SECTION 09900

PAINTING

PART 1 DESIGN DIRECTIVE

1.1 PROJECT INCLUDES

A. Painting and surface preparation for interior finished surfaces as scheduled.

B. Painting and surface preparation for exterior finished surfaces as scheduled.

C. Field-painting and surface preparation of exposed mechanical and electrical piping, conduit, ductwork, and equipment.

D. Repainting and surface preparation at areas of remodeling.

1.2 DESIGN CRITERIA

A. Painting Pre-Construction Meeting: The Dartmouth College Project Manager shall coordinate a painting pre-construction with the Painting sub-contractor, General Contractor, FO&M Representatives, and others as required. Prior to the meeting, the painting sub-contractor shall have tested existing painted surfaces to determine the existing paint material in order that the proper materials and application methods can be used to provide the new finish. Topics to be covered shall include the following:

1. Surface preparation techniques.

2. Review of product selection and application techniques.

B. The architect will present the finish schedule for review with the college at no later than 80% design phase completion.

C. The interior standard color for Residential Life, Academic and Office areas is “Dartmouth Driftwood”. Specifications for Pristine Eco Spec Flat (219-Dartmouth) require the use of a special formulation made for Dartmouth College.

1.3 QUALITY ASSURANCE

A. Compliance with VOC and environmental regulations. The college has a position of low or “no” VOC paints to be used. This position requires that the architect review the paint specification with FOM Paint Shop to assure conformance to the Dartmouth Standard practice.

1.4 SUBMITTALS:

A. Any necessary materials not specifically covered and specified in this contract shall be subject to the approval of Dartmouth College and the contractor shall submit to Dartmouth College, before any materials are delivered, the name of the brand of the materials which he proposes to use and shall receive an approval of same in writing from Dartmouth College.

B. The architect shall review interior caulking colors with FOM Paint Shop prior to approval.

C. The contractor shall provide the College via the O & M Manual a painting schedule of all finishes for the project. The following information shall be provided:

1. Location (by final room number or very clear description).

2. Product type.

3. Product color (name & number).

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Benjamin Moore & Co (manufacturer of choice for Dartmouth College). The product numbers specified herein are Benjamin Moore unless specifically noted otherwise.

B. Sherwin Williams (bid alternate to Benjamin Moore & Co.).

2.2 EXTERIOR PAINT SCHEDULE:

A. Wood Painted

1. Flat Finish
   a. Primer: 176 Super Spec Moorcraft Alkyd Exterior Primer
   b. Finish: 2 Coats Moorlife Latex House Paint (105)

2. Gloss Finish
   a. Primer: 176 Moorcraft Super Spec Alkyd Exterior Primer
   b. Finish: 2 Coats 096 MoorGlo soft gloss latex house paint

B. Wood Painted (Doors, Trim, Shutters)

1. Gloss Finish
   a. Primer: 176 Moorcraft Super Spec Alkyd Exterior Primer
   b. Finish: 2 Coats 096 MoorGlo soft gloss latex house paint

C. Wood Enameled (Floors)

1. High Gloss Finish/Urethane Alkyd
   a. 2 or 3 Coats Moore's I.M.C Urethane Alkyd Gloss Enamel (M22)
   b. For anti slip properties, broadcast Anti Slip Aggregate (M67) during application for first finish coat of product.

D. Water Resistant Soffit Board & Ceiling Board

1. Flat Finish
   a. Primer:
      1) Solid Wood: Moorcraft Super Spec Alkyd Exterior Primer (176)
      2) Plywood: Fresh Start (023)
   b. Finish: 2 Coats Moorlife Latex House Paint (105)

2. Gloss Finish
   a. Primer: Moorcraft Super Spec Alkyd Exterior Primer (176)
   b. Finish: 2 Coats 096 MoorGlo soft gloss latex house paint

E. Concrete Masonry Unit (Block)

1. Flat Finish
   a. Primer: 285 Moorcraft Super Craft Latex Block Filler
   b. Finish: Moorlife Latex House Paint (105)

F. Unglazed Brick & Concrete

1. Flat Finish
   a. Primer: Fresh Start (023)
   b. Finish: 2 Coats Moorlife Latex House Paint (105)

G. Masonry – Weathered

1. Flat Finish/Alkyd modified Vinyl Acrylic Latex
2. Primer: Moore's Acrylic Masonry Sealer (066)
3. Finish: 2 Coats Moorlife Latex House Paint (105)

H. Primers:

1. Super Spec (176)

2.3 INTERIOR PAINT SCHEDULE:

A. Special Dartmouth College Considerations

1. All acrylic interior latex flat paint (#219) applied to DC owned properties shall be a special formulation developed by Benjamin Moore. This finish is a bit flatter than the standard Benjamin Moore flat finish. There is not a special number for this product; for the purpose of this document it is referred to as "219-Dartmouth".

B. Special Primers

1. Glossy Surface / knotty areas (For use where adhesion is a problem)
   a. Fresh Start (202)
   b. Alcohol based Bin white pigmented shellac primer sealer #901

C. Plaster & Drywall

1. Flat Finish (Low Odor/Low VOC) 100% Acrylic Latex
   a. Primer: Pristine Eco Spec 100% Acrylic Interior Latex Primer Sealer (231) (Sherwin Williams HealthSpec Low Odor Interior Primer, B11W44)
   b. Finish: 2 Coats Pristine Eco Spec 100% Acrylic Interior Latex Eggshell (219-Dartmouth) (Sherwin Williams HealthSpec Low Odor Interior Latex Flat, B5 series)

2. Eggshell (Low Odor/Low Voc) 100 % Acrylic Latex
   a. Primer: Pristine Eco Spec 100% Acrylic Latex Primer Sealer (231) (Sherwin Williams HealthSpec Low Odor Interior Primer, B11W44)
   b. Finish: 2 Coats Pristine Eco Spec 100% Acrylic Interior Latex Eggshell (223) (Sherwin Williams HealthSpec Low Odor Interior Eg-Shel, B9 series)

3. Semi Gloss (Low Odor/Low Voc) 100 % Acrylic
   a. Primer: Pristine Eco Spec 100% Acrylic Interior Latex Primer Sealer (231) (Sherwin Williams HealthSpec Low Odor Interior Primer, B11W44)
   b. Finish: 2 Coats Pristine Eco Spec 100% Acrylic Interior Latex Semi Gloss (224) (Sherwin Williams HealthSpec Low Odor Interior Latex Semi-Gloss, B10 series)

4. Semi Gloss Finish/Acrylic Epoxy
   a. Primer: Moores I.M.C. Waterborne Epoxy Primer (M08/M09)
   b. Finish: 2 Coats Moore's I.M.C. Polyamide Epoxy Semi Gloss (M43/M4486)

5. High Gloss Finish /Acrylic Epoxy
   a. Primer: Moores I.M.C. Waterborne Epoxy Primer (M08/M09)
   b. Finish: 2 Coats Moore's I.M.C. Polyamide Epoxy Gloss (M43/M4484)

D. Wood Painted

1. Semi-Gloss Finish
   a. Primer: Fresh Start (023)
   b. Finish: 2 Coats Satin Impervo (314)

E. Wood Stained/Clear Systems:

1. Low Lustre Stained/Polyurethane
   a. Filler: Benwood Inteiror Wood Finishes Wood Grain Filler (238) tinted to shade of the stain with Color Preview Colorants. (Omit for close-grained woods).
   b. Intermediate: Benwood Interior Wood Finishes Penetrating Stain (234) (Omit if to be natural).
   c. Finish:
      1) 2 Coats Benwood Stays Clear Acrylic Polyurethane Finish Low Lustre (423).
      2) 2 coats Zipguard Urethane Wood Finish #71101 or 61101.

2. Gloss Finish – Stained/Acrylic Polyurethane
   a. Filler: Benwood Interior Wood Finishes Wood Grain Filler (238), tinted to shade of the stain with Color Preview Colorants. (Omit for closed grained woods).
   b. Intermediate Benwood Interior Wood Finishes Penetrating Stain (234) (Omit if to be natural).
   c. Finish:
      1) 2 Coats Benwood Stays Clear Acrylic Polyurethane Finish Clear High Gloss (422)
      2) 2 coats Zipguard Urethane Wood Finish #71201.

F. Wood – New (to be stained)

1. Penetrating Stain/Alkyd
   a. Benwood Interior Wood Finishes Penetrating Stain (234)

G. Concrete Masonry Units (Block)

1. Flat Finish (Low Odor/Low VOC) 100% Acrylic Latex
   a. Primer: Moorcraft Super Craft Latex Block Filler (285)
      (Sherwin Williams PrepRite Masonry Primer, B28W300)
   b. Finish: 2 Coats of Pristine Eco Spec 100% Acrylic Interior Latex Flat (219-Dartmouth)
      (Sherwin Williams HealthSpec Low Odor Interior Latex Flat, B5 series)

2. Eggshell (Low Odor/Low VOC 100% Acrylic Latex
   a. Primer Moorcraft Super Craft Latex Block Filler (285)
      (Sherwin Williams PrepRite Masonry Primer, B28W300)
   b. Finish: 2 Coats of Pristine Eco Spec 100% Acrylic Interior Latex Eggshell (223)
      (Sherwin Williams HealthSpec Low Odor Interior Eg-Shel, B9 series)

3. Semi Gloss Finish (Low Odor/Low VOC) Vinyl Acrylic Latex
   a. Primer: Moorcraft Super Craft Latex Block Filler (285)

      (Sherwin Williams PrepRite Masonry Primer, B28W300)
   b. Finish: 2 Coats Pristine Eco Spec 100% Acrylic Interior Latex Semi Gloss (224)
      (Sherwin Williams HealthSpec Low Odor Interior Latex Semi-Gloss, B10 series)

H. Concrete

1. Flat Finish (Low Odor/Low VOC) 100% Acrylic Latex
   a. Primer: Fresh Start (023)
      (Sherwin Williams HealthSpec Low Odor Interior Primer, B11W44)
   b. Finish: 2 Coats of Pristine Eco Spec 100% Acrylic Interior Latex Flat (219-Dartmouth)
      (Sherwin Williams HealthSpec Low Odor Interior Latex Flat, B5 series)

2. Eggshell (Low Odor/Low VOC 100% Acrylic Latex
   a. Primer: Fresh Start (023)
      (Sherwin Williams HealthSpec Low Odor Interior Primer, B11W44)
   b. Finish: 2 Coats of Pristine Eco Spec 100% Acrylic Interior Latex Eggshell (223) (Sherwin Williams HealthSpec Low Odor Interior Eg-Shel, B9 series)

3. Semi Gloss Finish (Low Odor/Low VOC) Vinyl Acrylic Latex
   a. Primer: Fresh Start (023)
      (Sherwin Williams HealthSpec Low Odor Interior Primer, B11W44)
   b. Finish: 2 Coats Pristine Eco Spec 100% Acrylic Interior Latex Semi Gloss (224)
      (Sherwin Williams HealthSpec Low Odor Interior Latex Semi-Gloss, B10 series)

2.4 INTERIOR &/OR EXTERIOR PAINT SCHEDULE

A. Metal Ferrous

1. Semi Gloss Finish/Alkyd

a. 2 Coats Moore's I.M.C. DTM Alkyd Semi Gloss (M24)

b. Where rust has formed, apply a coat if Moores Rust Converter (M82) prior to painting.

B. Metal – Aluminum Finish

1. Satin Finish/Linseed Coumerone – Indene

a. 2 Coats Moore's Weatherproof Aluminum Paint (164)

C. Metal Galvanized

1. Gloss Finish

a. Primer: Moore's I.M.C. Acrylic Metal Primer (M04)
b. Finish: 2 Coats Moore I.M.C. DTM acrylic semi gloss (M29)

D. Concrete Floors/Platforms

1. High Gloss Finish/Urethane Alkyd

a. 2 or 3 Coats Moore's I.M.C. Urethane Alkyd Gloss Enamel (M22)

2. Gloss Finish/Polyamide Epoxy

a. Sealer:
1) 1 coat Moore's water borne I.M.C. Polyamide Epoxy Clear Finish (M4200)
2) 1 Coat Moore's I.M.C. Moisture Tolerant Epoxy Sealer/Finish (M68/M69)
b. Finish: 2 Coats Polyamide Epoxy Gloss (M42)

3. For anti-slip properties, add Anti Slip Aggregate (M67) by either broadcasting during application of first finish coat of product, or mixing into product before application at a rate of 1 pound of M67 per gallon of product. (To ensure uniform distribution of aggregate, stir frequently to keep in suspension during application).

2.5 Miscellaneous Products:

A. Cleaning Products

1. Oil and Grease Emulsifier (M8300)

PART 3 EXECUTION

3.1 SCOPE OF WORK

A. Copper, bronze, chromium plate, nickel, stainless steel, aluminum, monel metal, lead and lead coated copper shall not be painted or finished except as otherwise specified.

B. The painting contractor shall be responsible for inspecting the work of others prior to the application of any paint or finishing material. If any surface to be finished cannot be put in proper condition for finishing by customary cleaning, sanding and puttying operation, *inform* the owner in writing or assume responsibility for and rectify any unsatisfactory finish resulting.

3.2 MATERIALS

A. All materials used on the work shall be of the brand and quality specified and approved by ~~the~~ Dartmouth College and shall be delivered at the site of work in original containers with seals unbroken and labels intact.

B. All materials shall be used strictly in accordance with manufacturer's label directions.

C. Contact DC-FO&M Paint Shop for requirements of matching stained wood.

D. All materials such as linseed oil, shellac and turpentine shall be pure and of highest quality and approved by the owner. They shall wear identifying labels on the containers.

3.3 STORAGE AND PROTECTION

A. All materials used on the job shall be stored in a single place designated by Dartmouth College. Such storage place shall be kept neat and clean and a~~ll~~*ny* ~~-~~damage ~~the~~ to *the room* or ~~to~~ its surroundings shall be ~~made good by painting~~*repaired to its original condition*.

B. All soiled or used rags, waste and trash must be removed from the building each night and legally disposed. Every precaution taken to avoid the danger of fire.

C. The painting contractor shall protect surfaces and objects inside and outside the building, as well as the grounds, lawns, shrubbery and adjacent properties against damage. The painting contractor shall be held responsible for damage to adjacent furnishings.

D. At completion of work, the painting contractor shall remove from the premises all surplus painting materials and all debris. All splatters shall be removed leaving the work in a clean and finished condition.

3.4 QUALITY ASSURANCE

A. Upon request, the painting contractor shall prepare and submit finished sample panels of specified materials for approval by Dartmouth College. Successive coats on these sample panels shall be applied in such a way that portions of all preceding coats remain exposed. Samples shall be retained to allow Dartmouth College to compare with the finishes as they are applied.

B. All work shall be done by skilled technicians in accordance with the best standard practice and in a manner acceptable to Dartmouth College. Any work not conforming to these specifications shall be corrected to the satisfaction of Dartmouth College. Such corrections shall be made at the expense of the painting contractor.

C. The painting contractor shall notify Dartmouth College in writing of any old or new surfaces which he considers not his responsibility or any defects in surfaces to be painted, or of any error of omissions in the drawings or in surfaces to be painted, or any areas of omissions in the drawings

or in the specifications. The painting contractor shall not proceed with the finishing of the surface in question until an agreement has *been* reached with Dartmouth College concerning the alleged discrepancies. *The* ~~He~~ starting of work on any surface shall imply that the surface has been inspected and approved by the painting contractor.

D. When preparing to paint previously finished surfaces, the painting contractor is required to examine the surface to determine if the finish is oil based or water based. The method to determine the type of previously applied material is to rub alcohol on the surface with a clean, white rag. If the paint comes off, the previous finish is water based; if not, oil based. If the previous surface is covered with oil based ~~paint, and~~*paint and* the new application is *scheduled (per this guideline) to be* water based, then the surface must be cleaned, dr*ied*~~y,~~ and abraded via sanding before being primed ~~with Fresh Start~~. *Refer to* ~~See~~ DC Standards 09900 PAINTING, Part 2, EXTERIOR PAINT SCHEDULES, PRIMERS, and INTERIOR PAINT SCHEDULE, SPECIAL PRIMERS.

3.5 WORKMANSHIP

A. All finishes shall be evenly applied and free from sags, runs, crawls, brush marks, skips or other defects.

B. Products shall be applied at the proper consistency and shall be thinned, tinted or otherwise altered only in accordance with the manufacturer's printed directions.

C. If the finish coat is to be colored, the prime coat and the intermediate coat shall be tinted to a slight variation in color from each other and from the finish coat.

D. All materials shall be applied to surfaces that are dry and properly prepared and when weather conditions are favorable for painting. Humidity over 80% is detrimental to both oil and latex paints and temperature shall be a minimum of 50º (see label directions).

E. Each coat of material shall be thoroughly dry before application of the succeeding coat.

F. When enamels and varnishes are being applied, the wood surface shall be lightly sanded and thoroughly dusted before application of the first coat.

G. Tops of all window sashes and bottoms of all lower sashes shall be finished the same as interior finish. Tops, bottoms and edges of doors shall be finished the same as balance of doors after the carpenter fits them. All painted interior woodwork shall be back~~-~~-primed *with an enamel undercoat* before installation ~~with an enamel undercoat~~. All natural interior woodwork that will be concealed after erection shall be primed *with a clear sealer* before installation ~~with a clear sealer~~.

H. After application of the first coat, all "hot spots" in plaster or cement shall be touched up before the second coat is applied.

I. All scratches, crack and abrasions in plaster surfaces, and openings adjoining trim, shall be cut out as required, then filled with a spackling compound or approved patching plaster, flush with adjoining plaster surface, when dry shall be sanded smooth and sealed before application of prime coat.

J. All surfaces to be painted shall be thoroughly cleaned of dust, dirt, oil, grease, wax, scale rust and other materials that will affect the finish coat. Areas with mildew shall be cleaned with bleach, thoroughly rinsed with clean water, and allowed to completely dry prior to painting.

K. All necessary puttying of nail holes, cracks and other defects shall be done after application of the first coat, using putty of a color to match that of the finish. Putty shall be brought flush with the adjoining surface. DC-FO&M paint shop can make custom putty colors.

L. To prevent bleeding or discoloration, all knots, pitch streaks and sappy spots shall be treated before application of prime coat – see SPECIAL PRIMERS in part 2 of Section 09900.

M. All metal surfaces shall be washed with mineral spirits to remove any dirt, oil or grease before painted. Remove rust and scales by wire brushing or sanding before painting.

N. When painting over weathered aluminum, remove all oxidation via an abrasive pad. For new and weathered aluminum, thoroughly clean area using an oil and grease emulsifier or, for large areas, pressure wash.

O. When painting new galvanized metals, confirm that there are no passivators or stabilizers. If so coated, remove by appropriate means. Then clean with oil and grease emulsifier, prime, and finish.

P. All exterior trim and woodwork to be painted shall be back primed before installation with an exterior wood undercoat.

Q. All work, where a coat of material has been applied, must be inspected and approved by Dartmouth College before application of the succeeding specified coat; otherwise, no credit for the coat applied will be given, and the contractor shall then assume the responsibility and re-coat the work in questions. The painting contractor shall furnish Dartmouth College a report of each coat applied when completed for inspection and approval to comply with the above.

R. In certain areas where the formation of mildew is likely, a mildewcide shall be added to the paint that will provide protection against mold and mildew growth on the painted surface.

S. Where efflorescence is evident in the masonry surface, the surface shall be treated by naturalizing the excessive alkalinity with an acid wash consisting of one gallon of concrete pretreatment etch M8500 to three gallons of water. When the acid action has ceased, the surface shall be flushed with clear, fresh water and allowed to dry thoroughly before applying paint.

T. Smooth, hard toweled concrete floors which are to be painted shall be etched with a solution consisting of one gallon of concrete pretreatment etch M8500 to three gallons of water or one quart muriatic acid per gallon of water to provide a surface of good mechanical adhesion of the paint coatings. The etching solution should be prepared in an acid proof container, adding the water first, followed by the acid. Rubber gloves and goggles should be worn as a precaution during the mixing operation. The solution should be allowed to remain on the surface until the acid action has stopped, flushed with fresh water and allowed to dry thoroughly before applying paint.

U. Urethane finish shall be oil based unless in an occupied area where odors are objectionable. Latex base may be used only after approval from DC-FO&M Paint Shop.

V. Wood floors shall be finished with the first coat a gloss finish and the second & third coats a satin finish.

W. Interior walls may be sprayed providing the final two coats are rolled (with ½" nap roller *for existing work and a ⅜" nap roller for new construction* ) to insure a uniform finish.

X. All LP gas piping shall be painted yellow.

END OF SECTION 09900