

SECTION 06105 - MISCELLANEOUS CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:

- 1. Wood blocking and nailers.
- 2. Shelving and clothes rods.
- 3. Sheathing.
- 4. Subflooring and underlayment.
- 5. Plywood backing panels.

- B. Related Sections include the following:

- 1. Division 6 Section "Interior Architectural Woodwork" for interior woodwork not specified in this Section.

1.3 DEFINITIONS

- A. Lumber grading agencies, and the abbreviations used to reference them, include the following:

- 1. NELMA - Northeastern Lumber Manufacturers Association.
- 2. NLGA - National Lumber Grades Authority.
- 3. SPIB - Southern Pine Inspection Bureau.
- 4. WCLIB - West Coast Lumber Inspection Bureau.
- 5. WWPA - Western Wood Products Association.

1.4 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

- 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used, net amount of preservative retained, and chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.

2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials, both before and after exposure to elevated temperatures when tested according to ASTM D 5516 and ASTM D 5664.
3. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
4. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels; place spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
 1. Factory mark each piece of lumber with grade stamp of grading agency.
 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
 3. Provide dressed lumber, S4S, unless otherwise indicated.
 4. Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal thickness or less, unless otherwise indicated.
- B. Wood Structural Panels:
 1. Plywood: Either DOC PS 1 or DOC PS 2, unless otherwise indicated.
 2. Thickness: As needed to comply with requirements specified but not less than thickness indicated.
 3. Factory mark panels according to indicated standard.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWPA C2 (lumber) and AWPA C9 (plywood), except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX).
 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and the following:

- a. Chromated copper arsenate (CCA).
- B. Kiln-dry material after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood. Do not use material that is warped or does not comply with requirements for untreated material.
- C. Mark each treated item with the treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
- D. Application: Treat items indicated on Drawings, and the following:
 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, provide materials that comply with performance requirements in AWPA C20 (lumber) and AWPA C27 (plywood). Identify fire-retardant-treated wood with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction.
 1. Use treatment for which chemical manufacturer publishes physical properties of treated wood after exposure to elevated temperatures, when tested by a qualified independent testing agency according to ASTM D 5664, for lumber and ASTM D 5516, for plywood.
 2. Use treatment that does not promote corrosion of metal fasteners.
 3. Use Exterior type for exterior locations and where indicated.
 4. Use Interior Type A High Temperature (HT), unless otherwise indicated.

2.4 MISCELLANEOUS LUMBER

- A. General: Provide lumber for support or attachment of other construction, including the following:
 1. Blocking.
 2. Nailers.
- B. For items of dimension lumber size, provide Construction, Stud, or No. 2 grade lumber with 19 percent maximum moisture content and the following species:
 1. Mixed southern pine; SPIB.
- C. For concealed boards, provide lumber with 19 percent maximum moisture content and the following species and grades:
 1. Mixed southern pine, No. 2 grade; SPIB.

2.5 SHELVING AND CLOTHES RODS

- A. Shelving: 3/4-inch medium-density fiberboard shelving with solid-wood front edge or Grade D Select eastern white pine..
 - 1. Shelf Cleats: 3/4-by-5-1/2-inch boards with holes to receive clothes rods, of same species and grade indicated above for interior lumber trim for opaque finish.
 - 2. Shelf Brackets: Prime-painted formed steel with provision to support clothes rod where rod is indicated.
- B. Clothes Rods: 1-1/2-inch- diameter, clear, kiln-dried hardwood rods .
 - 1. Rod Flanges: Clear, kiln-dried turnings, same species as rods.

2.6 PANEL PRODUCTS

- A. Miscellaneous Concealed Plywood: Exterior sheathing, span rating to suit framing in each location, and thickness as indicated but not less than 1/2 inch.
- B. Plywood Underlayment: DOC PS 1, Exterior A-C with fully sanded face, thickness as indicated but not less than 1/2 inch.
- C. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 1/2 inch thick.

2.7 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
 - 1. Where carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Nails, Wire, Brads, and Staples: FS FF-N-105.
- C. Power-Driven Fasteners: CABO NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.
- F. Lag Bolts: ASME B18.2.1..

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Discard units of material with defects that impair quality of carpentry and that are too small to use with minimum number of joints or optimum joint arrangement.
- B. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- C. Apply field treatment complying with AWPA M4 to cut surfaces of preservative-treated lumber and plywood.
- D. Securely attach carpentry work as indicated and according to applicable codes and recognized standards.
- E. Use fasteners of appropriate type and length. Pre-drill members when necessary to avoid splitting wood.

3.2 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.

3.3 PANEL PRODUCT INSTALLATION

- A. Wood Structural Panels: Comply with applicable recommendations contained in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial," for types of structural-use panels and applications indicated.

END OF SECTION 06105

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SECTION 06402 - INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:

1. Interior standing and running trim.
2. Wood veneer millwork
3. Solid-surfacing-material countertops.

- B. Related Sections include the following:

1. Division 8 Section "Flush Wood Doors."
2. Division 9 Section "Painting" for field finishing of interior architectural woodwork.
3. Division 12 Section "Casework" for interior cabinetry and countertops

1.3 DEFINITIONS

- A. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items, unless concealed within other construction before woodwork installation.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated, including cabinet hardware and accessories, and finishing materials and processes.

- B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.

1. Show details full size.
2. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
3. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, soap dispensers, and other items installed in architectural woodwork.
4. Show veneer leaves with dimensions, grain direction, exposed face, and identification numbers indicating the flitch and sequence within the flitch for each leaf.

- C. Samples for Verification: For the following:
1. Lumber with or for transparent finish, 50 sq. in., for each species and cut, finished on 1 side and 1 edge.
 2. Veneer leaves representative of and selected from flitches to be used for transparent-finished woodwork.
 3. Wood-veneer-faced panel products with or for transparent finish, 8 by 10 inches, for each species and cut. Include at least one face-veneer seam and finish as specified.
 4. Plastic Laminates per architectural finish schedule
 5. Solid surface material per architectural finish schedule
- 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 Owner/Commissioning Authoritys, and other information specified.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has completed architectural woodwork similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- B. Fabricator Qualifications: A firm experienced in producing architectural woodwork similar to that indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards" for grades of interior architectural woodwork, construction, finishes, and other requirements.
- D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver woodwork until painting and similar operations that could damage woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and will maintaining

temperature between 60 and 90 deg F and relative humidity between 25 and 55 percent during the remainder of the construction period.

- B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed and indicate measurements on Shop Drawings.

1.8 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide materials that comply with requirements of the AWI quality standard for each type of woodwork and quality grade specified, unless otherwise indicated.
- B. Wood Species for Opaque Finish: Any closed-grain hardwood.
- C. Wood Species for Translucent Finish: Birch
- D. Wood Products: Comply with the following:
 - 1. Medium-Density Fiberboard: ANSI A208.2, Grade MD. Moisture Resistant Particle Board at all countertop locations.
 - 2. Hardwood Plywood and Face Veneers: HPVA HP-1.
- E. Thermoset Decorative Overlay: Particleboard complying with ANSI A208.1, Grade M-2 Moisture Resistant, or medium-density fiberboard complying with ANSI A208.2, Grade MD Moisture Resistant, with surface of thermally fused, melamine-impregnated decorative paper complying with LMA SAT-1.
- F. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated, or if not indicated, as required by woodwork quality standard.
 - 1. Available Manufacturers: See Architectural Finish Schedule or equal materials by approval.
- G. Adhesive for Bonding Plastic Laminate: contact cement.

- H. Solid-Surfacing Material: Homogeneous solid sheets of filled plastic resin complying with material and performance requirements in ANSI Z124.3, for Type 5 or Type 6, without a precoated finish.

- 1. Products: See Architectural Finish Schedule or equal materials by approval.

2.2 CABINET HARDWARE AND ACCESSORIES

- A. General: See Division 12 Section "Casework" for cabinetry hardware specifications.

2.3 INSTALLATION MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Fire-retardant-treated softwood lumber, kiln-dried to less than 15 percent moisture content.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

2.4 FABRICATION, GENERAL

- A. Interior Woodwork Grade: Provide Premium grade interior woodwork complying with the referenced quality standard.
- B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.
- C. Sand fire-retardant-treated wood lightly to remove raised grain on exposed surfaces before fabrication.
- D. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
 - 1. Corners of Cabinets and Edges of Solid-Wood (Lumber) Members 3/4 Inch Thick or Less: 1/16 inch.
 - 2. Edges of Rails and Similar Members More Than 3/4 Inch Thick: 1/8 inch.
- E. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible, before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
- F. Shop cut openings, to maximum extent possible, to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and

use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

1. Seal edges of openings in countertops with a coat of varnish.

2.5 INTERIOR STANDING AND RUNNING TRIM FOR OPAQUE FINISH

- A. Quality Standard: Comply with AWI Section 300.
- B. Grade: Premium.
- C. Backout or groove backs of flat trim members and kerf backs of other wide, flat members, except for members with ends exposed in finished work.
- D. Wood Species: Any closed-grain hardwood.

2.6 PLASTIC-LAMINATE CABINETS

- A. See Division 12 Section "Casework" for casework countertop specifications.
- B. Quality Standard: Comply with AWI Section 400 requirements for laminate cabinets.
- C. Grade: Premium.
- D. AWI Type of Cabinet Construction: Flush overlay.
- E. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate complying with the following requirements:
 1. Horizontal Surfaces Other Than Tops: HGS.
 2. Postformed Surfaces: HGP.
 3. Vertical Surfaces: HGS.
 4. Edges: HGS.
- F. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
 1. Provide Architect's selections from laminate manufacturer's full range of colors and finishes in the following categories:
 - a. Solid colors.
 - b. Wood grains.
 - c. Patterns.

2.7 PLASTIC-LAMINATE COUNTERTOPS

- A. See Division 12 Section "Casework" for countertop specifications.

- B. Quality Standard: Comply with AWI Section 400 requirements for high-pressure decorative laminate countertops.
- C. Grade: Premium.
- D. High-Pressure Decorative Laminate Grade: HGS.
- E. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
 - 1. Provide Architect's selections from manufacturer's full range of colors and finishes in the following categories:
 - a. Solid colors.
 - b. Wood grains.
 - c. Patterns.
- F. Grain Direction: Parallel to cabinet fronts.
- G. Edge Treatment: Same as laminate cladding on horizontal surfaces.
- H. Core Material: Particleboard or medium-density fiberboard.
- I. Core Material at Sinks: exterior-grade plywood.

2.8 SOLID-SURFACING-MATERIAL COUNTERTOPS

- A. Quality Standard: Comply with AWI Section 400 requirements for countertops.
- B. Grade: Custom.
- C. Solid-Surfacing-Material Thickness: 3/4 inch (19 mm).
- D. Colors, Patterns, and Finishes: Provide materials and products that result in colors of solid-surfacing material complying with the following requirements:
 - 1. See Architectural Finish Schedule for materials or equal as approved.
- E. Fabricate tops in one piece with shop-applied backsplashes and edges, unless otherwise indicated. Comply with solid-surfacing-material manufacturer's written recommendations for adhesives, sealers, fabrication, and finishing.
- F. Drill holes in countertops for plumbing fittings and soap dispensers in shop.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Condition woodwork to average prevailing humidity conditions in installation areas before installation.
- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.2 INSTALLATION

- A. Quality Standard: Install woodwork to comply with AWI Section 1700 for the same grade specified in Part 2 of this Section for type of woodwork involved.
- B. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches.
- C. Scribe and cut woodwork to fit adjoining work, and refinish cut surfaces and repair damaged finish at cuts.
- D. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.
- E. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Do not use pieces less than 60 inches long, except where shorter single-length pieces are necessary. Scarf running joints and stagger in adjacent and related members.
 - 1. Fill gaps, if any, between top of base and wall with plastic wood filler, sand smooth, and finish same as wood base, if finished.
 - 2. Install wall railings on indicated metal brackets securely fastened to wall framing.
 - 3. Install standing and running trim with no more variation from a straight line than 1/8 inch in 96 inches.
- F. Cabinets: See Division 12 Section "Casework" for casework cabinet installation.
- G. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.
 - 1. Install cabinets with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
 - 2. Maintain veneer sequence matching of cabinets with transparent finish.
 - 3. Fasten wall cabinets through back, near top and bottom, at ends and not more than 16 inches o.c. with No. 10 wafer-head screws sized for 1-inch penetration into wood framing, blocking, or hanging strips.
- H. Countertops: See Division 12 Section "Casework" for casework cabinet installation.

- I. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.
 - 1. Install countertops with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
 - 2. Secure backsplashes to tops with concealed metal brackets at 16 inches o.c. and to walls with adhesive.
 - 3. Calk space between backsplash and wall with sealant specified in Division 7 Section "Joint Sealants."
 - 4. Align adjacent solid-surfacing-material countertops and form seams to comply with manufacturer's written recommendations using adhesive in color to match countertop. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

- J. Complete the finishing work specified in this Section to extent not completed at shop or before installation of woodwork. Fill nail holes with matching filler where exposed. Apply specified finish coats, including stains and paste fillers if any, to exposed surfaces where only sealer/prime coats were applied in shop.

- K. Refer to Division 9 Sections for final finishing of installed architectural woodwork scheduled to receive an opaque finish.

3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.

- B. Clean, lubricate, and adjust hardware.

- C. Clean woodwork on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 06402