility" paragraph below.

* + - * 1. Material Compatibility:

Systems could fail if paints used for individual coats are incompatible. MPI's paint systems match primers and topcoats and take compatibility into consideration.

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.

For each coat in a paint system, provide products recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

* + - * 1. Colors: [**As selected by Director’s Representative from manufacturer's full range] [Match Director’s Representative's samples] [As indicated in a color schedule**].

[**10**] [**20**] [**30**] percent of surface area will be painted with deep tones.

* + - * 1. Mechanical, Electrical, and Plumbing Components Colors: Provide paint colors shown on contract drawings or to be selected by the Director from finish paint manufacturers available color selections.

Approved finish paint manufacturers to match designated colors of other manufacturers where colors are shown on contract documents.

Safety Colors: Industry Standard ANSI Safety Colors.

Fire Protection Systems: Paint exposed piping, and handles of valves serving the system as specified below:

Sprinkler Systems: Red piping, and green valve handles.

Standpipe Systems: Red piping, and red valve handles.

Combination Sprinkler/Standpipe Systems: Red piping, and yellow valve handles.

Do not paint equipment with factory finish paint.

Color Coding: Apply exposed insulated and uninsulated piping finish paints in the following colors when piping is located in the following applicable rooms or spaces:

Applicable Rooms and Spaces: Mechanical Equipment Rooms, Steam Service Rooms, Refrigeration Machine Rooms, Boiler Rooms, Penthouse Mechanical Equipment Rooms and Power Houses.

Color code as follows:

Air, Compressed: Safety Green.

Air, Control: Safety Green.

Air, Medical: Safety yellow.

Ammonia, Gas and Liquid: Safety Yellow.

Brine: Safety Green.

Carbon Dioxide: Safety Red.

Dangerous Materials: Safety Yellow.

Engine Exhausts: Safety Yellow.

Flue Gases: Safety Yellow.

Gas, Natural and Manufactured: Safety Yellow.

Gasoline: Safety Yellow.

Glycol and Glycol/Water Mixtures: Safety Yellow.

Nitrous Oxide: Safety Blue.

Oils, Fuel and Lubrications: Safety Yellow.

Oxygen: Safety Green.

Pneumatic Tube System s: Safety Green.

Refrigerants: Safety Yellow.

Sewers, Storm and Sanitary: Safety Yellow.

Steam; Supply, Condensate Return and Exhaust: Safety Yellow.

Vacuum: Safety Green.

Vent, Atmospheric: Safety Green.

Water, Up to 140 Degrees Fahrenheit: Safety Green.

Water, 141 Degrees and Above: Safety Yellow.

Other Colors:

Exposed Ductwork: Gray.

Insulated and Uninsulated Equipment: Gray.

* + - 1. PAINT MATERIAL MANUFACTURERS

* + - * 1. [Manufacturers:](http://www.specagent.com/Lookup?ulid=11177) Subject to compliance with requirements, provide products by the following:

[Benjamin Moore & Co](http://www.specagent.com/Lookup?uid=123457118128).

Carboline.

Cloverdale Paint.

PPG Architectural.

Sherwin-Williams.

Or equal.

Retain "Products" paragraph below and insert lists of manufacturers and products in the Exterior Painting Schedule to require specific products or a comparable product from other manufacturers.

See lists of products currently approved by MPI in its "MPI Approved Products List." See "Writing Guide" Article in the Evaluations for further discussion.

* + - * 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to products listed in the Exterior Painting Schedule for the paint category indicated.
				2. Source Limitations: Obtain paint from single source from single manufacturer.
			1. PAINT MATERIALS

Manufacturers' names and product designations can be inserted in paragraphs in this article. Paints in these paragraphs are specified by referencing MPI paint categories and optional MPI numbers. Note that each paint category below is unique within this Section and is identical to that used in the maintenance repainting schedules at the end of Part 3.

If retaining paragraphs below, first revise the maintenance repainting schedules; then retain, delete, and insert appropriate paint products in paragraphs to correspond with paint systems specified in the maintenance repainting schedules.

* + - * 1. Concrete and Masonry Primers and Sealers:

Primer, Alkali Resistant, Water Based: A water based, alkali resistant pigmented primer used on alkaline surfaces such as plaster, vertical concrete and masonry surfaces. Paint systems using this coating will be primarily for new and repainting work in residential, commercial and light industrial applications. Surface preparation methods can include hand and power tool cleaning and pressure washing. Finish coatings include conventional latex and alkyd paints.

Type ARP: Primer, alkali resistant, water based, MPI #3. Provide one of the following:

Benjamin Moore: Ultra Spec Masonry Int/Ext 100 Acylic Sealer.

PPG Architectural: Perma-Crete Interior/Exterior Alkali Resistant Primer.

Sherwin-Williams: PrepRite ProBlock Interior/Exterior Latex Primer/Sealer.

Or equal.

Block filler, latex: A water based, high solids, emulsion type pigmented coating with bridging and filling properties for concrete masonry units, for the purpose of filling the surface for subsequent applications of paint.

Type LBF: Block filler, latex, interior/exterior, MPI #4. Provide one of the following:

Benjamin Moore: Ultra Spec Hi-Build Masonry Block Filler.

PPG Architectural: Speedhide Int./Ext. Masonry Hi Fill Latex Block Filler.

Sherwin-Williams: Pro Industrial Heavy Duty Block Filler.

Or equal.

Textured coating, latex, flat: A pigmented water based coating, containing a coarse or medium sized sand or other hard aggregate.  Primarily used on exterior masonry, concrete and concrete block.   Coatings complying with this standard are available in a variety of textures.  Manufacturers should be consulted and test areas completed to aid in the selection of the individual product.

Type TCL: Textured coating, latex, flat, MPI #42. Provide one of the following:

Benjamin Moore: Coronado Texcrete Waterborne Medium Texture Waterproofer.

PPG Architectural: Perma-Crete Textured Coating.

Sherwin-Williams: ConFlex Flexible Waterproofer-Textured.

Or equal.

Sealer, water based, for concrete floors: A water based, acrylic co-polymer emulsion type, clear sealer for interior and exterior horizontal concrete floors, decks and exposed aggregate driveways and walkways. Specified for use in residential and light to moderate traffic commercial locations. Oil, gasoline, alkali and water resistant.

Type CFS: Sealer, water based, for concrete floors, MPI #99. Provide one of the following:

Behr Paint: Behr Premium Floor Coatings Wet-Look Sealer High Gloss.

PPG Architectural: Perma-Crete Plex-Seal WB Interior/Exterior Clear Sealer.

Sherwin-Williams: H & C Clarishield Water-Based Wet-Look Sealer.

Or equal.

* + - * 1. Metal Primers:

Primer, Metal, Surface Tolerant: A solvent based, anti-corrosive metal primer for use on structural steel and misc. metal fabrications in residential and commercial applications, as well as light to moderate industrial applications. Most often specified for field application or repainting. Products conforming to this specification will provide good corrosion resistance on poorly prepared metal surfaces which may only receive a minimum of solvent degreasing (SSPC — SP1) followed by hand or tool power cleaning (SSPC SP2 or 3).

Type ESP-1: Primer, Metal, Surface Tolerant MPI #23. Provide one of the following:

Benjamin Moore & Co.: Coronado Rust Scat Polyurethane Int/Ext Alkyd Metal Primer.

PPG Architectural: Protective and Marine Coatings Multiprime/Devguard 4160.

Sherwin-Williams: Protective & Marine Kem Bond HS.

Or equal.

Primer, Alkyd, Anti-Corrosive for Metal: A solvent based, alkyd type, anti-corrosive primer for ferrous metals in industrial or light marine exposures. This coating is primarily used for field application on new and repainting work. Minimum preparation for new work is an SSPC SP 6 commercial blast, but in many situations, hand or power tool cleaning to SSPC SP11 may be used.

Type ESP-2: Primer, Alkyd, Anti-Corrosive for Metal MPI #79. Provide one of the following:

Benjamin Moore & Co.: Super Spec HP Alkyd Metal Primer.

PPG Architectural: Protective and Marine Coatings Multiprime/Devguard 4160.

Sherwin-Williams: Protective & Marine Kem Bond HS.

Or equal.

Primer, Zinc Rich, Organic: A solvent based, one component, anti-corrosive primer for new or repaired ferrous metal surfaces exposed to industrial and marine environments. Minimum recommended surface preparation is a SSPC SP 10 blast cleaning to near white metal. SSPC SP 5 is recommended where this primer will be used in a system for highly corrosive or immersion service. In milder exposures or where blast cleaning is not practical, power tool cleaning to bright metal is acceptable.

Type ESP-3: Primer, Zinc Rich, Organic MPI #18. Provide one of the following:

Benjamin Moore & Co.: Corotech Organic Zinc Rich Primer.

Diamond Vogel: Endura Zinc 705, Organic Zinc Rich Epoxy Ester Primer.

Sherwin-Williams: Protective & Marine Corothane I Galvapac 1K Zinc Primer

Or equal.

Primer, Zinc-Rich, Epoxy: A solvent based, two or three component, epoxy type anti-corrosive primer for cleaned new or repaired ferrous metal surfaces exposed to moderate industrial or marine environments. Must be top-coated to attain maximum protective qualities. Minimum recommended surface preparation is SSPC SP-6 Commercial Blast, but in some repainting work, hand or power tool cleaning may be the maximum attainable.

Type ESP-EP1: Primer, Zinc-Rich, Epoxy MPI #20. Provide one of the following:

Carboline: Carbozinc 859.

PPG Architectural: Protective and Marine Coatings Aquapon Zinc Rich Epoxy.

Sherwin-Williams: Protective & Marine Zinc Clad IV.

Or equal.

Primer, Epoxy, Anti-Corrosive, for Metal: A solvent based, two component, epoxy, anti-corrosive primer for exterior and interior, ferrous and galvanized metal surfaces. Specified for use over new, cleaned metals and as a spot primer or full coat over previous epoxy coatings that have been properly prepared with hand, power tool or abrasive blasting cleaning methods.

Type ESP-EP2: Primer, Epoxy, Anti-Corrosive, for Metal MPI #101. Provide one of the following:

Benjamin Moore & Co.: Corotech Surface Tolerant Epoxy Mastic Coating.

PPG Architectural: Protective and Marine Coatings Amercoat 235.

Sherwin-Williams: Protective & Marine

Or equal.

Wood Primers: A pigmented, white, water borne emulsion type wood primer for exterior wood surfaces. This primer is intended for use in coating systems using both latex and alkyd based finishing paints. Paint systems using this primer will be specified for new and repainting work in residential, commercial and light industrial applications. This primer is recommended for use on woods containing extractable staining materials such as cedar and redwood.

* + - * 1. Wood Primers:

Type EWP: Primer, Latex for Exterior Wood MPI #6. Provide one of the following:

Benjamin Moore & Co.: Multi-Purpose Primer.

PPG Architectural: Seal Grip Interior/Exterior Acrylic Universal Primer/Sealer.

Sherwin-Williams: Multi-Purpose Latex Primer/Sealer.

Or equal.

Primer, Alkyd for Exterior Wood: An alkyd/oil based primer for exterior wood siding and trim. This product is used for new and repainting work in residential, commercial and light industrial areas. This primer is used on woods prone to extractive bleeding, such as cedar and redwood, and must have bleeding resistance when applied to dry (less than 15% moisture content) wood substrates. Finish coatings, used over this primer include latex, alkyd and alkyd/oil based paints. The straight alkyd products are faster drying than the oil/alkyd type primer.  Must be mildew resistant.

Type EAP: Primer, Alkyd for Exterior Wood:  MPI #5. Provide one of the following:

Benjamin Moore & Co.: Fresh Start All-Purpose Primer.

PPG Architectural: Seal Grip Interior/Exterior Acrylic Universal Primer/Sealer.

Sherwin-Williams: Exterior Oil-Based Wood Primer.

Or equal.

Plastic Trim Primers: A water based, emulsion type, pigmented primer used on various types of problematic surfaces (such as cured glossy alkyd finishes, plastics, fiberglass and laminates) to promote adhesion of subsequent coating(s) in areas where solvent fumes may pose a health or safety problem. Used in residential, commercial, institutional and public locations.

Type PLP: Primer, Bonding, Water Based; MPI #17. Provide one of the following:

Benjamin Moore & Co.: Fresh Start; High-Hiding All Purpose Primer.

PPG Architectural: Seal Grip Int/Ext Acrylic Universal Primer/Sealer.

Sherwin-Williams: PrepRite ProBlock Primer/Sealer; Interior/Exterior Latex.

Or equal.

* + - * 1. Water-Based Paints:

Latex, Exterior Flat (Gloss Level 1): A white or colored, flat, water based paint intended for use on new and previously painted exterior wall surfaces, including stucco, concrete, or primed wood. This product is not intended for application to un-primed wood surfaces. Surfaces prone to extractive bleeding (i.e. cedar/redwood) must have a stain blocking primer applied (Type EAP or Type EWP). This product is alkali resistant for use on masonry surfaces and mildew resistant. Other primers used with this coating include Type LBF for concrete block, self-priming on stucco and concrete. Not recommended for horizontal surfaces, where water may pond or stand.

Use paint Type EAL-1 below on exterior permeable wall and soffit substrates where winter indoor to outdoor airborne moisture migrations may damage less permeable exterior paint. Use paint Type EAL-2 on wood trim, metal and other substrates requiring less permeability and occasional washing may be needed.

Type EAL-1; Latex, Exterior Flat (Gloss Level 1) MPI #10. Provide one of the following:

Benjamin Moore & Co.: Ultra Spec Exterior Flat Finish.

PPG Architectural: Speed Cryl Exterior 100% Acrylic Flat.

Sherwin-Williams: SuperPaint Exterior Latex Flat.

Or equal.

Latex, Exterior Low Sheen (Gloss Levels 3-4): A latex based, low sheen paint for use on new and previously painted surfaces, including stucco, concrete or wood. This product is not designed for application to unprimed wood surfaces. Where extractive bleeding may be encountered, a stain blocking primer such as Type EAP or Type EWP must be employed. This product is alkali resistant for use on masonry surfaces, and mildew resistant. Other primers used with this coating include Type LBF for concrete block, self-priming on concrete and stucco. Not recommended for horizontal surfaces where water may pond or stand.

Use paint Type EAL-2 below on exterior doors, windows, frames, trim, soffits and other substrates where winter indoor to outdoor moisture migrations do not pose a problem and concealed air spaces have been vented. Use paint Type EAL-3 for a harder, more durable finish where frequent washing may be required. Do not use paint Type EAL-2 over an existing paint Type EAL-1 on permeable exterior wall surfaces and assemblies.

Type EAL-2; Latex, Exterior Low Sheen (Gloss Levels 3-4) MPI #15. Provide one of the following:

Benjamin Moore & Co.: Ultra Spec Exterior Satin Finish.

PPG Architectural: Speed Cryl Exterior 100% Acrylic Satin.

Sherwin-Williams: SuperPaint Exterior Latex Satin.

Or equal.

Latex, Exterior Semigloss (Gloss Level 5): A pigmented, water based, emulsion type, semi-gloss paint for exterior masonry, stucco, primed metals and wood, (primarily trim, fascia and smooth surfaces e.g. doors and door frames) where low to moderate contact can be anticipated. Alkali resistant for use on masonry surfaces and mildew resistant. Primers used with this coating include Type LBF for concrete block, self-priming on stucco and concrete, and Type EAP and Type EWP for wood surfaces. Not recommended for horizontal surfaces, where water may pond or stand.

Use paint Type EAL-3 below on exterior impermeable substrates where frequent use or corrosive weathering requires a hard and durable long-lasting finish that can be easily washed and maintained. Do not use paint Type EAL-3 over existing paint Types EAL-1 or EAL-2 on permeable substrates. Do not use paint Type EAL-3 on surfaces where paint Type EAL-2 will perform equally well at less expense. Use paint Type AU for greater resistance to surface abrasions, impacts and acidic damages in corrosive or abusive outdoor environments.

Type EAL-3: Latex, Exterior Semigloss (Gloss Level 5) MPI #11. Provide one of the following:

Benjamin Moore & Co.: Ultra Spec Exterior Gloss.

PPG Architectural: Speed Cryl Exterior 100% Acrylic Semi-Gloss.

Sherwin-Williams: Latitude Exterior Acrylic Gloss.

Or equal.

* + - * 1. Solvent-Based Paints:

Alkyd, Exterior Gloss (Gloss Level 6): A white, or colored, gloss, alkyd based paint intended for use on new and previously painted primed exterior wood and metal surfaces, primarily residential and commercial trim, doors and frames.

Type EAP: Alkyd, Exterior Gloss (Gloss Level 6) MPI #9. Provide one of the following:

Benjamin Moore & Co.: Super Spec HP Urethane Alkyd Gloss Enamel.

PPG Architectural: Protective & Marine Coatings HPC Industrial Alkyd LVOC Gloss.

Sherwin-Williams: Protective & Marine Seaguard 1000 Marine.

Or equal.

* + - * 1. Floor Coatings:

An abrasion-resistant, latex type, pigmented paint for new interior and exterior horizontal concrete and primed wood surfaces not prone to water permeation from below. Coating must be alkali and water resistant to incidental splash and spillage. Primarily specified for use in low to medium traffic, residential and commercial locations. Surface preparation requires removal of all previous sealers and water retaining materials applied to the surface. Smooth concrete must be acid etched. Designed to be used with or without non-slip aggregate.

Type EPE: Floor Paint, Latex, Low Gloss (Maximum Gloss Level 3):  MPI #60.

Cloverdale Paint: Porch & Floor Enamel

PPG Architectural: Floor & Porch Enamel

Sherwin Williams: ArmorSeal Tread-Plex.

Or equal.

* + - * 1. Epoxy Coatings:

Epoxy, Gloss: A solvent based, gloss, two component, epoxy coating specified for wall and floor surfaces in moderate to heavy traffic commercial and moderate industrial environments. Must be resistant to incidental splash and spillage of dilute (5%) sulfuric acid, (15%) hydrochloric acid, (20%) sodium hydroxide, gasoline and heavy duty cleaners and detergents. Used as a self-priming material on smooth, low porosity concrete, masonry and wood surfaces. This epoxy shall be able to be applied at temperatures ranging from 15° to 40° C and a maximum relative humidity of 80%.

Type EP: Epoxy, Gloss:  MPI #77.

Cloverdale Paint: ClovaCoat 300.

Sherwin-Williams: Protective & Marine Tile-Clad HS Epoxy.

Or equal.

Epoxy, High-Build, Low Gloss: A two component epoxy, high solids, low gloss coating for use on interior or exterior concrete, masonry and primed metal surfaces. Metal surfaces may be primed with conventional epoxy primers, epoxy zinc rich primers or inorganic zinc rich primers. For increased durability, this product may be top coated with epoxy or polyurethane enamels.

Type EPHB: Epoxy, High-Build, Low Gloss MPI #108. Provide one of the following:

Benjamin Moore & Co.: Corotech Polyamide Epoxy Gloss.

PPG Architectural: Protective & Marine Coatings Aquapon High Build Epoxy.

Sherwin-Williams: Macropoxy 646 Fast Cure Epoxy.

Or equal.

* + - * 1. Polyurethane Coatings:

Polyurethane, Two-Component, Pigmented, Gloss (Gloss Level 6): A solvent based, two component polyurethane, pigmented coating with a gloss finish for interior or exterior brick, block, concrete, plaster, wood and metal surfaces, where abrasion, weathering, chemical and solvent resistance is required.

Paint Type AU: Polyurethane, Two-Component, Pigmented, Gloss (Gloss Level 6) MPI #72. Provide one of the following:

Benjamin Moore & Co.: Corotech Aliphatic Acrylic Urethane Gloss.

PPG Architectural: Protective & Marine Coatings Pitthane Ultra Gloss 95-812 Series.

Sherwin-Williams: Protective & Marine Acrolon 218 HS.

Or equal.

* + - 1. SOURCE QUALITY CONTROL

Retain this article for large projects or critical coatings where additional control is needed. Delete if tests are not required.

* + - * 1. Testing of Paint Materials: The Director’s Representative reserves the right to invoke the following procedure:

The Director’s Representative will engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.

Testing agency will perform tests for compliance with product requirements.

The Director’s Representative may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

1. EXECUTION
	* + 1. PROTECTION
				1. Comply with each manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products. Prevent chemical solutions from coming into contact with people, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.

Cover adjacent surfaces with materials that are proven to resist coatings being used. Use protective materials that are UV resistant and waterproof. Apply masking agents to comply with manufacturer's written instructions. Do not apply liquid masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.

* + - 1. EXAMINATION
				1. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
				2. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

Percentages in "Concrete," "Fiber-Cement Board," "Masonry (Clay and CMUs)," "Wood," "Portland Cement Plaster," and Gypsum Board" subparagraphs below are based on "MPI Manual."

Concrete: 12 percent.

Fiber-Cement Board: 12 percent.

Masonry (Clay and CMUs): 12 percent.

Wood: 15 percent.

Portland Cement Plaster: 12 percent.

Gypsum Board: 12 percent.

* + - * 1. Portland Cement Plaster Substrates: Verify that plaster is fully cured.
				2. Exterior Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
				3. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.
				4. Proceed with coating application only after unsatisfactory conditions have been corrected.

Application of coating indicates acceptance of surfaces and conditions.

* + - 1. PREPARATION
				1. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.
				2. 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.

After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.

* + - * 1. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

Coordination of shop-applied prime coats with topcoats is critical.

Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

* + - * 1. 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.
				2. Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceeds that permitted in manufacturer's written instructions.

Retain "Steel Substrates" paragraph below if steel is not shop primed or if shop primer is removed in the field.

* + - * 1. 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:**]

Usually, retain one of first two subparagraphs below. SSPC-SP 2 and SSPC-SP 3 remove loose rust, mill scale, and paint. SSPC-SP 2 is minimum surface preparation accepted by AISC for painted steel.

SSPC-SP 2.

SSPC-SP 3.

SSPC-SP 7/NACE No. 4 permits tight residues of rust, mill scale, and coatings to remain. Blast cleaning methods specified in SSPC-SP 6/NACE No. 3 may be impractical for use at Project site and may not be allowed by authorities having jurisdiction.

SSPC-SP 7/NACE No. 4.

SSPC-SP 11 requires complete removal of rust, mill scale, and paint by power tools. SSPC-SP 11 uses nonabrasive methods and is more thorough than SSPC-SP 2, SSPC-SP 3, and SSPC-SP 7/NACE No. 4.

SSPC-SP 11.

Retain "Shop-Primed Steel Substrates" paragraph below if primers are shop applied and are not removed in the field.

* + - * 1. 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.

Galvanized-metal substrates should not be chromate passivated if primers are field applied. If galvanized metal is chromate passivated, consult manufacturers for appropriate surface preparation and primers.

* + - * 1. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
				2. Wood Substrates:

If necessary, insert requirements for power or pressure washing.

Scrape and clean knots. Before applying primer, apply coat of knot sealer recommended in writing by topcoat manufacturer for exterior use in paint system indicated.

Sand surfaces that will be exposed to view, and remove sanding dust.

Prime edges, ends, faces, undersides, and backsides of wood.

After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

* + - * 1. Plastic Trim Fabrication Substrates: Remove dust, dirt, and other foreign material that might impair bond of paints to substrates.
			1. INSTALLATION
				1. Apply paints in accordance with manufacturer's written instructions and recommendations in "MPI Manual."

If Project requires restricted application method (e.g., using only spray or rollers), revise first subparagraph below accordingly.

Use applicators and techniques suited for paint and substrate indicated.

Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.

Paint [**both sides**] [**exterior side**] and edges of exterior doors and entire exposed surface of exterior door frames.

Retain first subparagraph below if required for steel windows.

Paint entire exposed surface of window frames and sashes.

Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.

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.

If tinting is not required, delete first paragraph below. Different tints show through as topcoat erodes.

* + - * 1. 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.
				2. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
				3. 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.
				4. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:

First subparagraph below is for use where items are to be painted to blend in with surroundings; revise if painting is required to protect items from corrosion. Consider indicating painted items on Drawings or delineating extent of "exposed to view" for complex situations.

Paint the following work where exposed to view:

List below contains items that are often field painted, plus others that are often not. Revise list to suit Project.

Equipment, including panelboards[**and switch gear**].

Uninsulated metal piping.

Uninsulated plastic piping.

Pipe hangers and supports.

Metal conduit.

Plastic conduit.

Tanks that do not have factory-applied final finishes.

* + - 1. FIELD QUALITY CONTROL
				1. Dry Film Thickness Testing: The Director’s Representative may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.

Contractor shall touch up and restore painted surfaces damaged by testing.

If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written instructions, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written instructions.

* + - 1. CLEANING AND PROTECTION
				1. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

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.

Dispose of contaminants in accordance with requirements of authorities having jurisdiction.

Allow empty paint cans to dry before disposal.

Retain subparagraph below if paint recycling or collection facilities are available in vicinity of Project.

Collect waste paint by type and deliver to recycling or collection facility.

* + - * 1. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
				2. 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 Director’s Representative, and leave in an undamaged condition.
				3. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.
			1. SURFACES, GENERAL

Edit paragraph and subparagraphs below by deleting surfaces and substrates not to be painted and adding other unlisted substrates and paint types for specific project requirements. The following may be deleted where paint type locations are shown on the drawings or room finish schedule.

* + - * 1. Surfaces: Unless otherwise specified or shown on the drawings, paint surfaces as follows:

Exterior Surfaces:

Wood Substrates:

Smooth Siding: Paint Type EAL-1.

Natural Finish: Paint Type ESV.

Stained Finish: Paint Type EWS

Rough Siding, Stained Finish: Paint Type EWS.

Doors, Windows, Frames and Trim: Paint Type EAL-2.

Handrails: Paint Type EAL-3.

Pressure Treated Decks: Paint Type EDS.

Porch Floors and Steps: Paint Type EPE.

Clear Natural Wood Finish: Paint Type ESV

Factory Finished Metal Substrates: Field painting not required.

Factory Primed and Unprimed Ferrous Substrates:

Metal Siding: Paint Type EAL-2.

Doors, Windows, Frames and Trim: Paint Type EAL-3.

Handrails: Paint Type AU.

Existing Unprimed Structural Steel: Paint Type AU over primer Paint Type ESP.

New Primed Structural Steel: Paint Type AU.

Steel Stairs, Decks and Handrails: Paint Type AU.

Unless otherwise noted, paint exterior unremovable and exposed wall and ceiling air supply and return grilles; plumbing pipes; electrical panel and fuse boxes, raceways and conduits; heating convector cabinets, radiators, radiator cabinets, unit heaters, and similar existing and installed devices and equipment by other trades.

Paint to match adjacent wall or ceiling surfaces.

Paint exposed surfaces when any part of the surface is on or within 8 inches of ceiling or wall surface to be painted.

Doors and Frames: Unless otherwise noted, paint doors and frames the same color in the next highest gloss as adjacent wall surfaces.

Where walls are not the same color on both sides of a door frame, change color at the inside corner of the frame stop.

Prime and finish paint door faces and edges before installation.

Paint door edges the same paint type color as the exterior side of the door.

Do not paint door components which are clearly not intended to be painted such as non-ferrous hardware, frame mutes, and weather stripping.

Do not allow doors and frames to touch until paint is thoroughly dry on both surfaces.

Window Frames and Sash: Unless otherwise noted, paint window frames and sash the same color as adjacent wall surfaces.

Do not paint window components which are clearly not intended to be painted such as prefinished frames, sliding metal or plastic contacts, weatherstripping, and non-ferrous hardware.

Do not allow operable doors, windows and frames to touch until paint is thoroughly dry on both surfaces.

Ferrous Metal Door and Window Hardware: Unless otherwise noted, prime and paint to match adjacent doors, windows and frames.

Do not paint plastic laminate surfaces, glazing, factory finished surfaces, finish hardware and similar items clearly not intended to be painted.

* + - 1. EXTERIOR PAINTING SCHEDULE

Paint systems in this article are based on "MPI Manual." For renovation projects, consult "MPI Maintenance Repainting Manual" and revise paint systems accordingly.

* + - * 1. Concrete Substrates, Nontraffic Surfaces:

Latex System [**MPI EXT 3.1A] [MPI EXT 3.1K**]:

Retain "Prime Coat" or "Prime Coat, Latex" subparagraph below. First corresponds to MPI EXT 3.1A; second corresponds to MPI EXT 3.1K.

Prime Coat: Primer, alkali resistant, water based, MPI #3. Type ARP.

Prime Coat, Latex: Exterior, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain one or more of the subparagraphs below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10. Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15. Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

Latex over Latex Aggregate System MPI EXT 3.1B:

Prime Coat: Textured coating, latex, flat, MPI #42. Type TCL.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain one or more of the subparagraphs below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10. Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15. Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

* + - * 1. Concrete Substrates, Traffic Surfaces:

Latex Floor Paint System MPI EXT 3.2A:

Prime Coat: Floor paint, latex, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Floor paint, latex, matching topcoat.

Topcoat: Floor paint, latex, low gloss (maximum MPI Gloss Level 3), MPI #60. Type EPE.

Clear Water-Based Sealer System MPI EXT 3.2H:

Prime Coat: Sealer, water based, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Sealer, water based, matching topcoat.

Topcoat: Sealer, water based, for concrete floors, MPI #99. Type CFS.

* + - * 1. Cement Board Substrates:

Latex System [**MPI EXT 3.3A] [MPI EXT 3.3J**]:

Retain "Latex Prime Coat" or "Alkali-Resistant Prime Coat" subparagraph below. First corresponds to MPI EXT 3.3A; second corresponds to MPI EXT 3.3J.

Latex Prime Coat: Exterior, matching topcoat.

Alkali-Resistant Prime Coat: Primer, alkali resistant, water based, MPI #3. Type ARP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain one or more of the subparagraphs below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10. Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15. Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

* + - * 1. Clay Masonry Substrates:

Latex System MPI EXT 4.1A:

Prime Coat: Latex, exterior, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain "Flat Topcoat," "Low-Sheen Topcoat," "Semigloss Topcoat," or "Gloss Topcoat" subparagraph below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10. Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15. Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

* + - * 1. CMU Substrates:

Latex System MPI EXT 4.2A:

Prime Coat: Block filler, latex, interior/exterior, MPI #4. Type LBF.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain one or more of the subparagraphs below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10. Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4). Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

Latex over Alkali-Resistant Primer System MPI EXT 4.2L:

Prime Coat: Primer, alkali resistant, water based, MPI #3. Type ARP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain one or more of the subparagraphs below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10. Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15. Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

Latex Aggregate System MPI EXT 4.2B:

"MPI Manual" states that application procedures and products used in this system vary; therefore, it relies on manufacturer's written instructions for primers and number of coats for a Premium Grade system and does not include a Budget Grade system.

Prime Coat: As recommended in writing by topcoat manufacturer.

Intermediate Coat: As recommended in writing by topcoat manufacturer.

Flat Topcoat: Textured coating, latex, flat, MPI #42. Type TCL.

* + - * 1. Steel and Iron Substrates:

Polyurethane, Pigmented over Epoxy System MPI EXT 5.1.H:

Primer, Epoxy, Anti-Corrosive, for Metal MPI #101. Type ESP-EP2.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Type EP: Epoxy, Gloss:  MPI #77.

Topcoat: Polyurethane, Two-Component, Pigmented, Gloss (Gloss Level 6) MPI #72. Type AU.

Galvanized-metal substrates should not be chromate passivated if primer is field applied. If galvanized metal is chromate passivated, consult manufacturers for appropriate surface preparation and primers.

* + - * 1. Galvanized-Metal Substrates:

Polyurethane, Pigmented over Epoxy System MPI EXT 5.1.H:

Primer, Epoxy, Anti-Corrosive, for Metal MPI #101. Type ESP-EP2.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Polyurethane, Two-Component, matching topcoat.

Topcoat: Polyurethane, Two-Component, Pigmented, Gloss (Gloss Level 6) MPI #72. Type AU.

* + - * 1. Wood Substrates: Glued-laminated construction.

Latex over Latex Primer System MPI EXT 6.1L:

Prime Coat: Primer, latex for exterior wood, MPI #6. Type EWP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain one or more of the subparagraphs below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10. Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15. Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

Latex over Alkyd Primer System MPI EXT 6.1A:

Prime Coat: Primer, alkyd for exterior wood, MPI #5. Type EAP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain one or more of the subparagraphs below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10. Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15. Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

* + - * 1. Wood Substrates: Exposed framing.

Latex over Latex Primer System MPI EXT 6.2M:

Prime Coat: Primer, latex for exterior wood, MPI #6. Type EWP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain one or more of the subparagraphs below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10. Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15. Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

Latex over Alkyd Primer System MPI EXT 6.2A:

Prime Coat: Primer, alkyd for exterior wood, MPI #5. Type EAP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain one or more of the subparagraphs below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10. Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15. Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

* + - * 1. Wood Substrates: [**Wood trim] [Architectural woodwork] [Doors] [Windows] [Wood board siding] [and] [wood fences**].

Latex over Latex Primer System MPI EXT 6.3L:

Prime Coat: Primer, latex for exterior wood, MPI #6. Type EWP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain "Flat Topcoat," "Low-Sheen Topcoat," "Semigloss Topcoat," or "Gloss Topcoat" subparagraph below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10. Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15. Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

Latex System MPI EXT 6.3A:

Prime Coat: Primer, alkyd for exterior wood, MPI #5. Type EAP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain one or more of the subparagraphs below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10. Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15. Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

* + - * 1. Wood Substrates: Wood-based panel products.

Latex over Latex Primer System MPI EXT 6.4K:

Prime Coat: Primer, latex for exterior wood, MPI #6. Type EWP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain "Flat Topcoat," "Low-Sheen Topcoat," "Semigloss Topcoat," or "Gloss Topcoat" subparagraph below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10. Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15. Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

Latex over Alkyd Primer System MPI EXT 6.4G:

Prime Coat: Primer, alkyd for exterior wood, MPI #5. Type EAP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain "Flat Topcoat," "Low-Sheen Topcoat," "Semigloss Topcoat," or "Gloss Topcoat" subparagraph below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10. Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15. Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

* + - * 1. Wood Substrates: Traffic surfaces, including [lumber decking] [and] [stairs].

Latex Porch and Floor Paint over Latex Primer System MPI EXT 6.5E:

Prime Coat: Primer, latex for exterior wood, MPI #6. Type EWP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex floor paint, matching topcoat.

Topcoat: Latex floor paint, low gloss, MPI #60. Type EPE.

Additive: Manufacturer's standard additive to increase skid resistance of painted surface.

Latex Porch and Floor Paint over Alkyd Primer System MPI EXT 6.5A:

Prime Coat: Primer, alkyd for exterior wood, MPI #5. Type EAP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex floor paint, matching topcoat.

Topcoat: Latex floor paint, low gloss, MPI #60. Type EPE.

Additive: Manufacturer's standard additive to increase skid resistance of painted surface.

* + - * 1. Plastic Trim Fabrication Substrates:

Latex System MPI EXT 6.8A:

Water-Based Prime Coat: Primer, bonding, water based, MPI #17. Type PLP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain one or more of the subparagraphs below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10. Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15. Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

* + - * 1. Portland Cement Plaster Substrates:

Latex System [**MPI EXT 9.1A] [MPI EXT 9.1J]:**

Retain "Latex Prime Coat" or "Alkali-Resistant Prime Coat" subparagraph below. First corresponds to MPI EXT 9.1A; second corresponds to MPI EXT 9.1J.

Latex Prime Coat: Latex, exterior, matching topcoat.

Alkali-Resistant Prime Coat: Primer, alkali resistant, water based, MPI #3. Type AAP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" subparagraph below for a Budget Grade system.

Intermediate Coat: Latex, exterior, matching topcoat.

Retain one or more of the subparagraphs below.

Flat Topcoat: Latex, exterior, flat (MPI Gloss Level 1), MPI #10 Type EAL-1.

Low-Sheen Topcoat: Latex, exterior, low sheen (MPI Gloss Level 3-4), MPI #15. Type EAL-2.

Semigloss Topcoat: Latex, exterior, semigloss (MPI Gloss Level 5), MPI #11. Type EAL-3.

END OF SECTION 099114