

## PART 1 - GENERAL

### 1.1 REFERENCES

- .1 American Society for Testing and Materials (ASTM)
  - .1 ASTM F1667-11, Driven Fasteners: Nails, Spikes, and Staples
  - .2 ASTM A123-09/A123M-09, Zinc (Hot Dip Galvanized) Coatings and Iron and Steel Products
- .2 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB 51.34-M86AMEND, Vapour Barrier, Polyethylene Sheet for Use in Building Construction
- .3 Canadian Standards Association (CSA)
  - .1 CSA O121-08, Douglas Fir Plywood.
  - .2 CSA O141-05 (R2009), Softwood Lumber.
  - .3 CSA O151-09, Canadian Softwood Lumber.
  - .4 CSA O325-07, Construction Sheathing.
- .4 National Lumber Grades Authority (NLGA)
  - .1 Standard Grading Rules for Canadian Lumber, 2010 Edition.
- .5 National Building Code of Canada 2010
- .6 American Wood Preservers Association (AWPA):
  - .1 Alkaline Copper Quaternary (ACQ) for all pressure treated wood.

### 1.2 QUALITY ASSURANCE

- .1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood, panels in accordance with CSA and ANSI standards.

### 1.3 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Waste Management and Disposal and the Waste Reduction Workplan, and the Waste Management plan to the maximum extent economically possible.
  - .2 Separate wood waste in accordance with the Waste Management Plan and place in designated areas.
  - .3 Separate metal, plastic, wood and corrugated cardboard-packaging in accordance with the Waste Management Plan and place in designated areas for recycling.
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- .4 Do not burn scrap at the project site.
- .5 Fold up metal banding, flatten, and place in designated area for recycling.

#### 1.4 SHOP DRAWINGS

- .1 Provide shop drawings in accordance with Section 01 33 00.

### PART 2 - PRODUCTS

#### 2.1 CARPENTRY MATERIALS

- .1 Lumber: softwood, S4S, moisture content 19% (S-dry) to CAN/CSA-O141. Refer to Drawings for sizes.
- .2 Canadian softwood plywood (CSP): to CSA O151, standard construction, thickness indicated.
- .3 Plywood Sheathing:
  - .1 Stamped to CSA 0151 standards
  - .2 16mm thickness
  - .3 Tongue and groove
  - .4 SHG-FACE-‘C’, veneer plies ‘C’, back ‘C’
    - .1 Standard of Acceptance: Can Ply Exterior
- .3 Fasteners: use galvanized-finish fasteners for carpentry work.

#### 2.2 PANEL MATERIALS

- .1 Douglas fir plywood (DFP): to CSA-O121, standard construction.
- .2 Canadian softwood plywood (CSP): to CSA-O151, standard construction.

#### 2.3 ACCESSORIES

- .1 Sealants: in accordance with Section 07 92 00.
  - .2 Nails, spikes and staples: to ASTM F1667.
  - .3 Screw Fasteners: non-corrosive fasteners, Robertson head proprietary fastener.
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2.4 FASTENER FINISHES

- .1 Galvanizing: to ASTM A123, use galvanized fasteners for exterior work and interior highly humid areas.

2.5 WOOD PRESERVATIVE

- .1 Pressure treated lumber and panels to CSA-O80.

2.6 CASEWORK ATTACHMENT

- .1 Wood Blocking, laid over finished wall surface. Size and location where architectural wood casework and countertops are indicated on drawings mounted to wall surfaces.

2.7 TOILET PARTITION, WASHROOM ACCESSORY OR HANDRAIL ATTACHMENT

- .1 15.9mm plywood, height of wall as indicated on drawings, laid over stud framing.

2.8 TOILET PARTITION ATTACHMENT

- .1 15.9mm plywood, within gypsum ceiling and walls. Size and location where toilet partition stiles are indicated on drawings mounted to wall and ceiling surfaces.

PART 3 - EXECUTION

3.1 INSTALLATION

- .1 Comply with requirements of NBC 2010.
  - .2 Install members true to line, levels and elevations, square and plumb.
  - .3 Construct continuous members from pieces of longest practical length.
  - .4 Select exposed framing for appearance. Install lumber and panel materials so that grade-marks and other defacing marks are concealed or are removed by sanding where materials are left exposed.
  - .5 Install furring and blocking as required to space-out and support casework, cabinets, wall and ceiling finishes, facings, fascia, soffit, electrical equipment mounting boards, and other work as required.
  - .6 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.
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### 3.2 ERECTION

- .1 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .2 Countersink bolts where necessary to provide clearance for other work.

### 3.3 SCHEDULES

- .1 Electrical equipment mounting boards:
    - .1 Fire Resistant Plywood, DFP grade, square edge 16 mm thick.
    - .2 Coordinate location with Division 26, and actual size of the panel, and location of plywood backing.
  - .2 Fenestration & Openings:
    - .1 Provide window buck framing, 38 mm x 89 mm and 19 mm plywood, anchored to wall, all joints totally sealed.
    - .2 Use pressure treated lumber and panel materials where in contact with masonry concrete.
    - .3 Refer to details.
  - .3 Plywood Sheet for Washroom Fixture Attachment:
    - .1 Provide 15.9mm Plywood backing beneath gypsum board for all washroom accessories.
    - .2 For grab bars, ensure 226 kg pull down load.
  - .4 Wood Blocking for Millwork Attachment:
    - .1 Provide wood blocking fastened to studs over gypsum board face for all upper and lower cabinets.
    - .2 Refer to the documents for placement.
  - .5 Plywood Sheet
    - .1 Refer to Equipment List and Miscellaneous Specialties Items
  - .6 Parapet Construction & Anchorage:
    - .1 38 x 140 wood studs at 300 o.c.
    - .2 15.9 mm pressure treated plywood, both sides mechanically fastened at 152 mm oc.
    - .3 Mineral insulation, refer to Section 07 21 13
    - .4 Refer to details on drawings.
    - .5 Refer to details for height of curb and extent.
    - .6 Provide 300 mm strip of pressure treated plywood around perimeter of the roof deck for parapet anchorage, similar around equipment curbs.
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.7 Roof Curbs for Mechanical Equipment, Roof Curb:

- .1 Provide roof curbs for all roof mounted equipment, exhaust fans, hoods, etc. Ensure all curbs are level; refer to drawings for roof slopes. Curbs to be constructed of:
  - .1 38 mm x 140 mm at 406 mm o.c.
  - .2 16 mm pressure treated plywood both sides, mechanically fastened.
  - .3 Semi-rigid insulation, Section 07 21 16.

.8 Plywood Sheathing

- .1 Substrate for veneer stone application.

END

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## PART 1 - GENERAL

### 1.1 REFERENCES

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- .1 American National Standards Institute (ANSI)
  - .1 ANSI A208.2-1994, Medium Density Fibreboard (MDF).
- .2 American Society for Testing and Material
  - .1 ASTM A123-09/A123M-09, Zinc (Hot Dip Galvanized) Coatings and Iron and Steel Products
  - .2 ASTM E1333-10, Determining Formaldehyde Concentrations in Air and Emission Rates from Wood Products Using a Large Chamber
  - .3 ASTM F1667-11, Driven Fasteners: Nails, Spikes, and Staples
- .3 Architectural Woodwork Manufacturers Association of Canada (AWMAC)
  - .1 AWMAC Manual (2010).
- .4 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB-11.3-M87, Hardboard.
- .5 Canadian Standards Association (CSA)
  - .1 CSA B35.4
  - .2 CSA O121-08, Douglas Fir Plywood.
  - .3 CSA O141-05 (R2009), Softwood Lumber.
  - .4 CSA O151-09, Canadian Softwood Lumber.
- .6 National Lumber Grades Authority (NLGA)
  - .1 Standard Grading Rules for Canadian Lumber 2010.
- .7 National Building Code of Canada NBC 2010.

### 1.2 SHOP DRAWINGS

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- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
  - .2 Indicate details of construction, profiles, jointing, fastening and other related details.
  - .3 Indicate all materials, thicknesses, finishes and hardware.
  - .4 Indicate that all exposed finish carpentry materials shall comply with flame spread ratings and smoke development classification as found in NBC 2010 edition.
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### 1.3 SAMPLES

- .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.

### 1.4 DELIVERY, STORAGE, AND HANDLING

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

### 1.5 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction Waste Management and Disposal.
- .2 Separate wood waste in accordance with the Waste Management Plan and place in designated areas.
- .3 Set aside damaged wood for acceptable alternative uses (e.g. bracing, blocking, cripples, bridging, or ties). Store this separated reusable wood waste convenient to cutting station and area of work.
- .4 Separate corrugated cardboard in accordance with Waste Management Plan and place in designated areas for recycling.
- .5 Do not burn scrap at project site.
- .6 Fold up metal banding, flatten, and place in designated area for recycling.

## PART 2 - PRODUCTS

### 2.1 LUMBER MATERIAL

- .1 Softwood lumber: unless specified otherwise, S4S, moisture content 10% or less for finish carpentry materials in accordance with following standards:
    - .1 CAN/CSA O141.
    - .2 NLGA Standard Grading Rules for Canadian Lumber.
    - .3 AWMAC custom grade, moisture content as specified.
  - .2 Machine stress-rated lumber is acceptable for all purposes.
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- .3 Hardwood lumber:
  - .1 Species to match hardwood lumber as specified in Section 06 41 00 Architectural Wood Casework.
  - .2 D4S (dressed four sides); Plain sawn.
  - .3 Moisture content: 8% or less, in accordance with:
    - .1 National Hardwood Lumber Association (NHLA).
  - .4 Finish quality hardwood suitable for stain and clear coat, with minor variation in colour; knot free.
  - .5 Grade: No 1 select

## 2.2 PANEL MATERIAL

- .1 Douglas fir plywood (DFP): to CSA O121, standard construction.
- .2 Canadian softwood plywood (CSP): to CSA O151, standard construction.
- .3 Hardwood plywood: to CSA O115, Grade A, maple species.
- .4 Particleboard: to ANSI A208.1, medium density (m series) 640-800 kg/m.
- .5 Hardboard: to CAN/CGSB-11.3.
  - .1 Hardboard must be manufactured such that formaldehyde emissions do not exceed 180 g/m when tested in accordance with ASTM E1333, Standard Test Method for Determining Formaldehyde Levels From Wood Products Under Defined Test Conditions Using a Large Chamber.
- .6 Medium density fibreboard (MDF): to ANSI A208.2:
  - .1 To be manufactured such that formaldehyde emissions do not exceed 180 g/m when tested in accordance with ASTM E1333.
  - .2 Medium density (M series) 640 - 800 kg/m.
- .7 Manufacturing process must adhere to Lifecycle Assessment Standards as ISO 14040/14041 LCA Standards

## 2.3 STAINLEES STEEL METAL

- .1 Stainless steel to ASTM A666 Type 304 No.4 finish.
- .2 Thickness 1.2 mm thick.

## 2.4 ACCESSORIES

- .1 Nails and staples: to ASTM F1667; galvanized to ASTM A123 for exterior work, interior humid areas and for treated lumber; plain finish elsewhere.
  - .2 Wood screws: to CSA B35.4, electroplated except in humid areas stainless steel, type and size to suit application.
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- .3 Splines: wood plastic metal.
- .4 Adhesive: recommended by manufacturer.
- .5 Use least toxic sealants, adhesives, sealers, and finishes necessary to comply with requirements of this section.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION

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- .1 Do finish carpentry to Quality Standards of the Architectural Woodwork Manufacturers Association of Canada (AWMAC), 'Custom' Grade, except where specified otherwise.
- .2 Scribe and cut as required, fit to abutting walls, and surfaces, fit properly into recesses and to accommodate piping, columns, fixtures, outlets, or other projecting, intersecting or penetrating objects.
- .3 Form joints to conceal shrinkage.

#### 3.2 CONSTRUCTION

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- .1 Fastening.
    - .1 Position items of finished carpentry work accurately, level, plumb, true and fasten or anchor securely.
    - .2 Design and select fasteners to suit size and nature of components being joined. Use proprietary devices as recommended by manufacturer.
    - .3 Set finishing nails to receive filler. Where screws are used to secure members, countersink screw in round cleanly cut hole and plug with wood plug to match material being secured.
    - .4 Replace items of finish carpentry with damage to wood surfaces including hammer and other bruises.
  - .2 Standing and running trim.
    - .1 Butt and cope internal joints of casework to make snug, tight, joint. Cut right angle joints of casing and base with mitred joints.
    - .2 Fit backs of baseboards and casing snugly to wall surfaces to eliminate cracks at junction of base and casing with walls.
    - .3 Make joints in baseboard, where necessary using a 45 degree scarf type joint.
    - .4 Install door and window trim in single lengths without splicing.
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### 3.3 INSTALLATION OF WOOD DOORS, HOLLOW METAL DOORS

- .1 Install wood doors supplied under work of Section 08 14 00 after finishing of walls.
- .2 Install hollow metal doors supplied under work of Section 08 11 00.
- .3 Fit wood doors with 5mm clearance at jambs and heads and 10mm over finished flooring.
- .4 Trim hinge side of wood doors to fit, and bevel latch edges as required.
- .5 Ensure that top and bottom edges of wood door are primed under work of Section 09 91 00 after they are cut to fit.
- .6 Undercut doors as noted in Schedule.

### 3.4 INSTALLATION OF FINISHING HARDWARE

- .1 Accept delivery of all finishing hardware, and be responsible for safe storage, issuing and ultimate installation under this or other sections.
- .2 Make cuts in wood doors neatly.
- .3 Accurately locate and adjust hardware to meet manufacturer's instructions. Use special tools and jogs as recommended.
- .4 Install hardware in wood doors at same locations as for hollow metalwork installed in Project.
- .5 Locate top hinges with 125mm below door top, bottom hinges with bottom 250mm from floor, and intermediate hinges equidistant between top and bottom hinges.
- .6 Locate door stops to contact doors 75mm from latch edges.
- .7 Install hardware and trim square and plumb to doors.
- .8 Replace missing hardware to ensure specified installation at time of building completion.
- .9 After installation, replace wrappings for hardware provided by manufacturer.
- .10 Safeguard keys to keep them out of unauthorized hands, tag them with opening number, and deliver them to Departmental Representative at building completion.

### 3.5 SCHEDULE OF FINISH CARPENTRY

- .1 Window Sills: SS1 Solid Surface.
  - .2 Closet shelf and rod, refer to Drawing # A-801.
  - .3 Typical shelving units, refer to Drawing # A-113.
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- .4 Plastic laminate paneling, refer to drawings and finish schedule for details and locations for install.
- .5 Pocket door enclosure for the security grille at server, including full height door, 2 layers of 16mm plywood, plastic laminate and all edges. Door complete with a full height piano hinge, door pull and magnetic door catch. For hardware, refer to section 06 41 00.

3.6 INSTALLATION OF MISCELLANEOUS SPECIALTIES INCLUDING THE FOLLOWING

- .1 Lockers
- .2 Washroom accessories
- .3 Toilet partitions
- .4 Security grille

END

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## PART 1 - GENERAL

### 1.1 REFERENCES

- .1 The standards listed form part of this Specification to the extent of reference. The publications are in the text by the basic designation only.
  - .2 American National Standards Institute (ANSI):
    - .1 ANSI A208.2-2009, Medium Density Fiberboard (MDF) for Interior Applications.
    - .2 ANSI/NPA A208.1-2009 Standards for particleboard
  - .3 American Society for Testing and Materials International (ASTM):
    - .1 ASTM D2369-10(2015)e1, Test Method for Volatile Content of Coatings
    - .2 ASTM D2832-92(2011), Guide for Determining Volatile and Nonvolatile Content of Paint and Related Coatings
    - .3 ASTM F1667-11ae1, Driven Fasteners: Nails, Spikes, and Staples
  - .4 Architectural Woodwork Manufacturers Association of Canada (AWMAC):
    - .1 AWMAC Architectural Woodwork Standards current edition.
  - .5 Canadian Hardwood Plywood and Veneer Association (CHPVA):
    - .1 Official Grading Rules for Canadian Hardwood Plywood.
  - .6 Canadian Plywood Association (CANPLY)
  - .7 Canadian General Standards Board (CGSB):
    - .1 CAN/CGSB 11.3-M87 Hardboard
  - .8 Canadian Standards Association (CSA):
    - .1 CSA B111-1974(2003), Wire Nails Spikes and Staples
    - .2 CSA O115-M1982(R2001), Hardwood and Decorative Plywood.
    - .3 CSA O121-08(R2013), Douglas Fir Plywood.
    - .4 CSA O141-05(R2014), Softwood Lumber.
    - .5 CSA O151-09(R2014), Canadian Softwood Plywood.
    - .6 CSA O153-13, Poplar Plywood
  - .9 ECP CCD-048, Environmental Choice Program, Certification Criteria Document, Surface Coatings-Recycled Water-Bourne (2006)
  - .10 National Building Code of Canada (NBC), 2010.
  - .11 National Electrical Manufacturers Association (NEMA):
    - .1 LD# 2005 High Pressure Decorative Laminates.
  - .12 National Hardwood Lumber Association (NHLA):
    - .1 Rules for the Measurement and Inspection of Hardwood and Cypress.
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- .13 National Lumber Grades Authority (NLGA):
  - .1 Standard Grading Rules for Canadian Lumber.
- .14 Consolidated Newfoundland and Labrador Regulation 1140/96: Buildings Accessibility Regulations under the Buildings Accessibility Act (O.C. 96-865), latest edition.

## 1.2 SUBMITTALS

- .1 Product Data:
  - .1 Submit manufacturer's printed product literature, including installation instructions, MSDS sheets, specifications and data sheets in accordance with Section 01 33 00 Submittal Procedures.
  - .2 Samples:
    - .1 Submit samples in accordance with Section 01 33 00 Submittal Procedures.
    - .2 Submit samples of finishes used in casework:
    - .3 Plastic and metal laminate finishes
    - .4 PVC edge banding
    - .5 MCP with melamine finish
    - .6 Hardwood, stain and clear coat 200 mm x 200 mm with edge treatment
    - .7 Door and drawer pulls
    - .8 Solid Surface finishes
    - .9 Specialty Composite Panel finishes
  - .3 Shop Drawings:
    - .1 Submit shop drawings in accordance with Section 01 33 00 Submittal Procedures.
    - .2 Incorporate plans, elevations, sections, and details for all casework in scale. The details shall show all thicknesses, types and finishes and all cabinet hardware.
      - .1 Shop drawings shall clearly indicate proposed edge finish based on Drawings and options specified by this Section.
      - .2 Provide closure material between wall and cabinetry scribed to the wall surface.
      - .3 Indicate details of construction, profiles, jointing, fastening and other related details.
      - .4 Indicate locations of all service outlets in casework, typical and special installation conditions, and all connections, attachments, anchorage and location of exposed fastenings. Include all cabinet hardware attachment to the cabinet.
      - .5 Indicate seaming locations for countertop materials.
    - .3 No work to be fabricated until the shop drawings have been reviewed in entirety and all related submittals, mockups, and samples as required by the specification have been approved by the Consultant.
    - .4 Submit shop drawings to Atlantic Regional AWMAC Chapter office for review prior to submission to the Consultant. Revise shop drawings if required by local AWMAC Chapter prior to submission to the Consultant. Provide copy of local AWMAC Chapter's comments to Consultant with submission of shop drawings.

1.3 ENVIRONMENTAL REQUIREMENTS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage and disposal of materials.

1.4 MOCK-UP

- .1 Refer to Section 01 45 00 Quality Control for requirements of mock-up.
- .2 Provide mock-up for one ticketing booth.
- .3 Notify Department Representative when sample is ready for review.
- .4 Allow forty-eight (48) hours for inspection of mock-up by Consultant before proceeding with Work.
- .5 When accepted, mock-up will demonstrate minimum standard for Work. Mock-up may remain as part of finished work.

1.5 DESIGN CRITERIA

- .1 The Architectural Casework for this project is specified to adhere to the AWMAC GIS Program that includes 3rd party reviews, inspections and reports at several stages of the millwork production process. To comply with the GIS (Guaranteed Inspection Service) Program, AWMAC members and non-members must produce quality shop drawings and quality millwork as outlined in the current issue of the AWS (Architectural Woodwork Standards). Failure to do so will result in rejection of the product and requests to revise and resubmit.
  - .1 If the Consultants specifications are in conflict with the AWMAC Standards, the AWMAC Standards will take precedence, unless the Consultant specifically makes note that a particular detail will be required even if it is in variance to the standards. The Consultant will not consider extra charges that arise from costs the millworker incurs to produce product to the AWMAC Standards.

1.6 SHOP FABRICATION AND SHOP FINISHES

- .1 Casework components to be fabricated and shop finished in a manufacturer approved shop.
  - .2 Fabricate sections complete with all components and package with protective barrier for travel.
  - .3 Protect on site prior to installation.
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1.7 DELIVERY, STORAGE AND PROTECTION OF PRODUCT

- .1 Deliver and store materials in compliance with Section 01 61 00 Common Product Requirements, and as described in the AWMAC Architectural Woodwork Standards Section 2.
- .2 Prepare casework for delivery: shop fabricated, shop finished, with hardware installed and in lengths suitable for delivery and storage. Units to be fully wrapped and protected prior to delivery to site.
- .3 Protect casework against dampness and damage during and after delivery.
- .4 Store casework in ventilated areas, in clean locked area, protected from extreme changes of temperature or humidity.
- .5 Do not deliver until painting and similar operations have been completed in installation areas.

1.8 WASTE MANAGEMENT

- .1 Separate and recycle waste materials in accordance with Section 01 74 19 Waste Management and Disposal and project Construction Waste Management Plan.
  - .1 A Waste Trip Log Form must be completed and submitted for all waste material removed from site.

1.9 QUALITY ASSURANCE/QUALITY CONTROL

- .1 AWMAC Guarantee and Inspection Services (GIS) Program:
    - .1 Work of this Section shall be manufactured and installed to the Custom AWMAC Standards and shall be subject to an inspection at the plant and site by an appointed AWMAC inspector, approved by the regional AWMAC Chapter. Inspection costs shall be borne by this Section.
    - .2 Shop drawings to be submitted for review by the AWMAC representative after the General Contractor has reviewed them and before they are reviewed by the Consultant. Work that does not meet the AWMAC custom standard shall be replaced, reworked and or refinished by the casework contractor at no additional cost to the Departmental Representative. Full review and approval of the casework shop drawing package must be completed before construction commences.
  - .2 Conform to requirements of NBC and Newfoundland Buildings Accessibility Regulations under the Buildings Accessibility Act (O.C. 96-865) for accessibility.
  - .3 Manufacturer and installer to:
    - .1 Have minimum ten years of experience in the manufacture of custom wood casework.
    - .2 Be a member of AWMAC.
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- .4 Perform Work in accordance with AWMAC AWS Custom Grade quality.
- .5 Work that does not meet AWMAC Quality Standards according to the latest issue of the Architectural Woodwork Standards to be replaced, reworked and/or refinished at no additional cost to the Departmental Representative and to the satisfaction of local AWMAC Chapter Representative and the Consultant.

#### 1.10 EXTENDED WARRANTY

- .1 Furnish Departmental Representative with two year AWMAC Guarantee Certificate to cover replacing, reworking and refinishing any defects in the Work due to faulty workmanship or defective materials which appear during a two year period following the date of substantial completion.

### PARTS 2 - PRODUCTS

#### 2.1 LUMBER MATERIALS

- .1 Softwood Lumber:
  - .1 Softwood, SPF Species, NLGA (124c) No.2 Structural and better.
  - .2 D4S, (dressed four sides)
  - .3 Moisture content 8-13% or less in accordance with: CSA-O141
  - .4 NLGA Standard Grading Rules for Canadian Lumber, latest edition
- .2 Hardwood Lumber:
  - .1 White Oak or Chestnut hardwood species, hardwood edging and solid wood surfaces as indicated
  - .2 FAS Grade
  - .3 D4S, (dressed four sides), plain sawn
  - .4 Moisture content 8-13% in accordance with AWMAC AWS Manual Section 2 Care and Storage
  - .5 Finish quality hardwood suitable for stain with minor variation in colour, knot free.

#### 2.2 PANEL MATERIALS

- .1 Hardwood Veneer Plywood (**HVP**)
    - .1 Face Veneer Plain slice. Species to match Hardwood Lumber.
    - .2 Grade B/BB, sanded at exposed faces. Grade B at exposed areas
    - .3 Core: Veneer, cross banded and laminated for a void free core.
  - .2 Softwood Plywood:
    - .1 Douglas fir plywood: to CSA O121, standard construction.
    - .2 Canadian Softwood Plywood: to CSA O151, standard construction.
    - .3 Poplar Plywood to CSA O153, standard construction
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- .3 Composite Panel Material:
  - .1 Medium Density Fiberboard (MDF) to ANSI A208.2.
  - .2 Density: 769 KG/m
- .4 Thermally Fused Melamine Panels (**MCP**): to ANSI A208.1
  - .1 Melamine Component Panel (MCP): to NEMA LD3 #2005 Grade VGL,
  - .2 Decorative paper impregnated and saturated with melamine resin, thermally fused under heat and pressure to particle board core.
  - .3 Decor paper fused to both faces.
  - .4 Sheet goods of balanced construction as outlined in AWMAC AWS Manual
  - .5 Standard of Acceptance: Uniboard, or approved alternate.
  - .6 Colours:
    - .1 (**MCP1**): Colour to be selected by Departmental Representative's representative
    - .2 (**MCP2**): White MCP at concealed cabinet interiors typical.
    - .3 (**MCP3**): Colour to match plastic laminate PL1
- .5 Resin Specialty Composite Panel (SCP1):
  - .1 Panel thickness: ¼" and 3/8" thicknesses
  - .2 Resistant to staining, water, and scratching
  - .3 Standard of Acceptance: 3Form Varia Ecoresin 'Mirror Silver Lodge'

## 2.3 COUNTERTOPS

- .1 High Pressure decorative laminate countertop with post formed edges.
    - .1 to NEMA LD3 and AWMAC AWS Manual Section II, Countertops Standards
    - .2 Solid Surface Countertop (**SS1**):
      - .1 Solid surface counter, profile as indicated on drawings.
      - .2 Compete with integral backsplash at wet locations and locations as indicated on drawings.
      - .3 Countertop: Thickness as per manufactures recommendations (19mm thick minimum).
      - .4 Standard of Acceptance: Corian 'Designer White'.
    - .3 Laminate pattern: as indicated
    - .4 At Laminate Counters with Sinks:
      - .1 Self-edge side edges.
      - .2 Provide integral backsplash and nosing. Built-up nosing profile to be selected from manufacturer's full range.
    - .5 Also refer to Plastic laminate specification notes for Plastic Laminate grades and thicknesses and Backer Sheet information.
  - .2 Solid Surface Countertop (**SS1**):
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- .1 Solid surface counter with front edge skirt and integral backsplash at counters with sinks.
- .2 Countertop: 12.7 mm thick solid surface
- .3 Standard of Acceptance: Corian 'Designer White'

## 2.4 PLASTIC & METAL LAMINATE

- .1 Plastic Laminate:
  - .1 to NEMA LD3 and AWMAC AWS Manual Section II, Countertops Standards.
  - .2 For Counter Tops and exposed faces of casework: General Purpose Grade, Standard Type, GP, 1 mm (1/32") thick
  - .3 Plastic Laminate for post forming 0.79 mm (1/32" or 0.030") thick post forming grade (U32)
  - .4 For cabinet lining and shelves: General Purpose Grade, Light Duty type, 0.8 mm (0.03") thick.
  - .5 Backing sheet: Laminated plastic backing sheet for all post formed and flatwork installation and countertops with sinks: Grade BK, Type Standard, not less than 0.5 mm (0.02") or same thickness and colour as face laminate
  - .6 Colours and Finish Standards of Acceptance:
    - .1 (PL1) Wilsonart 7975K-12 'Raw Chestnut w/ Softgrain Aeon Finish
    - .2 (PL2) Wilsonart D354K-18 'Designer White' w/ Striated Texture Finish (Factory Special)
    - .3 (PL3) Pionite WS811 White, Suede Finish
    - .4 (PL4) Pionite SG214 Banker's Grey, Suede Finish
  - .7 Metal Laminate (ML1):
    - .1 Real metal aluminum laminate
    - .2 Standard of Acceptance:
      - .1 DecoMetal by Formica, M4194 'Stainless Aluminum' Finish Code 99
- .2 Laminated plastic adhesive: contact adhesive
  - .1 Test for acceptable VOC emissions in accordance with ASTM D2369 and ASTM D2832.
  - .2 Plastic laminate adhesives to contain no added urea formaldehyde.
- .3 Plastic Laminate Wall Panel Systems
  - .1 Wall laminate panels, size as per documents. Veneer core material in accordance with manufacture's recommendation.
  - .2 Trim extrusions and moldings, clear anodized aluminum material reveals
  - .3 System engineered with substrate girts systems to align panels with all hidden fasteners in the system
  - .4 Acceptable Manufacturer:
    - .1 Based on MSW Plastics Canada.

## 2.5 CABINET HARDWARE

- .1 Door Hinges:
-

- .1 Blum Clip 170° Fully adjustable, European style, 110° degree adjacent walls and lower cabinets. Install open angle restraints for doors adjacent to walls.
  - .2 Acceptable materials: Blum, Hettich
  - .2 Door “D” Pull and Drawer Pulls:
    - .1 Functional metal pull. Square details.
    - .2 4” center to center
    - .3 Chrome finish.
    - .4 Standard of Acceptance: Richilieu #1076CV
  - .3 Steel Drawer Slides:
    - .1 Standard Of Acceptance: Series 3640, Accuride, Heavy Duty Drawer Slide or accepted Alternate:
    - .2 Ball bearing carrier,
    - .3 Fully extendable of quality to operate adequately for size and capacity of drawer.
    - .4 Capacity: Minimum 68kg for pair.
  - .4 Locks: where indicated:
    - .1 Drawer Lock: Richelieu BP 140200140 Series, zinc.
    - .2 Specify keying requirements, individual keys, all keys alike etc.
    - .3 Locations as shown on drawings.
  - .5 Catch:
    - .1 Steel catch and strike installed on left hand door of double locking doors, Model 5540-130, supplied by Richelieu, or approved equal.
    - .2 Magnetic, Hafele 246.13.740
  - .6 Door and Drawer Bumpers:
    - .1 Model BP303-11, clear, supplied by Richelieu, or approved equal.
  - .7 Plastic Grommets:
    - .1 Richelieu or Hafele plastic grommet, cover and case, or approved equal. Min. 50 mm. Colour specified by Consultant from standard range.
    - .2 Allow for 6 grommets total as per documents. Exact locations to be determined in shop drawing stage.
  - .8 Shelf Supports (Wood Shelves):
    - .1 Richelieu # 4256XR, zinc, shelf supports or approved alternate with Richelieu # 4255X3BC, zinc, 16 mm pilaster, length to suit casework or approved alternate.
    - .2 Richelieu #2282G, 5 mm zinc, shelf support with block pin to hold shelf in cabinet.
  - .9 Countertop support bracket: heavy duty to 500 kg capacity
    - .1 Standard of Acceptance: Hafele Hebgo Bracket
    - .2 Size to suit counter depth
    - .3 Epoxy coated grey colour.
    - .4 Space brackets to AWMAC requirements and bracket manufacture requirements for load capacity required.
    - .5 Coordinate with Rough Carpentry 06 61 00 for extent of solid wood backing at brackets.
    - .6 Short counter depth brackets indicated on drawings.
-

- .10 Served Side-Folding Grille Pocket Door Enclosure:
  - .1 Heavy duty continuous aluminum hinge, door pull and magnetic door catch:
    - 1-Continuous Hinge LS300 32D (sized to suit)
    - 1-Door Pull CBH406 32D
    - 1-Magnetic Latch ML20
- .11 Recessed Metal Pull (For doors of casework behind sliding door at bar)
  - .1 Standard of Acceptance: Richilieu Contemporary Recessed Metal Pull #234, Nickel finish.
- .12 Stainless Steel Wall Base (ST. STL. BASE)
  - .1 Type 304 Stainless steel base trim c/w cove bend
  - .2 14ga Stainless Steel (approx. .083")
  - .3 Height 4 3/4" or less as required to match recessed toe kick height as drawn.
- .13 Speak Thru
  - .1 Brushed stainless steel 178mm overall Speak-Thru, SST7 manufactured by CRL or approved equal.
  - .2 11 gauge stainless steel, brushed #4 finish.
- .14 Clothes Hook (Security Office)
  - .1 Utility metal hook, two arm.
  - .3 Chrome finish.
  - .4 Standard of Acceptance: Richilieu #2375CV, or approved equal.
  - .5 Quantity as shown on drawings.

## 2.6 FASTENERS AND ACCESSORIES

- .1 Construction Adhesive: VOC compliant to LEED, two component construction adhesive, designed to bond materials indicated and to suit project conditions.
  - .2 Wood screws: Type and size to suit application. Provide matching species wood plugs for members to receive stained or clear finishes. Provide coloured vinyl plugs to conceal fastenings in laminate-clad components.
  - .3 Nails and Staples: to ASTM F1667 and CSA B111.
  - .4 Splines: wood.
  - .5 Sealant Materials: refer to 07 92 00 Joint Sealants
  - .6 Exposed fasteners to be tamper-proof types
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### PART 3 - EXECUTION

#### 3.1 SHOP FINISH AND SHOP FABRICATION

- .1 Shop fabricate and shop finish all casework items, ready for delivery to site in size easily handled for truck delivery and to ensure passage through building openings.
- .2 Countersink screws, apply wood filler to indentations, sand smooth and leave ready to receive finish.
- .3 Shop install cabinet hardware for doors, shelves and drawers. Recess shelf standards unless noted otherwise.
- .4 Provide adjustable shelving unless otherwise noted.
- .5 Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes and other fixtures. Coordinate with Mechanical and Electrical
- .6 Construction:
  - .1 Finish components in shop, under controlled conditions.
  - .2 Fabricate components in maximum size permissible for installation on site.
  - .3 Site fabrication and finishing shall be performed only on receipt of written approval of Shop Drawings.
- .7 Fastening:
  - .1 Position items of finished carpentry work accurately, level, plumb, true and fasten or anchor securely.
  - .2 Design and select fasteners to suit size and nature of components being joined. Use proprietary devices as recommended by manufacturer.
  - .3 Set finishing nails to receive filler. Where screws are used to secure members, countersink screw in round cleanly cut hole and plug.
  - .4 Replace items of finish carpentry with damage to wood surfaces including hammer and other bruises.

#### 3.2 PREPARATION OF SUBSTRATE

- .1 Millworker to visit site before wall finish board is in place to verify adequacy of backing and support framing for:
    - .1 Full height x full width of counter at brackets for countertops at walls
    - .2 Top and bottom of separate casework units at walls
    - .3 Top and bottom of full height cabinets with intermediate anchor at cabinets over 1525 mm
    - .4 Coordinate with 06 61 00 Rough Carpentry and 09 22 16 Non-Structural Metal Stud Framing for wood backing.
  - .2 Provide field measurements for casework before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
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### 3.3            INSTALLATION

- .1 Do architectural woodwork to the Architectural Woodwork Manufacturers Association of Canada (AWMAC), Custom Grade.
- .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 Install Countertops. Use draw bolts in countertop joints.
- .5 Scribe and cut as required to fit abutting walls and to fit properly into recesses and to accommodate piping, columns, fixtures, outlets or other projecting, intersecting or penetrating objects.
- .6 At junction of counter back splash and adjacent wall finish, apply small bead of sealant.
- .7 Fit hardware accurately and securely in accordance with manufacturer's directions.
- .8 Install shelving.
- .9 Form joints to conceal shrinkage and adjusting.

### 3.4            CASEWORK SCHEDULE MCP CONSTRUCTION

- .1 Casework is MCP construction unless noted otherwise on drawings and herein.
  - .2 Casework Boxes:
    - .1 19 mm thick Melamine Component Panels (MCP).
    - .2 Faces exposed to public to be finished w/ plastic laminate.
    - .3 Finish Colour: Refer to Finish Schedule and drawings.
    - .4 All exposed edges:
      - .1 Solid high impact, PVC, 3 mm thick
      - .2 Machine applied
      - .3 Trim face back and corners for a uniform appearance.
    - .5 Use low VOC Adhesive
  - .3 Gables, Tops, Rails and Bottoms (MCP):
    - .1 19 mm thick Melamine Component Panels
    - .2 Finish Colour: Refer to Finish Schedule and drawings.
    - .3 Typical exposed edges:
      - .1 Solid high impact, PVC, 3 mm thick
      - .2 Machine applied
      - .3 Trim face back and corners for a uniform appearance.
  - .4 Finished Backs:
    - .1 13 mm thick Melamine Component Panels (MCP)
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- .5 Shelves:
  - .1 Adjustable:
  - .2 25 mm thick MCP for shelves over 920 mm wide and up to 940 mm
  - .3 3 mm PVC at front edge, 1 mm PVC at other three (3) edges.
  - .4 Fixed shelves:
    - .1 25 mm thick MCP for shelves up to 1069mm wide
    - .2 3 mm PVC at front edge and 1mm PVC at other three (3) edges be secured at side ends and back.
    - .3 At open shelves with no doors:
      - .1 Colour of shelves to match boxes
- .6 Doors:
  - .1 19 mm thick Melamine Component Panels (MCP) with 3 mm PVC edges.
  - .2 Doors are surface mounted, flush overlay style
  - .3 Glass panels in doors as indicated on drawings.
    - .1 Refer to Section 08 80 00 Glazing
- .7 Drawer Faces:
  - .1 19 mm thick Melamine Component Panels (MCP) with 3 mm PVC edges.
  - .2 Drawers are surface mounted, flush overlay style
- .8 Drawer Boxes:
  - .1 Baltic Birch plywood
  - .2 12.7 mm thick sides and bottoms with mortise and tenon joints
- .9 Toe Space:
  - .1 19 mm thick veneer core Douglas Fir plywood
  - .2 100 mm high
  - .3 Install and level prior to base cabinet installation.
  - .4 Base finish material as indicated
- .10 Filler Panels:
  - .1 No wider than 50 mm between wall and casework.
  - .2 No less than 63.5 mm at corner cabinets.
  - .3 Scribes of 1 mm PVC
- .11 Finish: As indicated on drawings for exposed faces; MCP2 for interior of casework.
- .12 Countertops: Solid surface or plastic laminate as indicated on drawings.
  - .1 Integral plastic laminate backsplashes at plastic laminate countertops as indicated on drawings.
  - .2 Solid Surface waterfall sides where indicated on drawings.

### 3.5 PROTECTION AFTER WORK COMPLETED

- .1 Protect casework from damage until final inspection.

### 3.6 CLEANING

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- .1 Adjust doors, drawers, hardware, fixtures and other moving or operating parts to function smoothly and correctly.
- .2 Clean casework inside cupboards and drawers and outside surfaces.

END

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