

PART 1 GENERAL

1.1 Section Includes

- .1 Miscellaneous plywood sheathing.
- .2 Miscellaneous wood furring and strapping.
- .3 Miscellaneous blocking for roofing systems and roof-mounted where needed.
- .4 Preservative treatment of wood members where needed.
- .5 Wall framing.
- .6 Mezzanine Framing.

1.2 Related Sections

- .1 Sheet Vapor Retarders and Air Barriers Section 072500
- .2 Gypsum Board Section 092900.

1.3 References

- .1 Canadian Standards Association, Latest Edition:
 - .1 CAN3-086: Engineering Design in Wood (Working Stress Design).
 - .2 CAN3-086.1: Engineering Design in Wood (Limit States Design).
 - .3 0121: Douglas Fir Plywood.
 - .4 0141: Softwood Lumber.
 - .5 0151: Canadian Softwood Plywood.
- .2 National Lumber Grades Authority Standards, latest edition.
- .3 National Building Code of Canada, 2010.

1.4 Source Quality Control

- .1 Identify lumber by grade stamp of an agency certified by Canadian Lumber Standards Administration Board.

PART 2 PRODUCTS

2.1 Lumber Material

- .1 Except as indicated or specified otherwise, lumber shall be softwood, S4S, moisture content (MC) not greater than 19% at time of installation, in accordance with the following standards:
 - .1 CSA 0141-1970.
 - .2 NLCA Standard Grading Rules for Canadian Lumber, effective 1978-07-01, to CSA-086 grading to the latest edition of NLCA Standard.
 - .3 Machine stress-rated lumber is acceptable for all purposes.
 - .4 Framing and board lumber: In accordance with NBC 2005, except as indicated or specified.
 - .5 Furring, blocking, nailing strips, grounds, rough bucks:
 - .1 Use S2S or S4S material.
 - .2 Grounds and blocking, nailing strips and cants: spruce/pine/fir "utility" light framing grade. Moisture content: maximum 19%.
 - .3 Strapping: Spruce/pine/fir "Utility" light framing grade. Moisture content: maximum 19%.
 - .6 Plywood: Douglas fir plywood marked "PMBC EXTERIOR" or grade as specified. Plywood to receive paint or varnish shall be fir plywood of suitable grade glued up with waterproof glue. Plywood exposed to view shall be "Clear Face"; plywood for portion not exposed to view may be factory grade plywood. Canadian softwood plywood to CSA 0151 for non-structural use.

- .7 Lumber and moisture content shall conform to the official grading rules of the Canadian Lumberman's Association, Ottawa, Ontario, for the particular lumber and grade.
- .8 Lumber shall be air dried, well seasoned and shall have moisture content of not more than 15%. Wood where required for interior finish work, shall not have moisture content of more than 6%.
- .9 Fir plywood shall conform to CSA specification 0121, laminated, with waterproof adhesive. Canadian softwood plywood to CSA 0151 for non-structural use.
- .10 Preservative shall be Pentox brown liquid toxic wood preservative manufactured by Osmose Wood Preserving Company of Canada, or approved equal. Propriety solution of organic zinc compounds in penetrating solvents, clear pentachlorophenol, "Pentox", or approved alternative.

2.2 Panel Material

- .1 Panels shall be of type, grade and thickness as indicated, in accordance with the following standards:
 - .1 Douglas Fir Plywood (DFP): To CSA 0121-M1978.
 - .2 Canadian Softwood Plywood (CSP): To CSA 0151-M1978
 - .3 Poplar Plywood (PP): To CSA 0153-1978.
 - .4 Interior Mat-Formed Wood Particleboard (Particleboard or WPB): To CAN3-0188.1-M78.
 - .5 Wafer-board (WFB): To CAN3-0188.2-M78.
 - .6 Hardboard (HDB): To CGSB 11-GP-3M.
- .2 Except as specified otherwise panels shall be 1220 x 2440 mm size, square-edge.
- .3 Except as specified otherwise, wafer-board panels shall be un-sanded.

2.3 Air/Moisture Barrier

- .1 Exterior wall sheathing paper: to CAN2-51.32M77 single ply type impregnated as indicated or TYVEK building paper or equal, all joints taped.

2.4 Damp-Proof Membrane (if any)

- .1 Polyethylene Film: To CAN2-51.33-M77, type 1, 0.15 mm thickness.
- .2 Roll Roofing: To CSA A123.3-M1979, No. 50 type.

2.5 Fastenings and Hardware

- .1 In accordance with part 9 of NBC 2005 as supplemented by the following requirements, except where specific type is indicated.
- .2 Nails, spikes and staples to NBC 2005 except:
 - .1 Use common spiral nails and spiral spikes except where indicated otherwise.
 - .2 Use hot galvanized finish steel for exterior work interior highly humid areas and for pressure-preservative and fire-retardant treated lumber except where indicated otherwise.
 - .3 Use stainless steel alloy.
 - .4 Bolt, nut, washer, screw and pin type fasteners with hot-dip galvanized finish to CSA G1641965 (R1972) for exterior work, interior highly humid areas and for pressure-preservative and fire-retardant treated lumber, elsewhere with primer paint finish where installed on sight-exposed surfaces.
 - .5 Use surface fastenings of the following types, except where specific type is indicated.
 - .1 To hollow masonry, plaster and panel surfaces use toggle bolt.
 - .2 To concrete, use expansion shield with lag screw, jute fibre or lead plug with wood screw.
 - .3 To structural steel, use bolts through drilled hole, or welded stud bolts or power

- driven self-frilling screws, or welded stud bolts, or explosive actuated stud bolts.
- .6 Nailing Discs: Flat caps, minimum 25 mm diameter, minimum 0.4 mm thick sheet metal, fibre, formed to prevent dishing. Bell or cup shapes not acceptable.
 - .7 Joist Hangers: Minimum 1 mm thick sheet steel, galvanized G90 coating designation, 6672 N bearing strength.
 - .8 Roof Sheathing H-Clips: Formed "H" shape, thickness to suit panel material, extruded 6063-T6 aluminum alloy type approved by Consultant.

PART 3 EXECUTION

3.1 Examination

- .1 Examine work of other trades on which work under this Section depends. Report promptly conditions, which may have detrimental effect on work under this Section.

3.2 Wood Frame Construction

- .1 Comply with requirements of NBC 2005, Section 9.23, except where specified otherwise.
- .2 Construct continuous members from pieces of longest practical length.
- .3 Install spanning members with "crown edge" up.

3.3 Erection of Framing Members

- .1 Install members true to line, levels and elevations. Space uniformly.
- .2 Construct continuous members from pieces of longest practical length.
- .3 Install spanning members with "crown edge" up.

3.4 Appearance Grade Materials

- .1 Install lumber and panel materials designated "Appearance" (A) Grade so that grade marks and other defacing marks are not visible on surfaces specified to be left unfinished or to be finished with translucent or transparent type coating. Surface cutting or sanding to remove such marks is acceptable only in locations where defacement will not be evident after finishing.
- .2 All materials shall be new, straight, dry and clean and shall be dressed 4 sides, properly sized and shaped to the correct dimensions from nominal sizes noted on the drawings.

3.5 Furring and Blocking

- .1 To install furring and blocking as required to space out and support surface applied cabinets as indicated.
- .2 Install furring to support siding applied vertically where there is no blocking and where sheathing is not suitable for direct nailing:
 - .1 For vertical lumber siding: Install 19 mm furring horizontally at 600 mm o.c. maximum and behind edges of siding where siding terminates.
 - .2 For vertical panel siding: Install furring horizontally at 600 mm o.c. maximum and behind panel edges.
- .3 Align and plumb faces of furring and blocking to tolerance of 1:600.
- .4 Framing lumber of wood blocking shall be #2 White or Red Pine, or #1 Construction Eastern Spruce or Jack Pine free from large loose knots, splits, wavy edges and other defects that would materially impair strength and durability.
- .5 All lagging nailing pieces shall be bolted to all beams, columns, masonry walls, etc. for securing of carpentry or other items as shown. All lagging and nailing pieces shall be of random lengths, with joints staggered.
- .6 All pipes, ducts, conduits, etc. in finished areas shall be enclosed by furring and strapping to the satisfaction of the Departmental Representative.

3.6 Rough Bucks, Nailers

- .1 Install treated wood bucks and nailers as indicated, including:
 - .1 Wood bucks and linings around frames for doors and windows.
- .2 Except where indicated otherwise, use materials at least 38 mm thick secured with 9 mm bolts located within 300 mm from ends of members and uniformly spaced at 1200 mm between.
- .3 Countersink bolts where necessary to provide clearance for other work.

3.7 Miscellaneous Cants, Nailers, Curbs (refer to drawings and details)

- .1 Install treated wood cants, backing, nailers, curbs and other treated wood supports for roofing and sheet metal work as indicated.
- .2 Secure with galvanized 9 mm bolts where indicated, galvanized nails elsewhere. Locate fastenings within 300 mm from ends and uniformly spaced between. Space bolts at 1200 mm and nails at 600 mm centers except where indicated otherwise.
- .3 Staple vapour retardant sheet strip to underside of nailers before installation. Apply strip continuous with 200 mm overlap at joints, free of wrinkles and tears, with at least 200 mm exposed for overlap on roof deck.
- .4 Install wood nailers for roof hopper, dressed, capered and recessed slightly below top surface of roof insulation.
- .5 Around perimeter of all flat roofs and canopies and at juncture of roof with vertical surfaces provide beveled cant strips of sized and shapes indicated on the drawings or as directed. Cant strips shall be securely fastened.

3.8 Panel-Type Sub-Flooring

- .1 Supplement NBC 9.23.14 sub-flooring and 9.23.3.4 fastenings as follows:
 - .1 Install combined sub-floor and underlay with panel end joints located on solid bearing, staggered at least 800 mm.
 - .2 Apply sub-flooring adhesive under panels installed on wood joists. Place continuous adhesive bead sized in accordance with manufacturer's instructions. single bead on each joist and double bead on joists where panel ends butt.
 - .3 Fasten panels using common spiral or annular grooved nails.

3.9 Strapping and Bridging

- .1 **Strapping:** 1" x 3" or as indicated in the drawings, where required and where shown on drawings. The underside of all strapping shall be leveled to within 1/8" in 12' and shall be to the satisfaction of the finishing trades and the Consultant. Strapping for acoustical tile by acoustical trade.
- .2 **Bridging:** 2" x 2", in rows not over 6'0", twice nailed each end or solid wood blocking.

3.10 Grounds

- .1 For wood trim, grilles and as shown, provide wood grounds and blocking of size and shape required for drywall work, for securing wood trim and where required to secure electrical fixtures or other work or equipment in place. Set grounds true to line, level or plumb and well secured in place. Wood blocking or nailers on steel framing shall be bolted thereto.

3.11 Handling and Storage

- .1 Lumber shall be protected and under cover both in transit and at the job site and shall not be delivered to the job until facilities are available to the satisfaction of the Consultant.

3.12 Door Frame Installation

- .1 Erect and substantially support frames in their proper location with assistance and co-operation with the pre-engineered metal building trade. Erect horizontal wood spreader to ensure maintenance of frame width during erection of steel frames.

3.13 Fixture Supports

- .1 As required by plumbers

3.14 Hardware and Door Installation

- .1 Install all hardware in accordance with hardware manufacturer's details, template and directions.

3.15 Boarding

- .1 Butt joints made over bearing. Boarding well driven up and twice nailed over each bearing. One ply of 7/8" shiplap, laid diagonally to joints, where and if called up.

END OF SECTION

PART 1 GENERAL

1.1 Section Includes

- .1 Scope
 - .1 This work includes the complete furnishings and installation of all Microllam laminated veneer lumber (LVL), as shown on the drawings herein specified and necessary to complete the work.

1.2 Related Sections

- .1 Rough Carpentry 061000.

1.3 Reference

- .1 Perform prefabricated wood truss work to CSA CAN3-086-M (Latest Edition), except where specified otherwise or to Part 9 of NBC 1995.
- .2 The design and fabrication criteria of all laminated veneer lumber shall meet with "National Building Code of Canada" (Latest Edition) issued by the Associate Committee on the National Building Code, National Research Council, Ottawa, Canada; (Latest Edition).
- .3 Code Reports: Materials shall comply with CCMC Report No. 08675-R.

1.4 Design

- .1 These products shall be designed and manufactured to the standards set forth in the Canadian Construction Materials Centre (CCMC) Report No. 08675-R.
- .2 Products: Microllam[®] LVL shall be designed to fit the dimensions and loads indicated on the plans.
- .3 Design Calculations: A complete set of design calculations shall be prepared by Trus Joist. All design should be in accordance with allowable values and section properties assigned and approved by the Building Code

1.5 Submittals

- .1 Drawings: Submit drawings showing layout and detail necessary for determining fit and placement in the building shall be provided by Trus Joist.
- .2 Submit shop drawings, in accordance with GC 34 CCDC 12 (Latest Edition) and Section 01340, bearing stamp of qualified professional Consultant registered in a Province that the Project Work is resident in. Manufacturer is to accept responsibility for the design of all member components and connections of components to each other and structure. Engineering Seal on shop drawings demonstrates acceptance.
- .3 Production: Fabrication and/or cutting shall not proceed until the Departmental Representative have approved the submittal package.

PART 2 PRODUCTS

2.1 Materials

- .1 Microllam LVL by Trus Joist or approved equal.
- .2 Adhesives: Adhesives shall be of the waterproof type conforming to the requirements of ASTM D-2559.

2.2 Fabrication

- .1 Microllam LVL shall be manufactured in a plant listed in the reports referred to above and under the supervision of an approved third-party inspection agency. It shall be manufactured in a

continuous process with all grain parallel with the length of the members. All members are to be free of finger joints, scarf joints, or mechanical connections in full-length members.

2.3 Tolerances

- .1 Finished Length (as specified): $\pm 3\text{mm}$.
- .2 Depth: $\pm 1.5\text{mm}$.
- .3 Width: $\pm 1.5\text{mm}$.

2.4 Identification

- .1 Microllam LVL shall be identified by a stamp indicating the product type and grade, CCMC report number, manufacturer's name, plant number, date of fabrication, and the independent inspection agency's logo.

PART 3 EXECUTION

3.1 Installation

- .1 Microllam[®] LVL, if stored prior to installation, shall be protected from the weather. It shall be installed in accordance with the plans, and any Shop drawings and installation suggestions. Temporary construction loads that cause stresses beyond design limits are not permitted. Safety bracing is to be provided by the installer to keep the Microllam[®] LVL straight and plumb as required and to ensure adequate lateral support for the individual Microllam[®] LVL members and the entire system until the sheathing material is applied.

3.2 Installation Review

- .1 Prior to enclosing Microllam LVL, the contractor shall give notification to the Manufacturer representative to provide an opportunity for review of the installation.

3.3 Performance Standards

- .1 Products shall be proven by testing and evaluation in accordance with the provisions of ASTM D-5456.

3.4 Fire Rating

- .1 Microllam LVL is permitted as a substitute for conventional wood framing in fire-resistive assemblies. Microllam[®] LVL shall be sized for the same load-carrying capacity as the sawn lumber specified in the assembly, and its dimensions shall be equal to or greater than those specified for the sawn lumber.

3.5 Warranty

- .1 The products delivered shall be free from manufacturing errors or defects in workmanship and material. The products, when correctly installed and maintained, shall be warranted to perform as designed for the normal and expected life of the building.

END OF SECTION

PART 1 GENERAL

1.1 Section Includes

- .1 Provide all labor, materials, methods, equipment, accessories to complete interior work bench counter and cabinetry.
 - .1 Rough hardware required for millwork screws, nails, bolts, connectors.
 - .2 Finish hardware for cabinets and casework.
 - .3 Plastic laminate, special surface coverings on millwork.
 - .4 Priming, sealing specified, required.
 - .5 Temporary protection to millwork.
- .2 Provide materials, items, Work for installation by others including but not limited to following:
 - .1 Section 061000: Rough Carpentry - Protection after delivery, installation of millwork, finish carpentry.
- .3 Install products provided by other Sections.
 - .1 Division 26: Electrical fixtures, etc. built in millwork.

1.3 Related Sections

- .1 Section 055000 – Metal Fabrication
- .2 Section 061000: Rough Carpentry
- .3 Section 099120 - Painting: Finishing cabinet interior.
- .4 Division 26 - Electrical

1.4 References

- .1 American National Standards Institute (ANSI)
 - .1 ANSI A208.1-09, Particleboard.
 - .2 ANSI A208.2-09, Medium Density Fiberboard (MDF) for Interior Applications.
 - .3 ANSI/HPVA HP-1-10, Standard for Hardwood and Decorative Plywood.
- .2 ASTM International
 - .1 ASTM E 1333-10, Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates From Wood Products Using a Large Chamber.
 - .2 ASTM D 2832-92(R2011), Standard Guide for Determining Volatile and Nonvolatile Content of Paint and Related Coatings.
 - .3 ASTM D 5116-10, Standard Guide For Small-Scale Environmental Chamber D Determinations of Organic Emissions From Indoor Materials/Products.
- .3 Architectural Woodwork Manufacturers Association of Canada (AWMAC) and Architectural Woodwork Institute (AWI)
 - .1 Architectural Woodwork Quality Standards Illustrated, 8th edition, Version 1.0 (2009).
- .4 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-71.20-M88, Adhesive, Contact, Brushable.
- .5 CSA International
 - .1 CSA B111-74(R2003), Wire Nails, Spikes and Staples.
 - .2 CSA O112.10-08, Evaluation of Adhesives for Structural Wood Products (Limited Moisture Exposure).
 - .3 CSA O121-08, Douglas Fir Plywood.
 - .4 CSA O141-05(R2009), Softwood Lumber.
 - .5 CSA O151-09, Canadian Softwood Plywood.
 - .6 CSA O153-M1980(R2008), Poplar Plywood.
 - .7 CAN/CSA-Z809-08, Sustainable Forest Management.

- .6 Forest Stewardship Council (FSC)
 - .1 FSC-STD-01-001-2004, FSC Principle and Criteria for Forest Stewardship.
- .7 Green Seal Environmental Standards (GS)
 - .1 GS-11-11, Paints and Coatings.
 - .2 GS-36-11, Commercial Adhesives.
- .8 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .9 International Organization for Standardization (ISO)
 - .1 ISO 14040-2006, Environmental Management-Life Cycle Assessment - Principles and Framework.
 - .2 ISO 14041-98, Environmental Management-Life Cycle Assessment - Goal and Scope Definition and Inventory Analysis.
- .10 National Electrical Manufacturers Association (NEMA)
 - .1 ANSI/NEMA LD-3-05, High-Pressure Decorative Laminates (HPDL).
- .11 National Hardwood Lumber Association (NHLA)
 - .1 Rules for Measurement and Inspection of Hardwood and Cypress [2011].
- .12 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber 2010.
- .13 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards.
 - .1 SCAQMD Rule 1113-A2011, Architectural Coatings.
 - .2 SCAQMD Rule 1168-A2005, Adhesives and Sealants Applications.
- .14 Sustainable Forestry Initiative (SFI)
 - .1 SFI-2010-2014 Standard.

1.5 Submittals

- .1 Submit shop drawings and product data to requirements of Section 01330.
- .2 Indicate items, material quantities in related, dimensioned positions to full size, large scale details, elevations minimum 1:50 metric scale.
- .3 Indicate finish, fixing methods, construction details where applicable. Indicate mechanical, electrical items, where hardware unusual, miscellaneous items, etc.
- .4 Indicate connection/disconnection points of dismantled “knock-down” items. Mark each item for reconnection.

1.6 Quality Assurance

- .1 Ensure lumber bears agency grading stamp certified by Canadian Lumber Standards Accreditation Board (CLS).
- .2 Ensure Plywood bears grading mark in accordance with applicable CSA Standards.
- .3 Provide facilities to Owner to examine millwork undergoing fabrication, assembly.

1.7 Regulatory Requirements

- .1 Construct millwork to Architectural Woodwork Manufacturers Association of Canada (AWMAC) “Quality Standards for Architectural Woodwork”, 1991.

1.8 Delivery, Storage and Handling

- .1 Protect millwork, keep under cover during fabrication, in transit.
- .2 Do not deliver millwork long before required.

- .3 Enclose items undergoing lengthy transportation in sturdy wood crates, fully protect contents, prevent moisture infiltration.
- .4 Ensure crating in accordance with requirements of Carriers involved. Take adequate protection against damage in transit, on handling.
- .5 Clearly mark each crate, carton, package in exterior with identification of items, intended location in building.
- .6 Do not store millwork within structure during plastering, wet trades, etc. until Work reasonably dry, ready for millwork.
- .7 Examine areas where millwork to be stored. Notify Consultant of conditions unsuitable for millwork.
- .8 Verify humidity in building with moisture reading instruments if doubt exists building sufficiently dry, ready to receive millwork.
- .9 Store millwork in dry warehouse conditions if millwork items manufactured before required on Site due to any cause.
- .10 Do not store in damp, humid conditions.
- .11 Bear costs for damage caused from such warehousing, storing.
- .12 Confer with Departmental Representative to designate place in premises for reception of millwork.
- .13 Peruse means of access into building ensure large items will enter intended location without hindrance.
- .14 Sectionalize millwork for passage through doors, stairs, corridors, etc. Inform Construction Manager of difficult delivery, liaise for openings to be left in walls, etc.
- .15 Pre-fit items together in millwork factory.
- .16 Place millwork on wood skids provided by Section 06100, above floor in manner to prevent warping, undue stress.
- .17 Examine materials delivered, ascertain no items damaged.

1.9 Warranty

- .1 Guarantee surfaces free from blisters, de-laminations, warping, other failures, defects.
- .2 Replace, re-install, refinish without cost, FOB job Site.

1.10 Field Measurements

- .1 Verify that field measurements are as indicated on shop drawings.

1.11 Coordination

- .1 Coordinate Work with plumbing and electrical rough-in.

PART 2 PRODUCTS

2.1 Wood Materials

- .1 Softwood lumber: to CSA 0141-1970 National Lumber Grades Authority requirements, selected for natural, paint finishes scheduled, indicated, Douglas Fir, Ponderosa Pine, Spruce species, AWMAC Custom Quality grade.
- .2 Hardwood lumber: to National Hardwood Lumber Association (NHLA) requirements, species indicated, scheduled for natural finish schedules, AWMAC Custom Quality grade.
- .3 Moisture content: kiln dried to average 6-8 percent interior Work, average 9-12 percent exterior Work.

2.2 Sheet Materials

- 1 Douglas Fir plywood: to CSA 0121-M1978, Good 2 Sides (G2S) grade, waterproof glues, thickness indicated.
- .2 Western softwood plywood: to CSA 0151-M1978, Good 1 Side, sound 1 side (G1S, S1S), thickness indicated.
- .3 Mat formed wood particle board: to CAN3-0188. 1-M78, Type 2, Industrial Grade R, minimum 45 pound core density, density required for finish applied, uniform light color, thickness indicated, required.
- .4 Melamine faced plastic laminate panel: to CAN3-A172-M79, 0.18mm thick melamine resin impregnated decorative sheet fused to Industrial grade "R" mat formed particle board both sides (G2S), one side with backing sheet (G1S), 1/4", 1/2", 5/8", 3/4" panel thick, sizes and thickness indicated, required, 0.51mm thick factory applied edge banding where indicated, required, color, finish selected by Consultant, Arborite "Cladboard", Formica "MPC".
- .5 Edging tape: pre-glued 3 mm PVC tape edge banding (site), shop applied with hot melt adhesive, color, pattern to match face.
- .6 Plastic laminate: to CAN3-A172-M79, Post Forming (PF) Type 2 grade, 0.030" thick, solid, patterned, color pattern, finishes indicated, indicated on drawings.
- .7 Plastic laminate backing sheets: Backing grade, Regular GP-MK-R, 0.045", 0.030" thick as required to match face thickness.

2.3 Accessories

- .1 Nails, spikes and staples: to CSA B111-1974, spiral thread.
 - .1 Galvanized: exterior Work, interior highly humid areas, treated lumber.
 - .2 Plain finish: interior Work.
- .2 Draw bolts, splines, etc.: fabricator standard.
- .3 Rough hardware: bolts, nuts, washers, lags, pins, screws, draw bolts, hot dip galvanized.
- .4 Glues, cements, adhesives: to CSA 0112 Series M77, first grade industrial quality, purpose made, water, heat proof for countertops.

2.4 Hardware

- .1 Provide all finish hardware, accessories, etc. required, etc. to Owner approval.
- .2 Shelf Standards and Rests: adjustable 2" increments, double-pinned.
- .3 Drawer and Door Pulls: 4" Stainless Steel.
- .4 Extra Heavy Duty Drawer Slides: 200 lbs capacity, self-closing feature.
- .5 Hinges: exposed, 5 knuckle stainless steel (2) two per door leaf.

2.5 Countertop Metal Cladding

- .1 Stainless Steel Type 304, with front edge and splash-guard, #4 brushed finish.

PART 3 EXECUTION

3.1 Preparation

- .1 Take Site measurements for millwork, other fabrication, establish sizes where dimension not available.

3.2 Fabrication

- .1 Fabricate millwork, finish carpentry Work to AWMAC Standards, Custom Quality Grade.
- .2 Perform manufacture, fabrication using skilled, capable craftsmen, first class materials.
- .3 Fabricate millwork, finish carpentry true, square, aligned as detailed, required.
- .4 Construct members from pieces long as possible.

- .5 Make ample allowance for site cutting, fitting required.
- .6 Join assemblies to hairline joints secured with concealed nails, screws, draw bolts, splines fully set, mortise and tenon joints, dadoes, dovetails, glue blocks, other acceptable methods. Allow for shrinkage.
- .7 Assemble at mill as practical, deliver ready for installation.
- .8 Ensure expose millwork, finish carpentry Work without defect, rough construction in exposed parts unless grading, species allows.
- .9 Apply compensating backing to rear face unsupported surfaces covered with glue-on facing materials, laminated plastic, etc.
- .10 Co-operate, verify details, dimensions, locations of items, cut, prepare openings, etc. in millwork for other Sections:
 - .1 Section 05500: Metal items attached, built-in.
 - .2 Division 16: Electrical fixtures, outlets, etc.
- .11 Build removable access panels required in millwork for servicing, installation, maintenance of electrical, mechanical items, valves, traps, etc.

3.3 Cabinet, Casework

- .1 Fabricate cabinet, casework to detail in accordance with AWMAC conventional construction, Premium Grade, unless specified otherwise.
- .2 Fabricate cabinet, casework bodies, gable ends, gables, bottoms, fixed, adjustable shelving from 5/8" thick melamine (G2S), 1/4" thick tempered masonite (i-side white). Apply PVC matching color edging tape on exposed edges.
- .3 Fabricate concealed framing, gate frames, etc. from minimum 19 mm" CDX plywood (solid wood stops).
- .4 Fabricate face frames minimum 19 mm thick, tight joints fully glued, nailed to case bodies. Provide for scribing where indicated, required.
- .5 Assemble cases, machine, dovetail, mortise and tenon, dado, rout joints. House related edges, members minimum 1/4". Construct cabinet, casework cases as indicated.
- .6 Construct counter tops, splash-backs, edgings, facing, etc. indicated, required.
- .7 Apply plastic laminate to plywood core materials of counter tops, edges, splash-backs, window frame stools, other surfaces indicated, required to CAN3-A172-M79 Appendix A, Owner approval.
- .8 Ensure adjacent parts continuous laminate match in color, pattern.
- .9 Cover exposed flatwork core edges with straight self-edging plastic laminate strip chamfered approximately 200 at top surface junction.
- .10 Apply straight self-edging plastic laminate strips to exposed end edges formed to top, splashback profile.
- .11 Use draw bolts, connectors, splines, etc. in countertop, horizontal surface joints, spaced maximum 16" o.c., in from edges. Make flush, hairline joints.
- .12 Fabricate cabinet, casework drawer fronts from 19 mm plywood with PVC edging tape on all edges.
- .13 Construct drawer sides, backs from minimum 15mm thick plywood, bottoms from 1/4" thick plywood, tempered masonite.
- .14 Fabricate drawers with lock shoulder front, dadoed back, plowed in bottom glued to shaper rounded top sides.
- .15 Equip drawers on scheduled, specified metal drawer slides.
- .16 Fabricate flush doors from 19mm thick plywood, edged with PVC tape all four edges.

.17 Install hardware indicated, scheduled, required to doors, shelves, drawers, etc. Recess shelf standards for adjustable shelving where indicated, required.

3.4 Adjusting

- .1 Adjust Work under provisions of Section 01710.
- .2 Adjust moving or operating parts to function smoothly and correctly.

3.5 Cleaning

- .1 Clean Work under provisions of 01710.
- .2 Clean casework, counters, shelves, hardware, fittings and fixtures.

END OF SECTION