SECTION 06200 - FINISH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Exterior standing and running trim and associated flashing.
 - 2. Exterior clapboard siding.
 - 3. Bracketed PVC brie de soliel and roof brackets.
 - 4. Cupola for existing sheds.
 - 5. PVC window boxes and brackets for existing sheds.
 - 6. PVC trellises for existing sheds.
 - 7. Wire shelving and clothes rods.
 - 8. Ornamental wood columns.
 - 9. Corner guards.
 - 10. Reinforced fiberglass wall protection systems.

B. Related Sections include the following:

- 1. Division 06 Section "Architectural Woodwork" for custom interior wood standing and running trim, shop-fabricated custom casework, wood handrails, and interior woodwork.
- 2. Division 07 Section "Vinyl Siding" for vinyl siding, soffits, and exterior vinyl ceilings, and louvers.
- 3. Division 09 Section "Painting" for priming, backpriming, and finishing of finish carpentry.

1.3 SUBMITTALS

- A. General: Submit in accordance with Division 01 Section "Submittal Procedures."
- B. Product Data: For each type of process and factory-fabricated product. Include construction details, material descriptions, dimensions of individual components and profiles, textures, and colors.
- C. Samples for Initial Selection: Color charts consisting of actual materials in small sections for corner guards.
- D. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- E. Maintenance Data: For finishes to include in the operation and maintenance manual specified in Division 01. Include cleaning methods, cleaning solutions recommended, and stain removal

methods recommended. Also include precautions for cleaning materials and methods that could be detrimental to finishes and performance.

F. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has completed finish carpentry similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.
- B. Source Limitations for PVC Trim: Obtain all PVC trim through one source from a single manufacturer.
- C. Fire-Test-Response Characteristics: Where fire-retardant materials are indicated, provide materials with specified fire-test-response characteristics as determined by a testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency on surfaces of materials that will be concealed from view after installation. Materials shall meet the following requirements when tested in accordance with ASTM E 84:
 - 1. Flame Spread: 25 or less.
 - 2. Smoke Developed: 450 or less.
- D. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
 - 1. Build mockup of typical wall area trim, as directed by Architect.
 - a. Construct a mockup location for for the construction of the siding mockup.
 - 2. Build mockup over completed air barrier waterproofing and rigid insulation.
 - a. Include an outside corner, a window and water table trim.
 - 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 4. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion. If mockup is rejected, remove materials and rigid insulation, repair air barrier waterproofing and replace insulation.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Keep materials under cover, off ground, and dry. Protect materials against weather and contact with damp or wet surfaces. Provide for air circulation within and around stacks and under temporary coverings.
- B. Fiberglass Reinforced Wall Protection: Store materials in original undamaged packages and containers inside a well-ventilated area protected from weather, moisture, soiling, extreme temperatures, and out of direct sunlight.
- C. Deliver interior finish carpentry only when environmental conditions meet requirements specified for installation areas. If interior finish carpentry must be stored in other than installation areas, store only where environmental conditions meet requirements specified for installation areas.

1.6 PROJECT CONDITIONS

- A. Weather Limitations for Exterior Finish Carpentry: Proceed with installation only when existing and forecasted weather conditions permit work to be performed according to manufacturer's written instructions and warranty requirements and at least one coat of specified finish to be applied without exposure to rain, snow, or dampness.
- B. Environmental Limitations for Interior Finish Carpentry: Do not deliver or install interior finish carpentry until building is enclosed and weatherproof, wet work in space is completed and nominally dry, and provisions are made to maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.
 - 1. Fiberglass Reinforced Wall Protection Systems: Do not install until the ambient temperature within the building is maintained at not less than 70 deg F for not less than 72 hours before, during and after installation.

1.7 WARRANTY

- A. General: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.
- B. Manufacturer's Warranty for Cellular PVC Trim: Manufacturer agrees to repair or replace trim that fails due to defects in manufacturing within specified warranty period. Failures include, but are not limited to, deterioration, delamination, and excessive swelling from moisture.
 - 1. Warranty Period: Manufacturer's standard, but not less than 25 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the manufactures specified.
 - 2. Products: Subject to compliance with requirements, provide one of the products specified.

2.2 EXTERIOR STANDING AND RUNNING TRIM

- A. Cellular PVC Materials, General: ASTM D 3679, extruded, expanded PVC with a small-cell microstructure, made from UV- and heat-stabilized, rigid material.
 - 1. Density: ASTM D 792, 0.55 g/cu. cm.
 - 2. Heat Deflection Temperature: Not less than 135 deg F, per ASTM D 648.
 - 3. Coefficient of Thermal Expansion: Not more than 3.2 x 10⁻⁵ inches/inch x deg F.
 - 4. Water Absorption: Not more than 1 percent, per ASTM D 570.
 - 5. Flame-Spread Index: 20 or less, per ASTM E 84.
- B. Cellular PVC Trim and Accessories: Smooth PVC trim shall be milled to indicated shape and size.

- 1. Products:
 - a. Kleer Lumber, LLC; Kleer Trimboard.
 - b. Vycom Corp.; Azek.
 - c. Wolfpac Technologies, Inc.; Versatex.
- 2. Trim and Accessories: PVC trim shall be milled to indicated shape and size.
 - a. Trim where siding butts shall be 5/4 thickness.
- C. Concealed Fasteners for Cellular PVC Trim: Concealed fastening system using screws that create a cored-out hole for trim plug and matching plugs for PVC trim.
 - 1. Coordinate that type of trim plug matches manufacturer of PVC products.
 - 2. Product: FastenMaster; Cortex Concealed Fastening System PVC Trim; phone: (800) 518-3569.
- D. Adhesive for PVC Trim Boards: Bond & Fill, Advances TrimWorks, Inc., 877-822-7745.
- E. Installation Adhesive (Bonding PVC to Wood Substrate): OSI TRIMTeQ TEQ Mounting Adhesive.
- F. Cap Flashing for Exterior Trim: Horizontal joint flashing for panels and trim. Preformed aluminum Z-shaped flashing, minimum 0.032-inch thick, with factory applied polyester prime paint finish. Provide one shop coat of finish to match siding before installation of flashing. Installed flashing specified to be field painted with second coat of finish under Division 09 Section "Painting."
 - 1. Fabricate for waterproof and weather-resistant performance, sufficient to permanently prevent leakage, damage, or deterioration of the work. Form work to fit substrates. Form shapes with metal break equipment, providing minimum of 8-foot lengths. Fabricate flashing to turn up wall 2 inches minimum. Install in full-length pieces without joints for locations less than the maximum available lengths. Seal lap joints with concealed bead of sealant.

2.3 EXTERIOR DECORATIVE COMPONENTS

- A. Bracketed PVC Brie de Soliel and Roof Brackets: Assembly fabricated of PVC and consisting of trellis brackets notched for three heavy laths (horizontal members), mounting brackets, and laths with concealed aluminum reinforcement.
 - 1. Product: Walpole Woodworkers; Sheldon Trellis Bracket, No. 795470 and heavy laths with solid PVC ends in required lengths.
 - 2. Building Attachment: Stainless steel lag bolts, set in countersunk holes with PVC plugs.
- B. PVC Window Boxes: Window boxes, 30 inches long, with predrilled drainage holes, and two PVC mounting brackets.
 - 1. Style: New England Farmhouse.
 - 2. Product: Advanced TrimWright Freedom; Estate Series No. 4201.
- C. Decorative Cupola: Constructed of cedar with copper roof; base size, 22- by 22-inches by 9 inches high; total height of 25 inches.
 - 1. Product: Brosco; Estate Cupola, Standard Model No. 24-A.
- D. PVC Trellis: Fan style trellis fabricated of PVC components; white.
 - 1. Product: Garden by ZooStores; Highwood Traditional Fan Trellis; website: garden.zoostores.com/garden en/highwood-traditional-fan-trellis-arbor-and-trellis.html#.

2.4 WOOD SIDING

- A. Lumber Siding: Kiln-dried lumber siding complying with DOC PS 20, factory coated with exterior alkyd primer.
 - 1. Grade A western red cedar; NLGA, WCLIB, or WWPA.
 - 2. Bevel Siding: S1S2E, actual overall dimensions of 5-1/2 by 11/16 inch, measured on the face and thick edge at 19 percent moisture content.

2.5 WIRE SHELVING AND CLOTHES RODS

- A. Wire Closet Shelving and Clothes Rods: Provide vinyl coated, wire shelving system; 12-inch deep shelf with matching mounting hardware for attachment to concealed wood blocking. Clothes Closet shelving to have integral hanger rod.
 - 1. Product: ClosetMaid, a division of Clairson International.

2.6 ORNAMENTAL COLUMNS

- A. Ornamental Column Enclosures, Opaque Finish: Factory fabricated from FRP, split column enclosure for installation around structural steel columns.
 - 1. Style: Tapered round Tuscan, unfluted.
 - 2. Size: 12 inch diameter.
 - 3. Product: Turncraft Poly-Classic Columns with standard base and capital.

2.7 CORNER GUARDS

- A. Surface-Mounted Corner Guards: ASTM E 648, Class 1; fabricated from PVC; with formed edges; fabricated with 90-degree turn to match wall condition.
 - 1. Wing Size: 1-1/2 inches by 1-1/2 inches by 1/8- inch thick.
 - 2. Height: Full height.
 - 3. Mounting: Adhesive.
 - 4. Colors: As selected by Architect from manufacturer's full range.
 - 5. Product: Johnsonite; Corner Bumper Guards, Model VBG-XX-A.
- B. Adhesive: Johnsonite Contact Bond Adhesive No. 945.

2.8 WALL PROTECTION SYSTEM

- A. Fiberglass Reinforced Wall Panel (FRP): Kemlite Fire-X Glasboard with surfaseal, 0.090 inch thick x 4 feet wide x full height panels. PVC inside and outside corners, and 1-inch wide, minimum, H-molding. Use adhesive and caulking as specified by manufacturer. Color for panel and molding shall match.
 - 1. Color: As selected by Architect from manufacturer's full range of colors.
- B. Adhesive: Comply with paneling manufacturer's recommendations for adhesives.
- C. Sealant: Single-component, mildew-resistant, neutral-curing silicone sealant recommended by plastic paneling manufacturer.
 - 1. VOC Content for Sealant: Sealant shall have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

2.9 MISCELLANEOUS MATERIALS

- A. Fasteners for Exterior Finish Carpentry: Provide nails or screws of the following materials, in sufficient length to penetrate minimum of 1-1/2 inches into substrate, unless otherwise recommended by manufacturer:
 - 1. Stainless steel.
 - 2. Hot-dip galvanized steel.
 - 3. Noncorroding aluminum.
- B. Fasteners for Interior Finish Carpentry: Nails, screws, and other anchoring devices of type, size, material, and finish required for application indicated to provide secure attachment, concealed where possible.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrates of projections and substances detrimental to application.
- B. Before installing interior finish carpentry, condition materials to average prevailing humidity in installation areas for a minimum of 24 hours, unless longer conditioning is recommended by manufacturer.

3.3 INSTALLATION, GENERAL

- A. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, or too small to fabricate with proper jointing arrangements.
 - 1. Do not use manufactured units with defective surfaces, sizes, or patterns.
- B. Install finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.
 - 1. Scribe and cut finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.
 - 2. Countersink fasteners, fill surface flush, and sand where face fastening is unavoidable.
 - 3. Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.
 - 4. Coordinate finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate exposed surfaces of finish carpentry.
 - 5. Finish according to specified requirements.

6. Refer to Division 09 Section "Painting" for final finishing of finish carpentry.

3.4 STANDING AND RUNNING PVC TRIM INSTALLATION

- A. Install PVC trim and panels in accordance with manufacturer's instructions and recommendations.
- B. Trim: Install with minimum number of joints practical, using full-length pieces from maximum lengths of material available. Do not use pieces less than 24 inches long, except where necessary. Stagger joints in adjacent and related standing and running trim. Cope at returns and miter at corners to produce uniform joints throughout length of joint. Joints shall be glued with joint bonding adhesive.
 - 1. Long runs of trim that require a joint for expansion shall be ship-lapped and installed with a 3/16-inch gap in ship-lapped joint, allowing for expansion and contraction.
 - 2. Trim around door and window openings shall be glued at joining of horizontal and vertical components.
 - 3. Fit exterior joints to exclude water.
 - 4. Place ripped edges up to be hidden by flashings, or place cut edge against adjacent material to hide to the maximum extent possible.
- C. Fastening Trim: Exterior eave and gable trim with backer shall be glued to the substrate in addition to screw fasteners. Exterior trim shall be installed with concealed fastening system producing hole for trim plug. Do not fasten trim within 3/8-inch of product edge. Holes for fasteners within 1/2-inch of trim shall be predrilled. Prevent over-tightening or overdriving of fasteners. Fill holes with plugs cut from same cellular PVC as trim boards. Place PVC trim plug into hole with the trim surface side up and gently tap until it is flush with trim surface.
 - 1. Apply installation bonding adhesive to substrate each side of joints, and in a serpentine pattern along full width and length of trim. Adhesive shall be applied and cured above 40 degrees F.
 - 2. Uniformly and equally space fasteners, maintaining vertical and horizontal alignment of fasteners to produce a neat, uniform appearance. Fasteners shall penetrate into solid wood blocking a minimum of 1-1/4 inches.
- D. Installation of Z-Flashing: Provide drip cap flashing over doors, windows and where indicated. Provide full-length pieces without lap splices to the maximum extent possible. For runs requiring splices, set vertical and horizontal legs of lap in sealant.
 - 1. At Steel Framed Walls: Run flashing back to exterior gypsum wall sheathing and turn up 2 inches minimum and flash into air barrier waterproofing.
 - 2. At CMU Walls: Run flashing back to exterior plywood sheathing, turn up sheathing behind weather barrier a minimum of 2 inches, and seal with weather barrier flashing tape.

3.5 WOOD SIDING INSTALLATION

A. Horizontal Lumber Siding: Apply starter strip along bottom edge of sheathing or sill. Install first course of siding with lower edge at least 1/8 inch below starter strip and subsequent courses lapped 1 inch over course below. Nail at each stud. Do not allow nails to penetrate more than one thickness of siding.

3.6 INSTALLATION OF EXTERIOR DECORATIVE COMPONENTS

A. General: Install in accordance with manufacturer's written instructions. To the maximum extent possible, conceal fasteners countersinking with PVC plugs. Install components level, plumb, and true to line without distortions.

3.7 WIRE SHELVING AND CLOTHES ROD INSTALLATION

A. Wire Shelving and Clothes Rods: Install in accordance with manufacturer's written instructions, except cut clip depth to thickness of wallboard and install wire shelving and clothes rods with clips fastened through the drywall into concealed wood blocking. Place wall clips every 10 to 12 inches on level line. Install end brackets on same level line as wall clips, centered on the front rods of shelves, screw attached to concealed blocking. Support shelves over 36 inches long with intermediate support brackets.

3.8 INSTALLATION OF INTERIOR COLUMN ENCLOSURES

- A. Install columns to comply with manufacturer's written instructions. Comply with requirements below unless manufacturer's written instructions state otherwise.
- B. Lay out column locations on ceiling and plumb down to locate column locations at floor.
- C. Set plinths in location, shim as required to temporarily level, and scribe and trim as required so that tops of plinths will sit level without use of shims. Seal cut surfaces with sealer or primer and fasten plinths to floor using pins or fasteners as recommended by manufacturer.
- D. Set columns in location, shim as required to temporarily plumb, and scribe and trim as required so that columns will sit plumb without shims.
- E. Scribe and trim tops of columns to fit to ceiling.
- F. Seal ends of columns with sealer or primer.
- G. Install column caps on columns and fasten to columns.
- H. Secure columns in place at top and bottom with fasteners recommended by manufacturer.

3.9 FRP INSTALLATION

A. Install according to manufacturer's recommendations. Set fiberglass reinforced panel edges in silicone sealant. Perimeter and H-moldings shall be fastened through the wallboard to studs or blocking back-up. Provide continuous cove base molding at the bottom of fiberglass panels, set in sealant. Apply wall panels with adhesive, allowing proper clearance for expansion and contraction. Brace wall panels to assure even contact to wall until adhesive has cured.

3.10 ADJUSTING

A. Replace finish carpentry that is damaged or does not comply with requirements. Finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing. Adjust joinery for uniform appearance.

3.11 CLEANING

A. Clean finish carpentry on exposed and semiexposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.

3.12 PROTECTION

- A. Protect installed products from damage from weather and other causes during remainder of the construction period.
- B. Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.
 - 1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.
- C. Provide final protection and maintain conditions that ensure finish carpentry is without damage or deterioration at the time of Substantial Completion.

END OF SECTION 062000