

PART 1 GENERAL

- 1.1 Related Work
 - .1 Architectural Woodwork Section 06 41 11
- 1.2 Source Quality Control
 - .1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
 - .2 Plywood identification: by grade mark in accordance with applicable CSA standards

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 CSA 0141-1970.
 - .2 NLGA Standard Grading Rules for Canadian Lumber, 1987 edition. This designates dry lumber and is stamped S-dry.
 - .2 Furring, blocking, nailing strips, grounds, rough bucks, curbs, fascia backing and sleepers:
 - .1 S2S is acceptable for all items.
 - .2 Board sizes: "Standard" or better grade.
 - .3 Dimension sizes: "Standard" light framing or better grade.
 - .4 Post and timber sizes: "Standard" or better grade.
 - .3 Machine stress rated lumber is acceptable for all purposes.
 - .4 Glued end-joined or finger-joined lumber is not acceptable.
- 2.2 Fasteners
 - .1 Nails, spikes and staples: to CSA B111-1974.
 - .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, recommended for purpose by manufacturer.
 - .4 Galvanizing: to CSA G164-M1981, use galvanized fasteners for exterior Work, interior highly humid areas, pressure-preservative, fire retardant treated lumber.
 - .5 Joist hangers: minimum, 1 mm 20 ga thick sheet steel, galvanized ZF001 coating designation, minimum 6672 N bearing strength.
 - .6 Nailing discs: flat caps, minimum 25 mm diameter, 1" diameter, minimum 0.4 mm 27 ga. Thick sheet metal formed to prevent dishing. Bell or cup shapes not acceptable.

2.3 Wood Preservative

- .1 Surface applied wood preservative: coloured or copper naphthenate or 5% pentachlorophenol solution, water repellent preservative.

PART 3 EXECUTION

3.1 Construction

- .1 Comply with requirements of NBC 2005, Part 9, supplemented by the following paragraphs.

3.2 Erection of Framing Members

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

3.3 Furring and Blocking

- .1 Install furring and blocking as required to space-out and support casework, cabinets, wall and ceiling finishes, facings, fascia, soffit, siding and other Work as required.
- .2 Align and plumb faces of furring and blocking to tolerance of 1:600.
- .3 Install furring to support siding applied vertically where there is no blocking and where sheathing is not suitable for direct nailing.

3.4 Nailing Strips, Grounds, and Rough Bucks

- .1 Install rough bucks, nailers, and linings to rough openings as required to provide backing for frames and other Work.

3.5 Fasteners

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

3.6 Electrical Equipment Backboard

- .1 Provide backboards for mounting electrical equipment as required. Use 19 mm thick plywood on 19 x 38 mm furring around perimeter and at maximum 300 mm intermediate spacing.

PART 1 GENERAL

1.1 Section Includes:

- .1 Material and installation for prefabricated wood trusses.

1.2 Related Sections:

- .1 Submittal Procedures Section 01 33 00

1.3 References

- .1 Canadian Standards Association (CSA International)
 - .1 CSA O80 Series-97(R2002), Wood Preservation.
 - .2 CAN/CSA-O86 - latest edition, Engineering Design in Wood.
 - .3 CAN/CSA-O141- latest edition, Softwood Lumber.
 - .4 CSA S307- latest edition, Load Test Procedure for Wood Roof Trusses for Houses and Small Buildings.
 - .5 CSA S347- latest edition, Method of Test for Evaluation of Truss Plates Used in Lumber Joints.
 - .6 CSA W47.1- latest edition, Certification of Companies for Fusion Welding of Steel.
- .2 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .3 National Lumber Grades Authority (NLGA)
 - .1 NLGA-03, Standard Grading Rules for Canadian Lumber.
- .4 National Research Council (NRC)/Institute for Research in Construction (IRC) - Canadian Construction Materials Centre (CCMC)
 - .1 CCMC-2002, Registry of Product Evaluations.
- .5 Truss Plate Institute of Canada (TPIC)
 - .1 TPIC - 1996 (R2001), Truss Design Procedures and Specifications for Light Metal Plate Connected Wood Trusses (Limit States Design).

1.4 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 CAN/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 CAN/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 1995 Structural Commentaries.
- .4 Limit live load deflection to 1/360th of span where gypsum board ceilings are hung directly from trusses.

- .5 Limit live load deflections to 1/240th of span unless otherwise specified or indicated.
- .6 Provide camber for trusses as indicated.
- 1.5 Quality Assurance
 - .1 Qualifications:
 - .1 Fabricator for trusses to show evidence of quality control program such as provided by regional wood truss associations, or equivalent.
 - .2 Fabricator for welded steel connections to be certified in accordance with CSA W47.1.
 - .2 Pre-Installation Meeting
 - .1 Convene pre-installation meeting one week prior to beginning work of this Section in accordance with Construction Progress Schedules.
 - .1 Verify project requirements.
 - .2 Review installation conditions.
 - .3 Co-ordination with other building subtrades.
 - .4 Review manufacturer's installation instructions and warranty requirements.
 - .3 Health and Safety:
 - .4 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- 1.6 Product Data
 - .1 Submit manufacturer's printed product literature, specifications and datasheet in accordance with Section 01 33 00 - Submittal Procedures.
- 1.7 Shop Drawings:
 - .1 Each shop drawing submission showing connection details to be signed and stamped by professional engineer registered or licensed in Manitoba, Canada.
 - .2 Indicate special structural application and specification as according to local authorities having jurisdiction.
 - .3 Indicate TPIC Truss Design Procedure and CSA O86 Engineering Design in Wood and specific CCMC Product Registry number of the truss plates
 - .4 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.
 - .5 Submit stress diagram or print-out of computer design indicating design load for truss members. Indicate allowable load and stress increase.
 - .6 Indicate arrangement of webs or other members to accommodate ducts and other specialties.
 - .7 Show location of lateral bracing for compression members.
 - .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.
- 1.8 Delivery, Storage And Handling
 - .1 Deliver, handle, store and protect materials in accordance with Section 01 61 00 - Common Product Requirements.
- 1.9 Storage and Protection:
 - .1 Store trusses on job site in accordance with manufacturer's instructions. Provide bearing supports and bracings. Prevent bending, warping and overturning of trusses.
- PART 2 PRODUCTS**
- 2.1 Materials
 - .1 Materials and products in accordance with Section 01 47 15 - Sustainable Requirements: Construction.
 - .2 Lumber: to following standards:
 - .1 CAN/CSA-O141.
 - .2 NLGA (National Lumber Grading Association), Standard Grading Rules for Canadian Lumber.
 - .3 Fastenings: to CAN/CSA-O86.
 - .4 Preservative: to CSA O80 Series.
 - .5 Fire retardant: to CSA O80 Series.
- 2.2 Fabrication
 - .1 Fabricate wood trusses in accordance with approved shop drawings.
 - .2 Provide for design camber and roof slopes when positioning truss members.
 - .3 Connect members using bolts and nuts, metal, plywood, gussets, metal connector plates, split rings or shear plates.
 - .4 Apply preservative and fire retardant in accordance with CSA O80 Series.
- 2.3 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 preservative and fire retardant treated wood in accordance with CSA O80 Series.
- PART 3 EXECUTION**
- 3.1 Manufacturer's Instructions
 - .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheet.
- 3.2 Erection
 - .1 Erect wood trusses in accordance with 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.
- 3.3 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 Obtain reports within three days of review and submit immediately to Contract Administrator.
- 3.4 Cleaning
- .1 Remove surplus materials, excess materials, rubbish, tools and equipment on completion of installation.

PART 1 GENERAL

1.1 Related Sections

- .1 Architectural Woodwork: Architectural Woodwork Section 06 41 11
- .2 Plastic Laminates: Laminated Plastic Work Section 06 41 12
- .3 Painting Section 09 91 10

1.2 Reference

- .1 American National Standards Institute (ANSI).
 - .1 ANSI A208.1-1989, Particleboard, Matformed Wood.
 - .2 ANSI A208.2-1994, Medium Density Fibreboard (MDF).
- .2 Architectural Woodwork Manufacturers Association of Canada (AWMAC).
 - .1 AWMAC Quality Standards for Architectural Woodwork 2003.
- .3 Canadian General Standards Board (CGSB).
 - .1 CAN/CGSB-11.3-M87, Hardboard.
- .4 Canadian Standards Association (CSA).
 - .1 CSA B111-1974, Wire Nails, Spikes and Staples.
 - .2 CAN/CSA-G164-M92, Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .3 CSA O115-M1982, Hardwood and Decorative Plywood.
 - .4 CSA O121-M1978, Douglas Fir Plywood.
 - .5 CAN/CSA O141-91, Softwood Lumber.
 - .6 CSA O151-M1978, Canadian Softwood Plywood.
 - .7 CSA O153-M1980, Poplar Plywood.
- .5 National Hardwood Lumber Association (NHLA).
 - .1 Rules for the Measurement and Inspection of Hardwood and Cypress January 1986.
- .6 National Lumber Grades Authority (NLGA).
 - .1 Standard Grading Rules for Canadian Lumber 1996.
- .7 Underwriters Laboratories of Canada (ULC).
 - .1 CAN4-S104-M80(R1985), Fire Tests of Door Assemblies
 - .2 CAN4-S105-M85, Fire Door Frames.

1.3 Shop Drawings

- .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.

- 1.4 Samples
 - .1 Submit samples in accordance with Section 01 33 00 – Submittal Procedures.
- 1.5 Regulatory Requirements
 - .1 Wood fire rated frames and panels: listed and labelled by an organization accredited by Standards Council of Canada in conformance with CAN4-S104M and CAN4-S105M for ratings specified or indicated.
- 1.6 Delivery, Storage And Handling
 - .1 Deliver, handle, store and protect materials in accordance with Section 01 61 00 – 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.
- PART 2 PRODUCTS**
- 2.1 Lumber Material
 - .1 Softwood lumber: unless specified otherwise, S4S, moisture content 19% or less 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.
 - .3 Hardwood lumber: moisture content 6% or less in accordance with following standards:
 - .1 National Hardwood Lumber Association (NHLA).
 - .2 AWMAC custom grade, moisture content as specified.
 - .4 Manufacturing process must adhere to Lifecycle Assessment (LCA) Standards as per ISO 14040/14041 LCA Standards.
- 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.
 - .4 Poplar plywood (PP): to CSA O153, standard construction.
 - .5 Particleboard: to ANSI A208.1-99.
 - .6 Low density fibreboard: to CAN3-A247M.
 - .1 Ensure fibreboard is not manufactured with binders, coatings or adhesives which contain resins or other compounds that have potential to release formaldehyde during final product's use.
 - .7 Manufacturing process must adhere to Lifecycle Assessment Standards as ISO 14040/14041 LCA Standards.

- 2.3 Accessories
- .1 Nails and staples: to CSA B111; galvanized to CAN/CSA-G164 for exterior Work, interior humid areas and for treated lumber; plain finish elsewhere.
 - .2 Wood screws: to CSA B35.4 plain, type and size to suit application.
 - .3 Splines: wood.
 - .4 Adhesive: recommended by manufacturer such that formaldehyde emissions do not exceed 0.05 ppm 180 sq. g/m³.
 - .5 Use least toxic sealants, adhesives, sealers, and finishes necessary to comply with requirements of this section.

PART 3 EXECUTION

- 3.1 Installation
- .1 Do finish carpentry to Quality Standards of the Architectural Woodwork Manufacturers Association of Canada (AWMAC), 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
- .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 Install hardware in accordance with manufacturer's instructions and requirements of Canadian Steel Door and Frame Manufacturers Association.
 - .4 Use the templates provided by hardware item manufacturer.
 - .2 Wood Doors.
 - .1 Install doors in accordance with manufacturer's instructions.
 - .2 Machine cut relief for hinges and coring for handsets and cylinders.
 - .3 Trim door width by cutting equally on both jambs. Trim fire door width from lock edge only, to a maximum of 5mm.
 - .4 Trim door height by cutting equally on top and bottom edges to a maximum of 19mm. Trim fire door height at bottom edge only, to a maximum of 15mm.
 - .5 Undercut doors to a maximum of 6mm above finished floor.
 - .6 Prepare doors to receive finish hardware in accordance with AWMAC requirements.
 - .7 Conform to AWMAC requirements for fit tolerances. Maximum diagonal distortions: 1.5mm measured with straight edge, corner to corner.
 - .8 Coordinate installation of glass and glazing. Install door louvers, as called for on Door schedule or on Mechanical Drawings.

PART 1 GENERAL

1.1 Related Sections

- .1 Plastic Laminates Section 06 41 12
- .2 Joint Sealers Section 07 92 00

1.2 References

- .1 American Society for Testing and Materials (ASTM).
 - .1 ASTM E 1333-90, Standard test method for determining formaldehyde levels from wood products under defined test conditions using a large chamber.
- .2 Architectural Woodwork Manufacturers Association of Canada (AWMAC).
 - .1 AWMAC Quality Standards for Architectural Woodwork 2003.
- .3 Canadian Standards Association (CSA).
 - .1 CAN3-A172-M79, High Pressure Paper Base, Decorative Laminates.
 - .2 CSA B111-1974, Wire Nails, Spikes and Staples.
 - .3 CSA O115-M1982, Hardwood and Decorative Plywood.
 - .4 CSA O121-M1978, Douglas Fir Plywood.
 - .5 CAN/CSA O141-91, Softwood Lumber.
 - .6 CSA O151-M1978, Canadian Softwood Plywood.
 - .7 CSA O153-M1980, Poplar Plywood.
 - .8 CAN/CGSB-11.3-M87, Hardboard.
- .4 National Hardwood Lumber Association (NHLA).
 - .1 Rules for the Measurement and Inspection of Hardwood and Cypress January 1996.
- .5 National Lumber Grades Authority (NLGA).
 - .1 Standard Grading Rules for Canadian Lumber 1991.

1.3 Shop Drawings

- .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.
 - .1 Scale: profiles, details ½ full size.
- .3 Indicate all materials, thicknesses, finishes and hardware.
- .4 Indicate locations of all service outlets in casework, typical and special installation conditions, and all connections, attachments, anchorage and location of exposed fastenings.

1.4 Quality Assurance

- .1 Perform Work in accordance with Custom Grade quality.
- .2 Work in this Section shall comply with the specified Grade of Work and Sections of the current edition of the AWI/AWMAC Quality Standard Illustrated.

- 1.5 Qualifications
- .1 Contractors and their personnel engaged in the Work shall be able to demonstrate successful experience with Work of comparable extent, complexity and quality to that shown and specified.
 - .2 Manufacturers who are members in good standing of the Architectural Woodwork institute (AWI) or the Architectural Woodwork Manufacturers Association of Canada (AWMAC) and are familiar with this Standard.

- 1.6 Delivery, Storage And Handling
- .1 Deliver, handle, store and protect materials of this section in accordance with General Conditions for Construction Contracts.
 - .2 Protect millwork against dampness and damage during and after delivery.
 - .3 Store millwork in ventilated areas, protected from extreme changes of temperature or humidity.

PART 2 PRODUCTS

- 2.1 Materials
- .1 Softwood lumber: unless specified otherwise, S4S, moisture content 15% or less 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.
 - .3 Hardwood lumber: moisture content 7% or less in accordance with following standards:
 - .1 National Hardwood Lumber Association (NHLA).
 - .2 AWMAC custom grade, moisture content as specified.
 - .4 Douglas fir plywood (DFP); to CSA O121, standard construction.
 - .5 Canadian softwood plywood (CSP); to CSA O151, standard construction.
 - .6 Hardwood plywood: to CSA O115.
 - .7 Poplar plywood (PP): to CSA O153, standard construction.
 - .8 Melamine: to CAN3-0188.1 Grade R; density 720 kg/m³. Melamine finish to NEMA LQ1, minimum 120 gram weight, thermally fired both sides to both sides of Woodstark. Colour: White.
 - .9 Nails and staples: to CSA B111.
 - .10 Wood screws: steel, type and size to suit application.
 - .11 Splines: wood, plastic or metal.
 - .12 Door and drawer pulls: Hafele – Steel handles – nickel-plated matt CST # 117.31.632 153x30x128.
 - .13 Sealant: in accordance with 07 92 00 - Joint Sealers.

- .14 The manufacturing process must adhere to Lifecycle Assessment (LCA) Standards as per ISO 14040/14041 LCA Standards.
- 2.2 Cabinet Hardware
 - .1 Hinges
 - .1 Concealed (European) hinge: self-closing zinc die-cast hinge with six-way adjustment and screw-in hinge cup, 170° opening angle, attached with a two-piece, height adjustable screw-in mounting plate, nickel finish.
 - .1 Blum CLIP 170°
 - .2 Mepla-Alfit SSP61 170°
 - .2 Shelf Supports
 - .1 Knappe & Vogt 80/180 standards & brackets and chrome finish.
 - .3 Standard Box Drawer Slides: standard-duty, 125 lb. load capacity
 - .1 Side-Mounted Full-Extension Drawer Slides – ball bearing, finish to be selected by Contract Administrator.
 - .1 Accuride 3017
 - .2 Knappe & Vogt 8500
 - .3 Waterloo 3290
 - .4 Door and Drawer Bumpers
 - .1 Door and Drawer Bumpers: nylon, 7 mm diameter (nominal) install in pairs, clear
 - .1 Blum 993.710
 - .2 Mepla-Alfit 630.000.03.07
- 2.3 Manufactured Units
 - .1 Casework.
 - .1 Fabricate caseworks to AWMAC custom quality grade.
 - .2 Furring, blocking, nailing strips, grounds and rough bucks and sleepers.
 - .1 S2S is acceptable.
 - .2 Board sizes: "Standard" or better grade.
 - .3 Dimension sizes: "Standard" light framing or better grade.
 - .3 Framing SPF species, NLGA #1 grade, para.
 - .4 Case bodies (ends, divisions and bottoms).
 - .1 Particleboard, square edge, 19mm thick, white melamine finish.
 - .5 Backs.
 - .1 Particleboard, square edge, 13mm thick, white melamine finish.
 - .6 Shelving.
 - .1 Particleboard, square edge, 16mm thick, white melamine finish.

- .2 Drawers.
 - .1 Fabricate drawers to AWMAC custom grade supplemented as follows:
 - .2 Sides and Backs.
 - .1 Particleboard, square edge, 19mm thick, white melamine finish.
 - .3 Bottoms.
 - .1 Particleboard, square edge, 19mm thick, white melamine finish.
 - .4 Fronts.
 - .1 Particleboard, 19mm thick, Plastic Laminate – Standard Finish - colour to be selected after Award of Contract.
- .3 Casework Doors.
 - .1 Fabricate doors to AWMAC custom grade supplemented as follows:
 - .2 Particleboard, 19mm thick, Plastic Laminate – Standard Finish - colour to be selected after Award of Contract
- 2.4 Fabrication
 - .1 Set nails and countersink screws, apply plain wood filler to indentations, sand smooth and leave ready to receive finish.
 - .1 Shop install cabinet hardware for doors, shelves and drawers. Recess shelf standards unless noted otherwise.
 - .2 Shelving to cabinetwork to be adjustable unless otherwise noted.
 - .3 Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes and other fixtures.
 - .4 Shop assemble Work for delivery to site in size easily handled and to ensure passage through building openings.
- 2.5 Finishing
 - .1 Sand Work smooth and set exposed nails and screws.
 - .1 For opaque finishes, apply wood filler in exposed nail and screw indentations and sand smooth.
 - .2 For transparent finishes, use wax or burn-in filler which blends with surrounding colour and sheen, often after stain and before final top coat.
 - .3 Prime paint surfaces in Contract with cementitious materials.
- PART 3 EXECUTION**
- 3.1 Installation
 - .1 Do architectural woodwork to Custom Grade Standards of the Architectural Woodwork Manufacturers Association of Canada (AWMAC), except where specified otherwise.
 - .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 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 Fit hardware accurately and securely in accordance with manufacturer's directions.
- 3.2 Cleaning
- .1 Clean all millwork and cabinet Work inside and outside surfaces.
- 3.3 Protection
- .1 Protect millwork and cabinet Work from damage until final inspection.

PART 1 GENERAL

1.1 Related Sections

- .1 Finish Carpentry Section 06 20 00
- .2 Architectural Woodwork Section 06 41 11

1.2 References

- .1 American Society for Testing and Materials (ASTM).
 - .1 ASTM D 2832-92(R1994), Standard Guide for Determining Volatile and Non-volatile Content of Paint and Related Coatings.
 - .2 ASTM D 5116-90, Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Materials/Products.
- .2 Canadian General Standards Board (CGSB).
 - .1 CAN3-O188.1-M78, Interior Mat-Formed Wood Particleboard.
 - .2 CAN3-O188.3-M82, Exterior Bond Mat-Formed Wood Particleboard.
 - .3 CAN/CGSB-71.20-M88, Adhesive, Contact, Brushable.
- .3 Canadian Standards Association (CSA).
 - .1 CAN3-A172-M79, High Pressure, Paper Base, Decorative Laminates.
 - .2 CSA O112.4-M1977, Standards for Wood Adhesives.
 - .3 CSA O112.5-Series-M-1977, Urea Resin Adhesives for Wood (Room-and High-Temperature Curing).
 - .4 CSA O112.7-Series M-1977, Resorcinol and Phenol-Resorcinol Resin Adhesives for Wood (Room-and Intermediate-Temperature Curing).
 - .5 CSA O121-M1978, Douglas Fir Plywood.
 - .6 CAN/CSA O141-91, Softwood Lumber.
 - .7 CSA O151-M1978, Canadian Softwood Plywood.
 - .8 CSA O153-M1980, Poplar Plywood.
- .4 Environmental Choice Program (EPC).
 - .1 ECP-44-92, Adhesives.
 - .2 ECP-45-92, Sealants and Caulking Compounds.
 - .3 ECP-67-95, Recycled Water-borne Surface Coatings.

1.3 Samples

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

1.4 Closeout Submittals

- .1 Provide maintenance data for laminate Work for incorporation into manual specified in Section 01 78 10 - Closeout Submittals.

1.5 Storage And Protection

- .1 Deliver, handle, store and protect materials of this section in accordance with Section 01 61 00 – Basic Product Requirements.
- .2 Maintain relative humidity between 25 and 60% at 22°C during storage and installation.

PART 2 PRODUCTS

2.1 Materials

- .1 Laminated plastic for flatwork: to CAN3-A172, Grade GP, 1.2mm thick; based on solid, woodgrain, or printed pattern colour range with standard finish. For counter top only, Wilsonart HD Premium Finish (Colour to be selected later).
- .2 For edges, Wilsonart HD Premium Decorative Edging.
- .3 Laminated plastic backing sheet: Grade BK, not less than 0.5mm thick or same thickness as face laminate.
- .4 Particleboard core: to CAN3-O188.1, sanded faces, of thickness indicated.
- .5 Laminated plastic adhesive: low VOC as recommended by laminate manufacturer.
 - .1 Test for acceptable VOC emissions in accordance with ASTM D 2369 and ASTM D 2832.
 - .2 Acceptable materials: ECP-44.
- .6 Sealer: water resistant sealer or glue acceptable to laminate manufacturer.
 - .1 Test for acceptable VOC emissions in accordance with ASTM D 2369 and ASTM D 2832.
 - .2 Acceptable materials: ECP-67.
- .7 Sealants: as recommended by laminate manufacturer.
 - .1 Test for acceptable VOC emissions in accordance with ASTM D 2369 and ASTM D 2832.
 - .2 Acceptable materials: ECP-45.
- .8 Draw bolts and splines: as recommended by fabricator.

2.2 Fabrication

- .1 Comply with CAN3-A172, Appendix 'A'.
- .2 Obtain governing dimensions before fabricating items which are to accommodate or abut appliances, equipment and other materials.
- .3 Ensure adjacent parts of continuous laminate Work match in colour and pattern.
- .4 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 2400 mm. Keep joints 600 mm from sink cutouts.
- .5 Form shaped profiles and bends as indicated, using postforming grade laminate to laminate manufacturer's instructions.
- .6 Use straight self-edging laminate strip for flatwork to cover exposed edge of core material. Chamber exposed edges uniformly at approximately 20 degrees. Do not mitre laminate edges.

- .7 Apply laminate backing sheet to reverse side of core of plastic laminate Work.
- .8 Apply laminated plastic liner sheet where indicated.

PART 3 EXECUTION

3.1 Installation

- .1 Install Work plumb, true and square, neatly scribed to adjoining surfaces.
- .2 Make allowances around perimeter where fixed objects pass through or project into laminated plastic Work to permit normal movement without restriction.
- .3 Use draw bolts and splines in countertop joints. Maximum spacing 450 mm oc, 75 mm from edge. Make flush hairline joints.
- .4 Provide cutouts for inserts, grilles, appliances, outlet boxes and other penetrations. Round internal corners, chamber edges and seal exposed core.
- .5 At junction of laminated plastic counter black splash and adjacent wall finish, apply small bead of sealant.
- .6 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.
- .7 For site application, offset joints in plastic laminate facing from joints in core.

3.2 Protection

- .1 Cover finished laminated plastic, wood, and metallic veneered surfaces with heavy kraft paper or put in cartons during shipment. Protect installed laminated surfaces by approved means. Do not remove until immediately before final inspection.