

**Part 1            General**

**1.1                SCOPE OF WORK**

- .1        Washroom counters.

**1.2                REFERENCES**

- .1        American National Standards Institute (ANSI)
  - .1        ANSI A208.1, Particleboard.
  - .2        ANSI A208.2, Medium Density Fiberboard (MDF).
- .2        American Society for Testing and Materials (ASTM)
  - .1        ASTM E1333, Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates From Wood Products Using a Large Chamber.
  - .2        ASTM D2832, Standard Guide for Determining Volatile and Nonvolatile Content of Paint and Related Coatings.
  - .3        ASTM D5116, Standard Guide For Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.
- .3        Architectural Woodwork Manufacturers Association of Canada (AWMAC)
  - .1        AWMAC Quality Standards for Architectural Woodwork.
- .4        Canadian General Standards Board (CGSB)
  - .1        CAN/CGSB-71.20, Adhesive, Contact, Brushable.
- .5        Canadian Standards Association (CSA)
  - .1        CSA B111, Wire Nails, Spikes and Staples.
  - .2        CSA O112.4, Standards for Wood Adhesives.
  - .3        CSA O112.5-Series-M-, Urea Resin Adhesives for Wood (Room- and High-Temperature Curing).
  - .4        CSA O112.7-Series M-, Resorcinol and Phenol-Resorcinol Resin Adhesives for Wood (Room- and Intermediate-Temperature Curing).
  - .5        CSA O115, Hardwood and Decorative Plywood.
  - .6        CSA O121, Douglas Fir Plywood.
  - .7        CAN/CSA O141, Softwood Lumber.
  - .8        CSA O151, Softwood Plywood.
  - .9        CSA O153, Poplar Plywood.
  - .10       CSA Z760, Life Cycle Assessment.

- .6 National Hardwood Lumber Association (NHLA)
  - .1 Rules for the Measurement and Inspection of Hardwood and Cypress.

- .7 National Lumber Grades Authority (NLGA)
  - .1 Standard Grading Rules for Canadian Lumber.

### **1.3 SHOP DRAWINGS**

- .1 Submit require shop drawings and technical sheets of all products used, such as panels, primers, adhesive, sealants, paint, etc. to section 01 33 00 – Document and sample submittals.
- .2 Drawings must show construction and assembly details, extrusions, fasteners and other related details.
  - .1 Scales: appropriate to components to represent, half-size for details.
- .3 All dimensions must be verified on site and adjusted to shop drawings. Any divergence from architectural drawings must be reported to representative ministerial prior to fabrication.
- .4 Drawings must indicate:
  - .1 Materials, finishes, thicknesses and hardware components.
  - .2 Position, dimension, fasteners for access hatches required for utility and lighting services.
  - .3 Location of each piece of furniture.
- .5 Shop drawings must indicate location of openings required in storage accessories for the purpose of connecting utility services, typical and particular installation conditions, connections, accessories and anchors, as well as location of fasteners.

### **1.4 SAMPLES**

- .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Unless indicated otherwise, submit two samples described below:
  - .1 Samples 300 mm X 300 mm of each material used for counter tops, including fasteners.
  - .2 Samples 300 mm X 300 mm X required thickness of specified plastic, colours and finishes at choice of representative ministerial.

### **1.5 DELIVERY, STORAGE, AND HANDLING**

- .1 Deliver, handle, store and protect materials of this section in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Protect millwork against dampness and damage during and after delivery.
- .3 Store millwork in ventilated areas, protected from extreme changes of temperature or humidity.

## **1.6 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate and recycle waste materials in accordance with Section 01 74 19 - Construction/Demolition Waste Management And Disposal and the Waste Reduction Workplan, to the maximum extent economically possible.

## **1.7 WARRANTY**

- .1 Supply written, signed document issued on the owner's behalf, certifying that the work described in this section is guaranteed for a period of five years against any defect in material, manufacture, and installation as well as against marring or delaminating as of the date of completion of a substantial part of the work.

## **Part 2 Products**

### **2.1 MATERIALS**

- .1 Softwood lumber: unless specified otherwise, S4S, moisture content 8% or less in accordance with following standards:
  - .1 CAN/CSA-O141.
  - .2 NLGA Standard Grading Rules for Canadian Lumber.
  - .3 AWMAC rules: custom premium grade wood, with prescribed moisture content.
- .2 Wood with a mechanical resistance grade is acceptable for all work.
- .3 Hardwood lumber: moisture content 8% or less in accordance with following standards:
  - .1 National Hardwood Lumber Association (NHLA).
  - .2 AWMAC custom premium grade, moisture content as specified.

### **2.2 FINISH PANELS**

- .1 Hardwood plywood: to ANSI/HPVA HP-1, CAN/CSA-Z809 or FSC or SFI certified.
  - .1 Plywood resin to contain no added urea-formaldehyde.
  - .2 For use as support panel for hardwood veneer and melamine veneer, to indications on drawings.

### **2.3 LAMINATED PLASTIC MATERIAL**

- .1 Laminate for for flat surfaces: to NEMA LD3, category HGS, 1.2 mm thick for countertops and VGS 0.7 mm thick for vertical surfaces; colour decorative side, pattern, texture and/or special finish at choice of representative ministerial.
- .2 Compensation sheets, QR quality, same thickness and colour as surface sheet.

### **2.4 ACCESSORIES**

- .1 Nails and cavaliers: to CSA B111, galvanized finish.

- .2 Wood screws: galvanized steel, appropriately sized.
- .3 Self-piercing screws: to ACNOR B35.3-1972, carbon steel.
- .4 Hexagon screw, zinc finish.
- .5 Clavettes: wood and/or metal.
- .6 Sealing product: according to prescriptions in section 07 92 00 – Joint sealing products, for indicated use.
- .7 Adhesive for laminates: contact adhesive to CAN/CGSB-71.20, water base without VOC and/or polyvinyl adhesive to CSA O112.4.
  - .1 VOC emission tests must be conducted to ASTM D2369 and ASTM D2832.
  - .2 Acceptable products: products that meet PCE-44.
- .8 Glue for installation of on site: adhesive compatible with under layers and components to be glued, with no VOC and/or low VOC emissions, according to manufacturer's standards.
- .9 Sealant: glue or waterproofing filler approved by laminate manufacturer.
- .10 Filler: selected by manufacturer, compatible with finish materials and systems specified. Generally, use filler to hide temporary anchors for woodwork glued to on site.
- .11 Generally, no anchors must be apparent. The Contractor of this batch must provide representative samples of anchoring methods for approval.

## **2.5 FABRICATION**

- .1 Sink finishing nails and screws; fill holes with stained filler and sand until smooth.
- .2 Build furniture according to drawings, approved shop drawings and the following prescriptions.
- .3 All interior and exterior surfaces of woodwork must be finished according to prescriptions.
- .4 Various elements must be assembled without splayed joints, nailed, screwed and/or glued under pressure with adequate presses. All fasteners must be hidden except where indicated otherwise on the plans.
- .5 As far as possible, mortice, bore, block and glue all components to avoid the use of nails and screws. Reinforce where necessary with keys, metal squares or other types of hidden supports to eliminate movement, cracking or other similar defects.
- .6 Install and adjust all hardware indicated according to instructions of respective manufacturers and using screws matched to finish.
- .7 Make openings for plumbing, accessories, electrical outlets and other appliances. Get required dimensions before making the components that must incorporate the appliances or equipment parts and other materials, or touch them.

- .8 Install plastic laminate to NEMA-LD-3:
  - .1 Ensure colours and patterns of adjacent laminated plastic are the same across the entire surface.
  - .2 Glue laminated plastic sheet to core panel following adhesive manufacturer's instructions. Ensure that laminate and core panel are even for proper adherence across the full surface. Use sheets of the biggest size and do not make joints less than 600 mm from any opening. Do not make any joint in joints up to 3.6 m in length.
  - .3 Install, according to the indications, the laminate to be installed on site. The laminate must cover the entire surface and adhere everywhere. In corners, make perfect joints. Use single piece of laminate sheeting. Make joints at indicated areas only. Lightly round edges.
  - .4 Install backing sheet on the back of the large panels or those that are not supported and therefore bend.
  - .5 Install interior finish sheet where indicated.
  - .6 Install laminate strip along visible edges and according to indications. Bevel visible edges approximately 20 degrees. Do not mitre laminated edges. For panels that must be covered with a laminate on six faces, apply to edges before faces.
- .9 No fastener must be visible on exposed panel surfaces.
- .10 Plant install door and drawer hardware, screw tops and opening hardware.
- .11 All new furniture shelves must be adjustable, as indicated, adjust all the shelves at the height indicated by the personnel, complete the fastening system as needed.
- .12 As far as possible, work must be done with sufficient movement and flexibility to be adjusted on site with adjacent work. As needed, verify all dimensions and angles before building the components to ensure perfect adjustment of existing work.
- .13 During plant assembly, take into account any access constraints of the building.

### **Part 3 Execution**

#### **3.1 INSTALLATION**

- .1 Do architectural woodwork to Quality Standards of the Architectural Woodwork Manufacturers Association of Canada (AWMAC), except where specified otherwise.
- .2 Install prefinished millwork at locations shown on drawings. Position accurately, level, plumb straight.
- .3 Fasten and anchor millwork securely. Provide heavy duty fixture attachments for wall mounted cabinets.
- .4 Attach cupboards to one another with bolts: joints must not be more than 1 mm.
- .5 Use draw bolts in countertop joints.

- .6 Provide all adjustment parts and fillers required. Trace and cut out components with contours matching the adjacent walls so that they can be adjusted in recesses and around pipes, columns, sanitary and electrical fittings, electrical outlets and any other protruding or penetrating object. Any cutouts carried out on site must be finished to match adjacent components.
- .7 Apply thin bead of waterproofing compound at the following areas:
  - .1 In joint separating countertops and laminated backing and cladding of adjacent wall;
  - .2 Junction of cupboards and adjacent walls;
  - .3 Junction of filler panels and adjacent walls;
  - .4 Junction between countertops and adjacent walls;
  - .5 Any other area required between two different types of woodwork material.
- .8 Fit hardware accurately and securely in accordance with manufacturer's written instructions.

### **3.1 ADJUSTING**

- .1 Adjust cabinet hardware for optimum, smooth operating condition.
- .2 Lubricate hardware and other moving parts.
- .3 Adjust cabinet door hardware to ensure tight fit at contact points with frames.

### **3.2 CLEANING**

- .1 Clean drawers, inside cupboards and outside surfaces of woodwork.
- .2 Remove excess glue from surfaces.
- .3 Wipe surfaces to remove finger marks and other stains, leave everything clean, do not use oils or waxes.

### **3.3 PROTECTION**

- .1 Protect millwork and cabinet work from damage until final inspection. Use polyethylene covers as needed.

**END OF SECTION**