

**Part 1 General**

**1.1 RELATED SECTIONS**

- .1 Section 05 50 00 – Metal Fabrications.

**1.2 REFERENCES**

- .1 National Building Code of Canada (NBC).
- .2 Manitoba Building Code (MBC).
- .3 ASTM International
  - .1 ASTM A123/A123M- 09 , Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
  - .2 ASTM A653/A653M- 11, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanealloyed) by the Hot-Dip Process.
  - .3 ASTM C578- 11a, Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
  - .4 ASTM C1289- 11, Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
  - .5 ASTM C1396/C1396M- 11, Standard Specification for Gypsum Board.
  - .6 ASTM D1761- 06, Standard Test Methods for Mechanical Fasteners in Wood.
  - .7 ASTM D5456- 11, Standard Specification for Evaluation of Structural Composite Lumber Products.
- .4 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB-11.3- M87, Hardboard.
  - .2 CAN/CGSB-51.32- M77, Sheathing, Membrane, Breather Type.
  - .3 CAN/CGSB-51.34- M86, Vapour Barrier, Polyethylene Sheet for Use in Building Construction and amendment.
  - .4 CAN/CGSB-71.26- M88, Adhesive for Field-Gluing Plywood to Lumber Framing for Floor Systems.
- .5 CSA International
  - .1 CAN/CSA-A123.2- 03(R2008), Asphalt Coated Roofing Sheets.
  - .2 CSA B111- 1974(R2003), Wire Nails, Spikes and Staples.
  - .3 CSA O112.9- 10, Evaluation of Adhesives for Structural Wood Products (Exterior Exposure).
  - .4 CSA O141- 05(R2009), Softwood Lumber.
  - .5 CSA O151- 09, Canadian Softwood Plywood.
  - .6 CSA O325- 07, Construction Sheathing.
  - .7 CSA O437 Series- 93(R2011), Standards on OSB and Waferboard.
  - .8 CAN/CSA-Z809- 08, Sustainable Forest Management.
- .6 National Lumber Grades Authority (NLGA)

- .1 Standard Grading Rules for Canadian Lumber 2010.
- .7 The Truss Plate Institute of Canada
  - .1 Truss Design Procedures and Specifications for Light Metal Plate Connected Wood Trusses 2007.

### **1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for wood products and accessories and include product characteristics, performance criteria, physical size, finish and limitations.

### **1.4 QUALITY ASSURANCE**

- .1 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood, particleboard, OSB and wood based composite panels in accordance with CSA and ANSI standards.

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

- .1 Deliver, store and handle materials in accordance with Section with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
  - .1 Store materials off ground, in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Replace defective or damaged materials with new.

### **1.6 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate and recycle waste materials in accordance with D14 – Environmental Protection Plan.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper, plastic, polystyrene, corrugated cardboard and packaging material in appropriate on-site bins for recycling in accordance with waste management plan.
- .4 Divert unused wood materials from landfill to approved facility.
- .5 Do not dispose of preservative treated wood through incineration.
- .6 Do not dispose of preservative treated wood with materials destined for recycling or reuse.
- .7 Dispose of treated wood, end pieces, wood scraps and sawdust at approved sanitary.
- .8 Dispose of unused wood preservative material at official, approved hazardous material collections site.

- .9 Do not dispose of unused preservative material into sewer system, into streams, lakes, onto ground or in other locations where they will pose health or environmental hazard.

## **Part 2 Products**

### **2.1 LUMBER MATERIAL**

- .1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% or less in accordance with following standards:
  - .1 CAN/CSA-O141.
  - .2 NLGA Standard Grading Rules for Canadian Lumber.
- .2 Furring, blocking, nailing strips and fascia backing:
  - .1 Board sizes: "Standard" or better grade.
  - .2 Dimension sizes: "Standard" light framing or better grade.

### **2.2 PANEL MATERIALS**

- .1 Canadian softwood plywood (CSP): to CSA O151, standard construction.

### **2.3 ACCESSORIES**

- .1 Nails, spikes and staples: to CSA B111, hot dipped galvanized.
- .2 Bolts: 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.
- .3 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, explosive actuated fastening devices, recommended for purpose by manufacturer.
- .4 All interior fasteners to be type 304 stainless steel.

### **2.4 WOOD PRESERVATIVE**

- .1 Surface-applied wood preservative: copper naphthenate or 5% pentachlorophenol solution, water repellent preservative.
- .2 Pentachlorophenol use is restricted to building components that are in ground contact and subject to decay or insect attack only. Where used, pentachlorophenol-treated wood must be covered with two coats of an appropriate sealer.
- .3 Structures built with wood treated with pentachlorophenol and inorganic arsenicals must not be used for storing food nor should the wood come in contact with drinking water.

### **2.5 ATTIC ACCESS HATCH**

- .1 Minimum opening dimension of 550 mm x 900 mm
- .2 Extruded aluminum frame incorporating double weather strip seal, insulation baffles, and R15 insulated embossed metal faced prefinished panel.
- .3 Acceptable product: by Attic Hatch Inc, of Innisfail Alberta, or approved equal in accordance with B7.

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**Part 3 Execution**

**3.1 EXAMINATION**

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for product installation in accordance with manufacturer's written instructions.
  - .1 Visually inspect substrate.
  - .2 Inform Contract Administrator of unacceptable conditions immediately upon discovery.
  - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Contract Administrator.

**3.2 PREPARATION**

- .1 Treat surfaces of material with wood preservative, before installation.
- .2 Apply preservative by dipping, or by brush to completely saturate and maintain wet film on surface for minimum 3 minute soak on lumber and one minute soak on plywood.
- .3 Re-treat surfaces exposed by cutting, trimming or boring with liberal brush application of preservative before installation.
- .4 Treat material as indicated and as follows:
  - .1 All wood in contact with unfinished concrete.

**3.3 INSTALLATION**

- .1 Install furring and blocking as required to space-out and support fascia, soffit, siding and other work as required.
- .2 Align and plumb faces of furring and blocking to tolerance of 1:600.
- .3 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.
- .4 Provide minimum 19 plywood or 38 mm dimensioned lumber as solid backing between studs in wall construction to reinforce supports for grab bars, equipment mounting, cabinetry, and other items requiring rigid support.
- .5 Install fascia backing and nailers, and other wood supports as required and secure using galvanized steel fasteners.
- .6 Use caution when working with particle board. Use dust collectors and high quality respirator masks.
- .7 Install members true to line, levels and elevations, square and plumb.
- .8 Construct continuous members from pieces of longest practical length.
- .9 Install spanning members with "crown-edge" up.
- .10 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.

- .11 Install roof sheathing in accordance with requirements of NBC.
- .12 Install furring and blocking as required to space-out and support casework, cabinets, wall and ceiling finishes, facings, fascia, soffit, siding, electrical equipment mounting boards, and other work as required.
- .13 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .14 Countersink bolts where necessary to provide clearance for other work.
- .15 Use nailing disks for soft sheathing as recommended by sheathing manufacturer.

### **3.4 SCHEDULES**

- .1 Provide electrical equipment backboards for mounting electrical and telecommunications/data equipment as indicated.
- .2 Use 19 mm thick fire retardant treated plywood on 19 mm x 38 mm furring spaced at maximum 300 mm centers and at vertical edges of mounting board.

### **3.5 CLEANING**

- .1 Progress Cleaning: Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

### **3.6 PROTECTION**

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by rough carpentry installation.

**END OF SECTION**

**Part 1 General**

**1.1 RELATED SECTIONS**

- .1 section 06 10 00 – Rough Carpentry.

**1.2 REFERENCES**

- .1 National Building Code of Canada (NBC).
- .2 Manitoba Building Code (MBC).
- .3 CSA International
  - .1 CAN/CSA O80 Series-08, Wood Preservation.
  - .2 CSA O86 Consolidation-09, Engineering Design in Wood.
  - .3 CSA O141-05(R2009), Softwood Lumber.
  - .4 CSA S307-M1980(R2001), Load Test Procedure for Wood Roof Trusses for Houses and Small Buildings.
  - .5 CSA S347-99(R2009), Method of Test for Evaluation of Truss Plates Used in Lumber Joints.
  - .6 CSA W47.1-09, Certification of Companies for Fusion Welding of Steel.
- .4 National Lumber Grades Authority (NLGA)
  - .1 Standard Grading Rules for Canadian Lumber 2010.
- .5 National Research Council (NRC)/Institute for Research in Construction (IRC) - Canadian Construction Materials Centre (CCMC)
  - .1 CCMC-on-line edition, Registry of Product Evaluations.
- .6 Truss Plate Institute of Canada (TPIC)
  - .1 TPIC - 2007, Truss Design Procedures and Specifications for Light Metal Plate Connected Wood Trusses (Limit States Design).

**1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Product Data:
  - .1 Submit in accordance with E5 – Operation and Maintenance Manuals.
  - .2 Submit manufacturer's instructions, printed product literature and data sheets for wood trusses and include product characteristics, performance criteria, physical size, finish and limitations.
- .2 Shop Drawings:
  - .1 Submit drawings in accordance with E3 – Shop Drawings.
  - .2 Include on drawings:
    - .1 Indicate special structural application and specification as according to local authorities having jurisdiction.

- .2 Indicate TPIC Truss Design Procedure and CSA O86 Engineering Design in Wood and specific CCMC Product Registry number of the truss plates
- .3 Indicate species, sizes, and stress grades of lumber used as truss members. Show pitch, span, camber, configuration and spacing of trusses. Indicate connector types, thicknesses, sizes, locations and design value. Show bearing details. Indicate design load for members.
- .4 Submit stress diagram or print-out of computer design indicating design load for truss members. Indicate allowable load and stress increase.
- .5 Indicate arrangement of webs or other members to accommodate ducts and other specialties.
- .6 Show location of lateral bracing for compression members.
- .7 Show lifting points for storage, handling and erection.
- .8 Test reports: submit certified test reports for prefabricated wood trusses from approved independent testing laboratories, indicating compliance with specifications for specified performance characteristics and physical properties.
- .9 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .10 Instructions: submit manufacturer's installation instructions.

#### **1.4 QUALIFICATION OF MANUFACTURERS**

- .1 Fabricator for welded steel connections to be certified in accordance with CSA W47.1.

#### **1.5 QUALITY ASSURANCE**

- .1 Provide Certificate of Quality Compliance from truss manufacturer upon completion of fabrication.
- .2 Provide Certificate of Quality Compliance upon satisfactory completion of installation.

#### **1.6 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
  - .1 Store materials off ground and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Store and protect wood trusses.
  - .3 Replace defective or damaged materials with new.
  - .4 Provide bearing supports and bracings. Prevent bending, warping and overturning of trusses.

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**Part 2 Products**

**2.1 DESIGN REQUIREMENTS**

- .1 Design light metal plate connected wood trusses in accordance with TPIC truss design procedures for wood truss chords and webs in accordance with engineering properties in CSA O86.
- .2 Design light metal plate connected wood trusses in accordance with TPIC truss design procedures for truss joint designs to test engineering properties in accordance with CSA S347 and listed in CCMC Registry of Product Evaluations.
- .3 Design trusses, bracing and bridging in accordance with CSA O86.1 for loads indicated for building locality as ascertained by NBC, Climatic Information for Building Design in Canada and minimum uniform and minimum concentrated loadings stipulated in NBC commentary.
- .4 Limit live load deflection to 1/360th of span where gypsum board ceilings are hung directly from trusses.
- .5 Provide camber for trusses as indicated.

**2.2 MATERIALS**

- .1 Lumber: Spruce (S-P-F) species, No. 1 grade, softwood, S4S, with maximum moisture content of 19% at time of fabrication and to following standards:
  - .1 CAN/CSA-O141.
  - .2 NLGA (National Lumber Grading Association), Standard Grading Rules for anadian Lumber.
- .2 Fastenings: to CAN/CSA-O86.1.

**2.3 FABRICATION**

- .1 Fabricate wood trusses in accordance with reviewed and approved shop drawings.
- .2 Provide for design camber and roof slopes when positioning truss members.
- .3 Connect members using metal connector plates.

**2.4 SOURCE QUALITY CONTROL**

- .1 Identify lumber by grade stamp of an agency certified by Canadian Lumber Standards Administration Board.
- .2 Certify by agency accredited by Standards Council of Canada that fire retardant treated wood in accordance with CAN/CSA O80 Series.

**Part 3 Execution**

**3.1 EXAMINATION**

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for product installation in accordance with manufacturer's written instructions.



- .1 Visually inspect substrate.
- .2 Inform Contract Administrator of unacceptable conditions immediately upon discovery.
- .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Contract Administrator.

### **3.2 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheet.

### **3.3 ERECTION**

- .1 Erect wood trusses in accordance with reviewed and approved shop drawings.
- .2 Handling, installation, erection, bracing and lifting in accordance with manufacturers instructions.
- .3 Make adequate provisions for handling and erection stresses.
- .4 Exercise care to prevent out-of-plane bending of trusses.
- .5 Install temporary horizontal and cross bracing to hold trusses plumb and in safe condition until permanent bracing and decking are installed.
- .6 Install permanent bracing in accordance with approved shop drawings, prior to application of loads to trusses.
- .7 Do not cut or remove any truss material without approval of Contract Administrator.
- .8 Remove chemical and other surface deposits on treated wood, in preparation for applied finishes.

### **3.4 FIELD QUALITY CONTROL**

- .1 Manufacturer's Field Services:
  - .1 Have manufacturer of products supplied under this Section review work involved in handling, installation/application, protection and cleaning of its product[s], and submit written reports, in acceptable format, to verify compliance of work with Contract.
  - .2 Manufacturer's field services: provide manufacturer's field services, consisting of product use recommendations and periodic site visits for inspection of product installation, in accordance with manufacturer's instructions.
  - .3 Schedule site visits to review work at stages listed:
    - .1 After delivery and storage of products, and when preparatory work on which work of this Section depends is complete, but before installation begins.
    - .2 Twice during progress of work at 25% and 60% complete.
- .2 Upon completion of work, after cleaning is carried out.
- .3 Obtain reports within three days of review and submit immediately to Contract Administrator.

**3.5 CLEANING**

- .1 Progress Cleaning: Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

**END OF SECTION**

**Part 1 General**

**1.1 SCOPE**

- .1 This section includes requirements for finish carpentry, supply of cabinets, counter tops, interior window sills and related work.

**1.2 REFERENCES**

- .1 National Building Code of Canada (NBC).
- .2 Manitoba Building Code (MBC).
- .3 American National Standards Institute (ANSI)
  - .1 ANSI A208.1-09, Particleboard.
  - .2 ANSI A208.2-09, Medium Density Fiberboard (MDF) for Interior Applications.
- .4 ASTM International
  - .1 ASTM E1333-10, Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates From Wood Products Using a Large Chamber.
  - .2 ASTM D2832-92(R2011), Standard Guide for Determining Volatile and Nonvolatile Content of Paint and Related Coatings.
  - .3 ASTM D5116-10, Standard Guide For Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.
- .5 Architectural Woodwork Manufacturers Association of Canada (AWMAC) and Architectural Woodwork Institute (AWI)
  - .1 Architectural Woodwork Quality Standards Illustrated, 8th edition, Version 1.0 (2009).
- .6 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB-71.20-M88, Adhesive, Contact, Brushable.
- .7 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.

**1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Product Data:
  - .1 Submit in accordance with E5 – Operation and Maintenance Manuals

- .2 Submit manufacturer's instructions, printed product literature and data sheets for architectural woodwork and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Submit two copies of WHMIS MSDS.
- .2 Shop Drawings:
  - .1 Submit drawings in accordance with E3 – Shop Drawings.
  - .2 Indicate details of construction, profiles, jointing, fastening and other related details.
  - .3 Indicate materials, thicknesses, finishes and hardware.
  - .4 Indicate locations of service outlets in casework, typical and special installation conditions, and connections, attachments, anchorage and location of exposed fastenings.

#### **1.4 QUALITY ASSURANCE**

- .1 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood, particleboard, OSB and wood based composite panels to CSA and ANSI standards.
- .3 Mock-ups:
  - .1 Construct mock-ups.
    - .1 Shop prepare one base cabinet unit, wall cabinet, counter top, shelving unit, complete with hardware and shop applied finishes, and install where directed by Contract Administrator.
    - .2 Allow 24 hours for inspection of mock-up by Contract Administrator before proceeding with Work.
    - .3 When accepted, mock-up will demonstrate minimum standard for Work.
    - .4 Do not proceed with work prior to receipt of written acceptance of mock-up by Contract Administrator.
    - .5 Mock-up may remain as part of finished work.

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

- .1 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
  - .1 Protect millwork against dampness and damage during and after delivery.
  - .2 Store millwork in ventilated areas, protected from extreme changes of temperature or humidity.
- .3 Storage and Handling Requirements:
  - .1 Store materials off ground indoors and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Store and protect architectural woodwork from nicks, scratches, and blemishes.

- .3 Replace defective or damaged materials with new.

## **Part 2 Products**

### **2.1 MATERIALS**

- .1 Softwood lumber: unless specified otherwise, S4S, moisture content 19 % or less in accordance with following standards:
  - .1 CSA O141.
  - .2 CAN/CSA-Z809 or FSC or SFI certified.
  - .3 NLGA Standard Grading Rules for Canadian Lumber.
  - .4 AWMAC custom premium grade, moisture content as specified.
- .2 Machine stress-rated lumber is acceptable for all purposes.
- .3 Ensure manufacturing process adheres to Lifecycle Assessment (LCA) Standards to ISO 14040/14041 LCA Standards, CSA Z760-94 Life Cycle Assessment.
- .4 Hardwood lumber: moisture content 15 % or less in accordance with following standards:
  - .1 National Hardwood Lumber Association (NHLA).
  - .2 CAN/CSA-Z809 or FSC or SFI certified.
  - .3 AWMAC custom premium grade, moisture content as specified.
- .5 Canadian softwood plywood (CSP): to CSA O151, standard construction, CAN/CSA-Z809 or FSC or SFI certified.
  - .1 Plywood resin to contain no added urea-formaldehyde.
- .6 Melamine Component Panel (MCP) with thermoset melamine impregnated paper permanently bonded to particleboard substrate.
- .7 Particleboard Substrate shall be of 47 lb. Density and balanced construction with moisture content not to exceed 8%.
- .8 Laminated plastic for flatwork: GP grade, satin finish, selected from standard solid colour or woodgrain range.
- .9 Laminated plastic for counter tops and window sills: to lab grade, matte finish.
- .10 Nails and staples: to CSA B111.
- .11 Wood screws: plated steel, type and size to suit application.
- .12 Splines: wood.
- .13 Sealant: clear silicone.
- .14 Laminated plastic adhesive: contact adhesive to CAN/CGSB-71.20:
  - .1 Test for acceptable VOC emissions in accordance with ASTM D 2369 and ASTM D 2832.
  - .2 Acceptable materials: ECP-44.

## 2.2 MANUFACTURED UNITS

- .1 Casework:
  - .1 Fabricate caseworks to AWMAC premium quality grade.
  - .2 Furring, blocking, nailing strips, grounds and rough bucks and sleepers.
    - .1 S2S is acceptable for concealed locations.
    - .2 Board sizes: "standard" or better grade.
    - .3 Dimension sizes: "standard" light framing or better grade.
    - .4 Urea-formaldehyde free.
  - .3 Case bodies (ends, divisions and bottoms).
    - .1 MCP square edge, 19mm thick.
  - .4 Backs:
    - .1 Softwood and poplar plywood square edge, 12 mm thick.
    - .2 Exposed faces and covered with plastic laminate.
  - .5 Shelving:
    - .1 Softwood and poplar plywood square edge, 19 mm thick.
    - .2 Exposed faces and edges covered with plastic laminate.
- .2 Drawers:
  - .1 Fabricate drawers to AWMAC premium grade supplemented as follows:
  - .2 Sides and Backs.
    - .1 MCP square edge, 12mm thick, with PVC colour matched edge trim, full thickness of panel material, minimum 3mm thickness.
  - .3 Bottoms:
    - .1 MCP square edges 12mm thick.
  - .4 Fronts:
    - .1 MCP square edge, 12mm thick, with PVC colour matched edge trim, full thickness of panel material, minimum 3 mm thickness.
- .3 Casework Doors:
  - .1 Fabricate doors to AWMAC premium grade supplemented as follows:
    - .1 MCP square edge, 12 mm thick, with PVC colour matched edge trim, full thickness of panel material, minimum 3 mm thickness.
- .4 Counter top:
  - .1 Moulded one piece counter top and 100 mm high backsplash covered with lab grade plastic laminate with square edge rounded profile.
  - .2 Provide sidesplash pieces at each end abutting a wall or other surface.
- .5 Cabinet Hardware:
  - .1 Comply with ANSI/BHMA A156.9, Grade 1 units.
  - .2 Door and drawer front pulls to have 92 mm spacing on screws. Pull designs shall comply with the Americans with Disability Act (ADA).
  - .3 Hinges: Concealed 120-degree swing, self-closing, clip-on style.

- .4 All doors have rubber bumpers.
- .5 Drawer Slides: Epoxy powder coated steel, bottom corner mounted, with smooth and quiet nylon rollers, and positive stop in both directions. Regular drawers to receive 100-pound load rated, standard extension slides. File drawers to receive 150-pound load rated full-extension slides.
- .6 Shelf supports: Injection moulded, clear polycarbonate, adjustable on 1 ¼ inch holes, with two integral support pins, and automatic lock down tabs for ¾ inch and 1 inch thick shelves to prevent accidental tipping of shelf.

### **2.3 FABRICATION**

- .1 Provide metal drawer sides, bottom and backs with adjustable stops at file drawers.
- .2 Shop install cabinet hardware for doors, shelves and drawers. Recess shelf standards unless noted otherwise.
- .3 Shelving to cabinetwork to be adjustable unless otherwise noted.
- .4 Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes and other fixtures.
- .5 Shop assemble work for delivery to site in size easily handled and to ensure passage through building openings.
- .6 Obtain governing dimensions before fabricating items which are to accommodate or abut appliances, equipment and other materials.
- .7 Ensure adjacent parts of continuous laminate work match in colour and pattern.
- .8 Veneer laminated plastic to core material in accordance with adhesive manufacturer's instructions. Ensure core and laminate profiles coincide to provide continuous support and bond over entire surface. Use continuous lengths up to 3000 mm. Keep joints 600 mm from sink cutouts.
- .9 Form shaped profiles and bends as indicated, using postforming grade laminate to laminate manufacturer's instructions.
- .10 Use straight self-edging laminate strip for flatwork to cover exposed edge of core material. Chamfer exposed edges uniformly at approximately 20 degrees. Do not mitre laminate edges.
- .11 Apply laminate backing sheet to reverse side of core of plastic laminate work.
- .12 Apply laminated plastic liner sheet to interior of cabinetry.

### **2.4 INTERIOR WINDOW SILLS**

- .1 Provide laminated plywood window sills at exterior window openings constructed of 19 mm plywood with 38 mm built up edge.
- .2 Width of sill to match finished window opening.
- .3 Depth of sill to project 25 mm into room beyond interior finished wall surface.
- .4 Cover all exposed surfaces and edges with plastic laminate.
- .5 Provide neat paintable silicone sealant bead against window frame and adjacent wall surfaces.

**2.5 FINISHING**

- .1 Finish in accordance with Section 09 91 23 - Interior Painting.

**Part 3 Execution**

**3.1 EXAMINATION**

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for architectural woodwork installation in accordance with manufacturer's instructions.
  - .1 Visually inspect substrate.
  - .2 Inform Contract Administrator of unacceptable conditions immediately upon discovery.
  - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Contract Administrator.

**3.2 INSTALLATION**

- .1 Do architectural woodwork to Quality Standards of AWMAC.
- .2 Install prefinished millwork at locations shown on drawings. Position accurately, level, plumb straight.
- .3 Fasten and anchor millwork securely. Supply and install heavy duty fixture attachments for wall mounted cabinets.
- .4 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 plastic laminate counter back splash and adjacent wall finish, apply small bead of sealant.
- .7 Apply bituminous coating over wood framing members in contact with masonry or cementitious construction.
- .8 Scribe base and filler pieces to adjacent construction within 2 mm gap.
- .9 Fit hardware accurately and securely in accordance with manufacturer's written instructions.
- .10 Site apply laminated plastic to units as indicated. Adhere laminated plastic over entire surface. Make corners with hairline joints. Use full sized laminate sheets. Make joints only where approved. Slightly bevel arises.
- .11 For site application, offset joints in plastic laminate facing from joints in core.

**3.3 CLEANING**

- .1 Progress Cleaning: Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.



- .3 Clean millwork and cabinet work outside surfaces, inside cupboards and drawers.
- .4 Remove excess glue from surfaces.

**3.4 PROTECTION**

- .1 Protect millwork and cabinet work from damage until final inspection.
- .2 Protect installed products and components from damage during construction.
- .3 Repair damage to adjacent materials caused by architectural woodwork installation.

**END OF SECTION**