SECTION 06 20 00
FINISH CARPENTRY

PART 1 - GENERAL

1.1 DESCRIPTION

A. This section specifies cabinets, counters, tack panels, and window stools.

1.2 RELATED WORK

A. Framing, furring and blocking: Section 06 10 00, ROUGH CARPENTRY.

B. Wood doors: Section 08 14 00, WOOD DOORS.

C. Electrical light fixtures and duplex outlets: Division 26, ELECTRICAL.

1.3 SUBMITTALS

A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Shop Drawings:

1. Millwork items – Half full size scale for sections and details 1:50 (1/4-inch) for elevations and plans.
2. Show construction and installation.

C. Manufacturer's literature and data:

1. Finish hardware

1.4 DELIVERY, STORAGE AND HANDLING

A. Protect lumber and millwork from dampness, maintaining moisture content specified both during and after delivery at site.

B. Store finishing lumber and millwork in weathertight well ventilated structures or in space in existing buildings designated by Resident Engineer. Store at a minimum temperature of 21^{0}C (70^{0}F) for not less than 10 days before installation.

C. Pile lumber in stacks in such manner as to provide air circulation around surfaces of each piece.

1.5 APPLICABLE PUBLICATIONS

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

B. American Society of Testing and Materials (ASTM):

A36/A36M-08.....Structural Steel

A53-07.....Pipe, Steel, Black and Hot-Dipped Zinc Coated, Welded and Seamless

A167-99 (R2009).....Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip

B26/B26M-09.....Aluminum-Alloy Sand Castings

B221-08.....Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
E84-09.....Surface Burning Characteristics of Building Materials

C. American Hardboard Association (AHA):
A135.4-04.....Basic Hardboard

D. Builders Hardware Manufacturers Association (BHMA):
A156.9-03.....Cabinet Hardware
A156.11-04.....Cabinet Locks
A156.16-02.....Auxiliary Hardware

E. Hardwood Plywood and Veneer Association (HPVA):
HP1-09.....Hardwood and Decorative Plywood

F. National Particleboard Association (NPA):
A208.1-99.....Wood Particleboard

G. American Wood-Preservers' Association (AWPA):
AWPA C1-03.....All Timber Products – Preservative Treatment by Pressure Processes

H. Architectural Woodwork Institute (AWI):
AWI-99.....Architectural Woodwork Quality Standards and Quality Certification Program

I. National Electrical Manufacturers Association (NEMA):
LD 3-05.....High-Pressure Decorative Laminates

J. U.S. Department of Commerce, Product Standard (PS):
PS20-05.....American Softwood Lumber Standard

K. Military Specification (Mil. Spec):
MIL-L-19140E.....Lumber and Plywood, Fire-Retardant Treated

L. Federal Specifications (Fed. Spec.):
A-A-1922A.....Shield Expansion
A-A-1936.....Contact Adhesive
FF-N-836D.....Nut, Square, Hexagon Cap, Slotted, Castle
FF-S-111D(1).....Screw, Wood
MM-L-736(C).....Lumber, Hardwood

PART 2 - PRODUCTS

2.1 LUMBER

A. Grading and Marking:
1. Lumber shall bear the grade mark, stamp, or other identifying marks indicating grades of material.
2. Such identifying marks on a material shall be in accordance with the rule or standard under which the material is produced, including requirements for qualifications and authority of the inspection

organization, usage of authorized identification, and information included in the identification.

3. The inspection agency for lumber shall be approved by the Board of Review, American Lumber Standards Committee, to grade species used.

2.2 PLYWOOD

A. Softwood Plywood:

1. Prod. Std.
2. Grading and Marking:
   a. Each sheet of plywood shall bear the mark of a recognized association or independent inspection agency that maintains continuing control over the quality of the plywood.
   b. The mark shall identify the plywood by species group or identification index, and shall show glue type, grade, and compliance with PS1.
3. Plywood, 13 mm (1/2 inch) and thicker; not less than five ply construction, except 32 mm (1-1/4 inch) thick plywood not less than seven ply.
4. Plastic Laminate Plywood Cores:
   a. Exterior Type, and species group.
   b. Veneer Grade: A-C.

2.3 PARTICLEBOARD

A. NPA A208.1

B. Plastic Laminate Particleboard Cores:

1. Use Type 1, Grade 1-M-3, or Type 2, Grade 2-M-2, unless otherwise specified.
2. Use Type 2, Grade 2-M-2, exterior bond, for tops with sinks.

2.4 PLASTIC LAMINATE

A. NEMA LD-3.

B. Exposed decorative surfaces including countertops, both sides of cabinet doors, and for items having plastic laminate finish. General Purpose, Type HGL.

1. Provide chemical resistant laminate at countertops with sinks.

C. Cabinet Interiors including Shelving: Both of following options to comply with NEMA, CLS as a minimum.

1. Plastic laminate clad plywood or particle board.
2. Resin impregnated decorative paper thermally fused to particle board.

D. Backing sheet on bottom of plastic laminate covered wood tops: Backer, Type HGP.

E. Post Forming Fabrication, Decorative Surfaces: Post forming, Type HGP.

2.5 ADHESIVE

A. For Plastic Laminate: Fed. Spec. A-A-1936.

2.6 STAINLESS STEEL

ASTM A167, Type 302 or 304.

2.7 ALUMINUM CAST

ASTM B26

2.8 ALUMINUM EXTRUDED

ASTM B221

2.9 HARDWARE

A. Rough Hardware:
   1. Furnish rough hardware with a standard plating, applied after punching, forming and assembly of parts; galvanized, cadmium plated, or zinc-coated by electric-galvanizing process. Galvanized where specified.
   2. Use galvanized coating on ferrous metal for exterior work unless non-ferrous metals or stainless is used.
   3. Fasteners:
      a. Bolts with Nuts: FF-N-836.
      b. Expansion Bolts: A-A-1922A.
      c. Screws: Fed. Spec. FF-S-111.

B. Finish Hardware
   1. Cabinet Hardware: ANSI A156.9.
      a. Door/Drawer Pulls: B02011.
      b. Drawer Slides: B05051 for drawers over 150 mm (6 inches) deep, B05052 for drawers 75 mm to 150 mm 3 to 6 inches) deep, and B05053 for drawers less than 75 mm (3 inches) deep.
      c. Adjustable Shelf Standards: B4061 with shelf rest B04083.
      d. Concealed Hinges: B1601, minimum 110 degree opening.
   2. Cabinet Locks: ANSI A156.11.
      a. Drawers and Hinged Door: E07262.
   3. Auxiliary Hardware: ANSI A156.16.
      a. Shelf Bracket: B04041, japanned or enameled finish.
   4. Edge Strips Moldings:
      a. Driven type "T" shape with serrated retaining stem; vinyl plastic to match plastic laminate color, stainless steel, or 3 mm (1/8 inch) thick extruded aluminum.

2.10 MOISTURE CONTENT

A. Moisture content of lumber and millwork at time of delivery to site.

1. Interior finish lumber, trim, and millwork 32 mm (1-1/4 inches) or less in nominal thickness: 12 percent on 85 percent of the pieces and 15 percent on the remainder.
2. Moisture content of other materials shall be in accordance with the standards under which the products are produced.

2.11 TACK PANEL

A. Performance criteria:
   1. Adhesive mounting direct to substrate.
   2. Composite flame spread: ASTM E84, 25 or less.
   3. Smoke developed: ASTM E84, 140 or less.
B. Glass fiber panel covered with fabric.
   1. Glass fiber panel one inch thick minimum, tackable surface.
   2. Fabric covering treated to resist stains and soil, bonded directly to the glass fiber panel face, flat bonded directly to the glass fiber panel face, flat wrinkle-free surface.
C. Adhesive: As recommended by panel manufacturers.

2.12 FABRICATION

A. General:
   1. Except as otherwise specified, use AWI Custom Grade for architectural woodwork and interior millwork.
   2. Plastic Laminate Work:
      a. Factory glued to either a plywood or a particle board core, thickness as shown or specified.
      b. Cover exposed edges with plastic laminate, except where aluminum, stainless steel, or plastic molded edge strips are shown or specified. Use plastic molded edge strips on 19 mm (3/4-inch) molded thick or thinner core material.
      c. Provide plastic backing sheet on underside of countertops, vanity tops, thru-wall counter and sills including back splashes and end splashes of countertops.
      d. Use backing sheet on concealed large panel surface when decorative face does not occur.
B. Counter or Work Tops:
   1. Fabrication with plastic laminate over 32 mm (1-1/4 inch) thick core unless shown otherwise.
      a. Use decorative laminate for exposed edges of tops 38 mm (1-1/2 inches) wide and on back splash and end splash. Use plastic or metal edges for top edges less than 38 mm (1-1/2 inches) wide.
      b. Assemble back splash and end splash to counter top.

c. Use one piece counters for straight runs.

d. Miter corners for field joints with overlapping blocking on underside of joint.

PART 3 - EXECUTION

3.1 ENVIRONMENTAL REQUIREMENTS

A. Maintain work areas and storage areas to a minimum temperature of 21^{0}C (70^{0}F) for not less than 10 days before and during installation of interior millwork.

B. Do not install finish millwork in any room or space where wet process systems such as concrete, masonry, or plaster work is not complete and dry.

3.2 INSTALLATION

A. General:

1. Coordinate with plumbing and electrical work for installation of fixtures and service connections in millwork items.
2. Plumb and level items unless shown otherwise.

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