

- 1 General
- 1.1 **SUMMARY**
 - .1 Section Includes
 - .1 Labour, Products, equipment and services necessary to complete the Work of this section.
 - .2 By definition, "casework" means cabinets, vanities, counters, countertops, cupboards, wardrobes, lockers, closets, shelving, desks, tables, benches, showcases, door jambs.
- 1.2 **REFERENCES**
 - .1 Conform to the latest edition of the following:
 - .1 AWMAC - Architectural Woodwork Manufacturers Association of Canada
 - .2 ANSI A208.1 - Particleboard
 - .3 CAN3-A172-M - High Pressure, Paper Base, Decorative Laminates
 - .4 CAN3-O188.1-M - Interior Mat-Formed Wood Particleboard
 - .5 CSA O115-M - Hardwood and Decorative Plywood
 - .6 CSA O121-M - Douglas Fir Plywood
 - .7 NEMA LD-3 - High Pressure Decorative Laminates
 - .8 AODA - Accessibility for Ontarians with Disabilities Act
- 1.3 **SUBMITTALS**
 - .1 Submit Shop Drawings to illustrate fully all details of Work and conditions adjoining the Work, in accordance with Section 01 33 00.
 - .2 Show fabrication details including exact sizes and description of anchorage and hardware, the nature of the materials which are to be used as component parts.
 - .3 Clearly cross reference components on the Shop Drawings to the Contract Working Drawings indicating location, number required and name of unit.
 - .4 Certification: Submit a certificate from the National Hardwood Lumber Association stating compliance of supplied hardwood lumber to the Specification.
 - .5 Samples: Submit samples of casework sections in accordance with Section 01 33 00. Sample units for submission shall be as follows:
 - .1 150 x 150 mm plastic laminate applied on 19 mm core showing finish for countertops.
 - .2 150 x 150 mm plastic laminate applied on 19 mm core showing finish for cupboard doors and adjustable shelves.or
 - .3 One drawer unit (except hardware) constructed and finished as specified.

- .6 Apply plastic laminate on sample materials on both faces and on three sides only of core, in thicknesses specified.
- .7 Samples shall depict exactly, the Work required to be provided with regards to finish and material on which finish is applied. Finish all casework equal in quality and finish to those approved.
- .8 Identify samples with Project name and number, date of submission, material name and Subcontractor's name.

1.1 **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 Quality standard: Comply with AWI/AWMAC Architectural Woodwork Standards Edition 1-2009 ("AWI/AWMAC Manual"), "Custom Grade".
- .3 Execute plastic laminate Work to CAN3-A172-M, except as specified otherwise.

1.2 **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 Provide adequate protection until finally accepted.

1.3 **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.

1.4 **EXAMINATION**

- .1 Examine the Drawings and Specifications and previously constructed Work which is to receive this Work. Notify the Consultant in writing of any conditions beyond acceptable tolerances which may prejudice the proper completion of this Work.
- .2 Obtain and verify all dimensions at the building before any fabrication of casework takes place, and in ample time to prevent unnecessary delays in the Work.

- .3 Commencement of Work on the Site shall constitute acceptance of existing conditions.
- 2 Products
- 2.1 **MATERIALS**
 - .1 Plastic Laminate Cabinets
 - .1 Grades:
 - .1 General Purpose Standard Grade (GP)
 - .2 Postforming Standard Grade (PF)
 - .3 Plastic laminate backing sheet: Backing Grade (BK) 0.511 mm, Product of manufacturer of face sheet used.
 - .2 Lower Cabinets (PLAM-1):
 - .1 Laminate face sheets. Refer to Section 06 47 00.
 - .2 Thickness as indicated on Drawings
 - .3 Colour: ~~Alabaster D431 by Wilsonart or accepted equal~~ Refer to Finish Schedule
 - .3 Upper Cabinets (PLAM-2):
 - .1 Laminate face sheets. Refer to Section 06 47 00.
 - .2 Thickness as indicated on Drawings
 - .3 Colour: ~~North Sea D90 by Wilsonart or accepted equal~~ Refer to Finish Schedule.
 - .4 Adhesive: Thermosetting to suit laminate application without failure and as recommended by manufacturer.
 - .2 Hardboard: confirming to CGSB 11-GP-3M.
 - .3 Rough hardware: Supply all bolts, anchors, nails, expansion shields and other fastenings required for this Work. All bolts and screws shall be non-ferrous materials.
 - .4 Casework Hardware: As follows:
 - .1 Provide cabinet hardware and accessory materials for complete installation, except for items in accordance with Section 08 71 00 Door hardware:
 - .1 Hinges: Blum "Clip 170" or Hettich "Euromat Topsafe 4955", 170 degree opening angle, concealed, self-closing, nickel plated.
 - .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 Adjustable Shelf for Cabinets: recessed pilaster strips and rests.
 - .4 Door and drawer pulls: Canadian Builders Hardware CBH 220, 88 mm long aluminum (bronze) (brass) (stainless steel) or Hafele 116.05.922.

- .5 Drawer slides: Full extension, rated 100 lb. load, Knape & Vogt 1400 or Accuride 3832.
- .6 Cabinet door and drawer lock: Knape & Vogt 986, nickel plated.
- .7 Refuse Cabinets: full extension carburized steel ball bearing, bottom mounting, 79 kg capacity heavy duty load rating, cold rolled steel slide members and ball retainers, cushioned in and out stops, progressive action, positive stop, bright electro zinc plate finish.

2.2 **SHOP FABRICATION AND WORKMANSHIP**

- .1 Carry out all finish joinery Work in accordance with first quality cabinet making practice, by skilled mechanics, under the supervision of a competent supervisor. Erect casework plumb, level and true, in lengths as long as practicable with joints arranged to be as inconspicuous as possible, and with proper provision for shrinkage.
- .2 Machine sand wood surfaces to an even, smooth surface, ready for finish. Hand clean and securely fix all joints accurately fitted, no end grain exposed on finished surfaces, unless part of the design; and concealing nail heads with all screw and bolt heads countersunk and covered with matching wood plugs in finished Work.
- .3 Tool marks on exposed surfaces is deemed sufficient cause for rejection.
- .4 Do all scribing, mitres and jointing accurately and neatly. Carefully mitre all exposed corners. Neatly cope intersecting moulds at inside corners and do not mitre.
- .5 Assemble and finish Work completely at the shop, unless impractical, and deliver ready for installation. Where Work is to be built in, construct casework with ample allowance for cutting and fitting.
- .6 Ensure that mill assembled units are of sizes that can be transported through the building to their final location.
- .7 Construct Work adequately framed, and complete with gables, divisions, blocking and other members as required to provide a firm and rigid installation. Cover all exposed braces and brackets of wood with plastic laminate covered on all exposed edges and faces. Conceal all fastenings.
 - .1 Doors: Cupboard doors, unless otherwise detailed, of 19 mm thick five-ply construction and installed with edging strips on sides, top and bottom, rebated into the core so as to conceal the joint as much as possible. Provide hardwood core.
 - .2 Adjustable shelves: Shelves in cabinets of 19 mm thick plywood, unless detailed otherwise on the Drawings, edge lipped with solid wood and adjustable at 13 mm intervals on pilaster track and brackets.
 - .3 Drawers: All drawers shall have 25 mm solid birch front (cut for lock hardware). Drawer sides shall be 13 mm thick solid birch with top edges rounded and attached to drawer front with carefully fitted glued dovetail joints. Mortised or nailed construction will not be accepted. Drawer backs shall be 13 mm solid birch attached to drawer sides with carefully fitted lock corner joints. Drawer bottoms shall be 6 mm plywood grooved into drawer sides, back and front making box construction. Install all hardware to drawers, doors and fitments.
 - .4 Pipe frames: Construct pipe frames and metal bracing to tables and benches where indicated. Pipe shall be standard 32 mm diameter, Schedule 40 pipe with rails and braces fitted and welded and ground smooth. Form channel braces of

38 x 38 mm sections bolted to framing. Feet shall be standard flange type, welded to legs.

.8 Coordinate with mechanical trades and cut fitments for sinks, services and wastes.

.9 Plastic Laminate Application

.1 Veneer plastic laminate to core material in accordance with manufacturer's printed directions. Apply laminate face sheet to exposed surfaces of casework. Apply backing grade to underside of shelves and counters. Use melamine finished core for interior surfaces of drawers and cabinets only.

.2 Neatly butt plastic laminate, with self edging applied before face veneers. Seal core at joints and edges and where sink cut-outs are provided, with water-resistant material to retard movement of moisture to, or from, the assembly. Mechanically shop fasten backsplash core material to the top core with 1.5 mm (16 gauge) concealed brackets at 300 mm centres. Carry counter laminate material up at back edges to form integral coved backsplash.

.3 Joints in plastic laminate Work are not permitted except in pieces exceeding 2400 mm in length.

.4 Splashbacks, unless otherwise shown on the Drawings, to be 100 mm high, but where installed over a counter and below an overhead cupboard, the splashback shall be for the full height between the two fitments. Butt joints in all surfaces to be spliced and drawn together with "draw-bolts" of type recommended by manufacturer of laminate material. All such butt joints to be located not nearer than 600 mm from any sink. Splashbacks to be mechanically shop fastened at the counter top with 1.5 mm (16 gauge) brackets at 300 mm centres.

2.3 FINISHES

.1 Prime paint all metal Work (except galvanized iron) with one coat primer conforming to CISC/CPMA 2.75, finished with two coats alkyd enamel in colours selected later by the Consultant.

.2 Finish all oak veneer or solid stock oak with sealer and two-coat hand rubbed lacquer treatment.

.3 Finish all birch, solid and veneered material, including interiors of cabinets, drawers, counters and trim as specified for oak material.

.4 Cover all exteriors of fitments, braces, shelves, countertops, aprons and backsplash, and the interior faces of doors, with plastic laminate finish as hereinbefore specified. Exterior shall mean all faces, edges and ends not concealed behind doors. All door edges shall be similarly faced.

OR

.5 All painted wood to receive one coat of interior wood primer and two coats interior alkyd enamel, low gloss, colours as later selected by the Consultant. Prime all concealed wood surfaces such as cupboard backs against walls, cupboard supports under bottom shelves, etc; before installation.

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 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 Hardwood face veneers: Tightly and smoothly cut, selected for uniformity of colour. Knots, open defects, wood inlays, excessive stain or discolouration of plastic fillers are not acceptable. Match face veneers for grain or colour.
- .4 Install all finish hardware supplied by the finishing hardware Supplier.

3.3 **CLEAN-UP**

- .1 Clean-up and remove from the Owner's premises on a daily basis all rubbish and surplus materials resulting from this Work.
- .2 Immediately prior to final acceptance of finished Work, thoroughly clean and polish all Work of this trade to an acceptable finish.

End of Section