

1 General

1.1 **SUMMARY**

.1 Section Includes

- .1 Labour, Products, equipment and services necessary to complete the Work of this section.

1.2 **REFERENCES**

.1 Conform to the latest edition of the following:

- | | | | |
|----|----------------|---|--|
| .1 | AWI/AWMAC | - | American Woodwork Institute/Architectural Woodwork Manufacturers Association of Canada |
| .2 | CAN3-O188.1-M | - | Interior Mat-Formed Wood Particleboard |
| .3 | CSA O80 Series | - | Wood Preservation |
| .4 | CSA O115-M | - | Hardwood and Decorative Plywood |
| .5 | CSA O121-M | - | Douglas Fir Plywood |
| .6 | CAN/ULC-S102 | - | Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies |
| .7 | NEMA LD3 | - | National Electrical Manufacturers Association, High Pressure Decorative Laminates |
| .8 | AODA | - | Accessibility for Ontarians with Disabilities Act |

1.3 **SUBMITTALS**

.1 Shop Drawings

- .1 Submit in accordance with Section 01 33 00. Show on Shop Drawings, vanities, counters, cupboards, and other casework.
- .2 Show fabrication details, including exact sizes and description of anchorage and hardware, nature of the materials which are to be used as component parts, and installation and interface conditions.

1.4 **QUALITY ASSURANCE**

.1 Special Experience Requirements

- .1 Manufacturer/fabricator: Architectural woodwork shall be manufactured by a current member firm of AWI/AWMAC, and having a minimum of five years experience on Work of similar size and quality to that indicated and specified.
- .2 Installer qualifications: Engage an installer who is a current member firm of AWI/AWMAC, and who has successfully completed two architectural woodwork projects similar in scope, materials and design to that indicated and specified within the last five years.

- .2 Execute plastic laminate Work to CAN3-A172-M, except as specified otherwise.

1.5 **PRODUCT DELIVERY, STORAGE AND HANDLING**

- .1 Deliver units to meet installation schedule. Arrange for strategic, off-the-ground, covered storage locations with constant minimum temperature of 16°C (61°F) and maximum moisture content of 12% when measured with moisture meter.

~~.2 Cover plastic laminate faced surfaces and varnished surfaces at the factory with 480 kg/m³ kraft paper. Protect all surfaces with corrugated cardboard.~~

- ~~3.2~~ Provide adequate protection until finally accepted.

1.6 **WARRANTY**

- .1 Warrant Work of this section against defects and deficiencies for a period of two years from date Work is certified as substantially performed in accordance with the general conditions of the Contract.
- .2 Promptly make good defects and deficiencies which become apparent within the Warranty Period by replacing defective plastic laminate Work satisfactory to the Consultant and at no expense to the Owner.
- .3 Defects shall include, but not be limited to, warping and delamination.

1.7 **COORDINATION**

- .1 Coordinate with the frame Suppliers as to the time at which such items will be required for installation. Receive and store such items.

2 **Products**

2.1 **MATERIALS**

- .1 Wood Materials
 - .1 Restriction of source of supply: 50% of wood Products used in Work of this section must be Forest Stewardship Council (FSC) Certified, with chain of custody verification.
 - .2 Provide materials that comply with requirements of the AWI/AWMAC Manual for each type of woodwork and quality grade indicated and, where Products are part of woodwork, with requirements of the referenced Product standards that apply to Product characteristics indicated.
 - .3 Lumber: To AWI/AWMAC manual with the following requirements:
 - .1 Hardwood for concealed blocking and framing: Economy grade, any species that, when painted, will not show any defects.
 - .2 Moisture content: Provide kiln-dried (KD) lumber with an average moisture content range of 6% to 11% for interior Work. Maintain temperature and relative humidity during fabrication, storage and finishing operations so that moisture content values for woodwork at time of installation do not exceed 5% to 10%.
 - .3 Solid hardwood for transparent finish grade: to Architectural Woodwork Standards, Edition 1-2009, Grade I. Wood species and cut: To later selection by Consultant.
 - .4 Architectural lumber: Clear, straight, kiln dried, select yellow birch for urethane or varnish finished fitments and door jambs. Lumber shall be kiln dried to 5% moisture content and free from blemishes that would be apparent after finish is applied.

~~.1 — Stainless Steel Trim / Edge:~~

~~.1 — Fabricate stainless steel trim to sizes, shapes and profiles as indicated on Drawings.~~

~~.2 — Standard commercial tempers and hardness, as required for fabrication, strength and durability from Type 304 alloy. Miter exposed corner joints and machine fit to hairline joint. Stainless steel finish: No. 4 (bright directional polish); No. 8 (non-directional mirror polish).~~

.2 Plastic laminate face sheets: Refer to Section 06 47 00 Plastic Laminates.

~~.3 — Countertops: Refer to Section 12 36 00 Countertops.~~

2.2 **SHEET MATERIALS**

.1 Melamine surfaced boards: 720 kg/m³ density particleboard core with thermally fused low pressure laminate finish by Domtar, Arborite or Uniboard. Colour as selected by the Consultant.

.2 Plywood: Douglas fir conforming to CSA O121-M, G2S, sanded, and stain grade birch conforming to CSA O115-M, G1S and G2S, depending on exposure.

.3 Softwood Plywood: CSA-O121; Graded to NAAWS; Custom installation; veneer core; Douglas Fir face species, rotary cut.

.4 Medium Density Fibreboard (MDF): NPA A208.2 moisture resistant; composed of wood particles reduced to fibres, made with high waterproof resin binders; of grade to suit application; sanded faces.

.5 Hardboard: CAN/CGSB-11.3 AHA A135.4; Pressed wood fibre with resin binder, standard tempered grade, 6 mm (1/4 inch) thick, smooth one sides.

~~.6 — Casework hardware: As follows:~~

~~.1 — Adjustable shelf hardware (janitors' shelves): Extra heavy duty; Knappe and Vogt No. 87 ANO standards, No. 187LL ANO shelf brackets and matching shelf rests or Richelieu equivalent, all in anochrome finish. Locate standards at 600 mm o.c. maximum.~~

~~.2 — Adjustable shelf hardware (cupboard shelves): Knappe & Vogt No. 255 standards and No. 256 shelf brackets, or Richelieu equivalent, nickel plated (brass) (epoxy coated white) (epoxy coated almond), mortised into cabinet sides.~~

~~.3 — Door and drawer pulls: Canadian Builders Hardware CBH 220, 88 mm long aluminum (bronze) (brass) (stainless steel) or Hafele 116.05.922.~~

~~.4 — Hinges: Blum "Clip 170" or Hettich "Euromat Topsafe 4955", 170 degree opening angle, concealed, self-closing, nickel plated.~~

~~.5 — Drawer slides: Full extension, rated 100 lb. load, Knappe & Vogt 1400 or Accuride 3832.~~

~~.6 — Cabinet door and drawer lock: Knappe & Vogt 986, nickel plated.~~

~~.7 — Vanity brackets: Hebeo table brackets.~~

7.6 Rough hardware: Supply all rough hardware to frame and fix finish carpentry. This includes bolts, anchors, nails, expansion shields and other fastenings required. Ensure bolts and screws are galvanized or non-ferrous material. Wood screws shall be full thread screws.

~~.8 Wood veneer for natural finish: Species: Straight grain, to match approved sample, minimum 0.8 mm thick, architectural quality, premium grade selected for uniformity of colour, figure and grain. Piece veneers shall be parallel-chipped, jointed by tapeless splicer and edge glued. Face veneers shall not contain open joints, face depressions, glue stain, patches, plastic repair or any other manufacturing irregularities or defects.~~

~~.9.7~~ Fire retardant treated plywood: Pressure-impregnated fire retardant treated plywood conforming to CSA O80.27, to provide a flame spread rating of 25 or less, in accordance with CAN/ULC-S102.

2.3 **FABRICATION**

- .1 Obtain and verify dimensions at the building before fabrication of casework takes place, and in ample time to prevent unnecessary delays in the Work.
- .2 Make Work plumb, level and true, in as long lengths as practicable with joints arranged to be as inconspicuous as possible, and with proper provision for shrinkage.
- .3 Machine sand wood surfaces to an even, smooth surface, ready for finish. Hand clean Work and securely fix. Accurately fit joints of shop assembled Work. Dovetail and glue drawer slides to fronts and backs. Groove drawer bottoms 6 mm deep into drawer fronts, sides and back. Connect other joints by means of mortise and tenons, dowels, stub tenons, dovetails, dados or lock joints, as applicable for the jointing condition. Ensure end grain on finished surfaces, unless part of the design, are not exposed. Nails shall have concealed heads and with all screw and bolt heads countersunk and covered with matching wood plugs in exposed surfaces.
- .4 Tool marks on exposed surfaces is deemed sufficient cause for rejection.
- .5 Neatly and accurately scribe, mitre and joint Work. Carefully mitre all exposed corners. Neatly cope intersecting moulds at inside corners; do not mitre.
- .6 Rout or groove back of flat trim; kerf backs of wide flat members, except for members with backs exposed in finished Work.
- .7 Assemble Work at the shop, unless impractical, and deliver ready for installation, with ample allowance for cutting, fitting and scribing.
- .8 Ensure that mill assembled units are of sizes that can be transported through the building to their final location.
- .9 Construct Work as shown or noted on the Drawings and Shop Drawings. Adequately frame as required to provide a firm and rigid installation complete with all gables, divisions and other members. Conceal all fastenings.

3 Execution

3.1 **EXAMINATION**

- .1 Inspect existing conditions upon which Work of this section is dependent. Report to the Consultant in writing any defects or discrepancies. Commencement of Work implies acceptance of existing conditions.

3.2 **INSTALLATION**

- .1 Set and secure materials and components in place, rigid, plumb and square, and in accordance with reviewed Shop Drawings. Be responsible for a rigid and secure attachment.

- .2 Casework: Install level plumb and true and complete in all respects. Rigidly and securely fasten to retaining structures using heavy duty hardware. Fit and scribe as required to achieve neat junctures with retaining structure and to conceal voids at such points. Install finish hardware for casework in accordance with manufacturers' directions. Adjust as required for a perfect fit and for ease of operation.

~~.3 Custom Moulding~~

- ~~.1 Protect adjacent surfaces from damage prior to undertaking dismantling, in-situ repairs and refinishing.~~
- ~~.2 Fill surface voids with compounds formulated for wood.~~
- ~~.3 Avoid damaging materials and finishes adjacent to the surface being dismantled.~~
- ~~.4 Avoid marring, crushing or splitting components.~~
- ~~.5 Protect dismantled historic components from weather.~~
- ~~.6 Splice in new materials with same wood species as existing wood component, if possible. Grain orientation shall match existing wood component and match profile of existing wood section.~~

~~.4 Wood Handrails~~

- ~~.1 Secure wood stair handrails, level, square and true to the required lines, slopes or curves.~~
- ~~.2 Bolt balcony handrails to retaining angle welded atop balcony edge steel framing. Likewise, secure handrail to retaining angle at stairs and landings. Let bolt heads in finished Work and cap with edge grain wood caps, dress and finish flush.~~
- ~~.3 Finish woodwork in maximum possible lengths. Scarf, glue and properly fasten joints between lengths. Match material being jointed reasonably well for grain and colour.~~
- ~~.4 Accurately cut, mitre, fit and joint Work together to produce tight hairline joints, rigidly secured together in a permanent manner using glue or blind screw fixing.~~
- ~~.5 Hand sand after installation to remove roughness, planer marks, etc. Sanding shall be done with the grain of the wood and finished with fine grit paper to leave a smooth scratch-free surface suitable to receive finish.~~

End of Section

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