SECTION 099301 - STAINING AND TRANSPARENT FINISHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Surface preparation and application of the following:

1. Stain and transparent finish systems.

B. Related Requirements:

1. Section 090391 "Historic Treatment of Plain Painting" for finish systems on historic wood surfaces, including preparatory cleaning, paint removal, and minor substrate repair, in preparation for new finishing.
2. Section 099114 "Exterior Painting (MPI Standards)" for stains and transparent finishes on concrete floors.
3. Section 099124 "Interior Painting (MPI Standards)" for stains and transparent finishes on concrete floors.
4. Section 099601 "High-Performance Coatings (MPI Standards)" for transparent high-performance coatings on concrete floors and masonry.

1.2 DEFINITIONS

A. MPI Gloss Level G1: Not more than five units at 60 degrees and 10 units at 85 degrees, in accordance with ASTM D523.

B. MPI Gloss Level G2: Not more than 10 units at 60 degrees and between 10 to 35 units at 85 degrees, in accordance with ASTM D523.

C. MPI Gloss Level G3: Between 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, in accordance with ASTM D523.

D. MPI Gloss Level G4: Between 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, in accordance with ASTM D523.

E. MPI Gloss Level G5: Between 35 to 70 units at 60 degrees, in accordance with ASTM D523.

F. MPI Gloss Level G6: Between 70 to 85 units at 60 degrees, in accordance with ASTM D523.

G. MPI Gloss Level G7: More than 85 units at 60 degrees, in accordance with ASTM D523.

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1.3 ACTION SUBMITTALS

A. Product Data: For each type of specified product.

1. Include preparation requirements and application instructions.
2. Indicate compatibility of products within each finish system with one another and substrates indicated.
3. Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
4. Indicate VOC content.

B. Samples for Initial Selection: Manufacturer's standard color sheets, showing full range of available colors for each type of exposed finish.

C. Samples for Verification: For each type of finish system and in each color and gloss of finish required on representative samples of actual wood substrates.

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

D. Product List: Cross-reference to finish system and locations of application areas. Use same designations indicated on Drawings and in schedules. Include color designations.

1.4 DELIVERY, STORAGE, AND HANDLING

A. 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**.

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.5 FIELD CONDITIONS

A. Apply finish systems only when temperature of surfaces to be finished and ambient air temperatures are between **50 and 95 deg F**.

B. Do not apply finish systems when relative humidity exceeds 85 percent, at temperatures of less than **5 deg F** above the dew point, or to damp or wet surfaces.

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PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

A. Obtain each finish system product from single source from single manufacturer.

2.2 STAIN AND TRANSPARENT FINISH SYSTEMS

A. Stains and Transparent Finishes:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Varathane, Water Based Polyurethane.
    b. Behr
    c. Rodda-Miller

2. Transparent Finish, Sheen: Satin.

B. MPI Standards: Provide products complying with MPI standards indicated in applicable exterior and interior finish schedule articles and listed in its "MPI Approved Products List."

C. Material Compatibility:

1. Materials for use within each finish 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 finish system, provide products recommended in writing by topcoat manufacturer for use in finish system and on substrate indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

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

B. Maximum Moisture Content of Exterior Wood Substrates: 15 percent, when measured with an electronic moisture meter.

C. Maximum Moisture Content of Interior Wood Substrates: 10 percent, when measured with an electronic moisture meter.

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D. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers. Proceed with application of finish systems only after unsatisfactory conditions have been corrected.

1. Application of finish systems indicates acceptance of substrates and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and finish systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and finishing.

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

C. Clean and prepare surfaces to be finished in accordance with manufacturer's written instructions for each substrate condition and as specified.

1. Remove dust, dirt, oil, and grease by washing with a detergent solution; rinse thoroughly with clean water and allow to dry. Remove grade stamps and pencil marks by sanding lightly. Remove loose wood fibers by brushing.
2. Remove mildew by scrubbing with a commercial wash formulated for mildew removal and as recommended in writing by stain manufacturer.

D. Interior Wood Substrates:

1. Sand surfaces exposed to view and dust off.
2. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dry.

3.3 APPLICATION OF STAINS AND TRANSPARENT FINISHES

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

1. Use applicators and techniques suited for finish system and substrate indicated.
2. Finish surfaces behind movable equipment and furniture same as similar exposed surfaces.
3. Do not apply finishes over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.

B. Apply finish systems to produce surface films without cloudiness, holidays, lap marks, brush marks, runs, ropiness, or other surface imperfections.

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3.4 CLEANING

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

B. After completing finish application, clean spattered surfaces. Remove spattered materials by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

3.5 PROTECTION

A. Protect work of other trades against damage from finish application. Correct damage by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

B. At completion of construction activities of other trades, touch up and restore damaged or defaced finished wood surfaces.

3.6 INTERIOR FINISH SYSTEM SCHEDULE, WOOD SUBSTRATES

A. Exposed Finished Wood Substrates: Plywood & trim.

1. Polyurethane Clear Varnish System: Satin Sheen.

a. Prime Coat: Matching topcoat.
b. Intermediate Coat: Matching topcoat.
c. Topcoat: Varnish, interior, polyurethane, oil modified,

END OF SECTION 099301

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