

Part 1 General

Part 1.1 RELATED SECTIONS

- .1 Section 06 17 53 Shop Fabricated Wood Trusses.

Part 1.2 REFERENCES

- .1 American National Standards Institute (ANSI)
 - .1 ANSI/NPA A208.1[1999], Particleboard, Mat Formed Wood.
- .2 American Society for Testing and Materials International (ASTM)
 - .1 ASTM A653/A653M[05a], Standard Specification for Steel Sheet, ZincCoated (Galvanized) or ZincIron AlloyCoated (Galvanealed) by the HotDip Process.
 - .2 ASTM C36/C36M[03], Standard Specification for Gypsum Wallboard.
 - .3 ASTM C578[05a], Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
 - .4 ASTM C1289[05a], Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
 - .5 ASTM D1761[88(2000)], Standard Test Methods for Mechanical Fasteners in Wood.
 - .6 ASTM D5055[05], Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists.
 - .7 ASTM D5456[05a], Standard Specification for Evaluation of Structural Composite Lumber Products.
- .3 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB11.3[M87], Hardboard.
 - .2 CAN/CGSB51.32[M77], Sheathing, Membrane, Breather Type.
 - .3 CAN/CGSB51.34[M86], Vapour Barrier, Polyethylene Sheet for Use in Building Construction.
 - .4 CAN/CGSB71.26[M88], Adhesive for FieldGluing Plywood to Lumber Framing for Floor Systems.
- .4 Canadian Standards Association (CSA International)
 - .1 CSA A123.2[03], Asphalt Coated Roofing Sheets.
 - .2 CAN/CSAA247[M86], Insulating Fiberboard.
 - .3 CSA B111[1974(R2003)], Wire Nails, Spikes and Staples.
 - .4 CAN/CSAG164[M92(R2003)], Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .5 CSA O112 Series[M1977(R2006)], CSA Standards for Wood Adhesives.
 - .6 CSA O121[M1978(R2003)], Douglas Fir Plywood.
 - .7 CSA O122[06], Structural GluedLaminated Timber.
 - .8 CSA O141[05], Softwood Lumber.
 - .9 CSA O151[04], Canadian Softwood Plywood.
 - .10 CSA O153[M1980(R2003)], Poplar Plywood.
 - .11 CAN/CSAO325.0[92(R2003)], Construction Sheathing.

- .12 CSA O437 Series[93(R2006)], Standards on OSB and Waferboard.
- .5 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber [2005].
- .6 Truss Design and Procedures for Light Metal Connected Wood Trusses, Truss Plate Institute of Canada.
- .7 Underwriters' Laboratories of Canada (ULC)
 - .1 CAN/ULC-S706-[97], Mineral Fibre Thermal Insulation for Buildings.

Part 1.3 SUBMITTALS

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

Part 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.

Part 2 Products

Part 2.1 FRAMING AND STRUCTURAL MATERIALS

- .1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% (Sdry) or less in accordance with following standards:
 - .1 CSA O141.
 - .2 NLGA Standard Grading Rules for Canadian Lumber.
- .2 Glued endjointed (fingerjointed) lumber to NLGA Special Products Standard.
- .3
- .4 Lightframe trusses in accordance with "Truss Design and Procedures for Light Metal Connected Wood Trusses", Truss Plate Institute of Canada.
- .5 Framing and board lumber: in accordance with NBC.
- .6 Furring, blocking, nailing strips, grounds, rough bucks, cants, curbs, fascia backing and sleepers:
 - .1 Board sizes: "Standard" or better grade.
 - .2 Dimension sizes: "Standard" light framing or better grade.
 - .3 Post and timbers sizes: "Standard" or better grade.

Part 2.2 PANEL MATERIALS

- .1 Plywood, OSB and wood based composite panels: to CAN/CSAO325.0.
- .2 Douglas fir plywood (DFP): to CSA O121, standard construction.
- .3 Canadian softwood plywood (CSP): to CSA O151, standard construction.
- .4 Poplar plywood (PP): to CSA O153, standard construction.

- .5 Interior matformed wood particleboard: to ANSI 208.1.
- .6 Matformed structural panelboards (OSB wafer): to CAN30437.0.

Part 2.3 ACCESSORIES

- .1 Exterior wall sheathing paper: to CAN/CGSB51.32 spunbonded olefin type, coated or impregnated as indicated.
- .2 Polyethylene film: to CAN/CGSB51.34, Type 1, 0.15 mm thick.
- .3 Air seal: closed cell polyurethane or polyethylene.
- .4 Sealants: in accordance with Section 07 92 10 - Joint Sealing
 - .1 Maximum allowable VOC limit 250 g/L.
- .5 General purpose adhesive: to CSA O112 Series.
 - .1 Maximum allowable VOC limit 140 g/L.
- .6 Nails, spikes and staples: to CSA B111.
- .7 Bolts: 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.
- .8 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, recommended for purpose by manufacturer.
- .9 Joist hangers: minimum 1 mm thick sheet steel, galvanized ZF001.
- .10 Nailing discs: flat caps, minimum 25 mm diameter, minimum 0.4 mm thick, sheet metal, formed to prevent dishing. Bell or cup shapes not acceptable.

Part 2.4 FASTENER FINISHES

- .1 Galvanizing: to CAN/CSAG164, ASTM A653, use galvanized fasteners for exterior work, pressure preservative and fire retardant or treated lumber.

Part 2.5 WOOD PRESERVATIVE

- .1 Maximum allowable VOC limit 350 g/L.
- .2 To be suitable for exterior exposure.

Part 3 Execution

Part 3.1 PREPARATION

- .1 Store wood products in a dry, clean environment and in such a manner that prevents any bending or warping.

Part 3.2 INSTALLATION

- .1 Comply with requirements of NBC 2005 Part 9 supplemented by following paragraphs.
- .2 Install members true to line, levels and elevations, square and plumb.
- .3 Construct continuous members from pieces of longest practical length.
- .4 Install spanning members with "crown edge" up.

- .5 Select exposed framing for appearance. Install lumber and panel materials so that grademarks and other defacing marks are concealed or are removed by sanding where materials are left exposed.
- .6 Install truss sheathing in accordance with manufacturer's printed instructions.
- .7 Install furring to support siding applied vertically where there is no blocking and where sheathing is not suitable for direct nailing.
 - .1 Align and plumb faces of furring and blocking to tolerance of 1:600.
- .8 Install wood cants, fascia backing, nailers, curbs and other wood supports as required and secure using galvanized steel fasteners.
- .9 Install sleepers as indicated.
- .10 Use dust collectors and high quality respirator masks when cutting or sanding wood panels.

Part 3.3 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 Use nailing disks for soft sheathing as recommended by sheathing manufacturer.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Roof curbs.
- .2 Blocking in wall and roof openings.
- .3 Blocking around window and door openings
- .4 Wood furring and grounds.
- .5 Telephone and electrical panel back boards.
- .6 Concealed wood blocking for support of toilet and bath accessories, wall cabinets, wood trim and all other wall mounted equipment or furnishings shown on Drawings or Schedules.
- .7 Preservative treatment of wood.

1.2 RELATED SECTIONS

- .1 Section 06 20 00 – Finish Carpentry.
- .2 Section 06 41 11 – Architectural Woodwork.
- .3 Section 08 11 00 - Metal Doors and Frames.
- .4 Section 08 44 13 – Glazed Aluminum Curtain Wall.
- .5 Section 09 22 16 – Non-Structural Metal Stud Framing.
- .6 Section 10 28 14 – Toilet and Bath Accessories.
- .7 Structural, Mechanical and Electrical Specifications.

1.3 REFERENCES

- .1 CSA-O80 Series-08 - Wood Preservation.
- .2 CSA-O121-08 - Douglas Fir Plywood
- .3 CAN/CSA-O141-05 (R2009) - Softwood Lumber.
- .4 CSA-O151-09 - Canadian Softwood Plywood.
- .5 CSA-O153-M1980 (R2008) - Poplar Plywood.
- .6 CSA-O437-93 (R2006) - OSB and Waferboard.
- .7 NPA A208.1-2009 - Particleboard.
- .8 APA (American Plywood Association) - Grades and Specifications.

- .9 CANPLY (Canadian Plywood Association) - Canadian Plywood Handbook.
- .10 National Lumber Grades Authority (NLGA) - Standard Grading Rules for Canadian Lumber, 2007 Edition.

1.4 QUALITY ASSURANCE

- .1 Lumber Products: Graded and stamped to NLGA requirements.
- .2 Plywood Products: Certified and graded to CANPLY requirements.

Part 2 Products

2.1 MATERIALS

- .1 Lumber: NLGA (Standard Grading Rules for Canadian Lumber).
 - .1 CAN/CSA-O141, softwood, SPF species, Select grade.
 - .2 19% maximum moisture content, pressure preservative treat.
- .2 Plywood: CSA-O121 (DFP).
- .3 Particleboard: NPA A208.1; sanded.
- .4 Mat-Formed Panelboards: CSA-O437, OSB.

2.2 ACCESSORIES

- .1 Fasteners and Anchors:
 - .1 Fasteners: Hot dipped galvanized steel for high humidity and treated wood locations, unfinished steel elsewhere.
 - .2 Anchors: Toggle bolt type for anchorage to hollow masonry, expansion shield and lag bolt type for anchorage to solid masonry or concrete, and bolt or ballistic fastener for anchorages to steel, as required.

2.3 FACTORY WOOD TREATMENT

- .1 Wood Preservative (Pressure Treatment): CSA-O80 Series using water borne preservative with 0.25% retainage.
- .2 Wood Preservative (Surface Application): Clear type.

Part 3 Execution

3.1 FRAMING

- .1 Set members level and plumb, in correct position.
- .2 Place horizontal members, crown side up.
- .3 Construct curb members of single pieces.

- .4 Space framing as indicated on Drawings.
- .5 Curb roof openings except where prefabricated curbs are provided. Form corners by alternating lapping side members.
- .6 Coordinate curb installation with installation of decking and support of deck openings and roofing vapour retardant.

3.2 SHEATHING

- .1 Secure sheathing to framing members with ends over firm bearing and staggered.
- .2 Install telephone and electrical panel back boards with plywood sheathing material where required. Size the back board as indicated on Electrical Drawings and specifications.

3.3 SITE APPLIED WOOD TREATMENT

- .1 Apply preservative treatment in accordance with manufacturer's written instructions.
- .2 Brush apply two (2) coats of preservative treatment on wood in contact with cementitious materials or roofing and related metal flashings. Treat Site-sawn cuts.
- .3 Allow preservative to dry prior to erecting members.

3.4 DOOR & WINDOW FRAME INSTALLATION

- .1 Install door and window frames in rough openings square and level.
- .2 Install a 300mm (12") wide strip of vapour barrier to window and door frames prior to installation. Lap and seal to wall vapour barrier as detailed on Drawings.

3.5 SURFACE-APPLIED WOOD PRESERVATIVE

- .1 Before installation, treat surfaces of material with wood preservative. Apply preservative after materials have been cut and fit to size.
- .2 Apply preservative by dipping, brush, or spray to completely saturate and maintain a wet film on the surface for a minimum of 3 minutes.
- .3 Re treat surfaces exposed by cutting, trimming, or boring with liberal brush application of preservative before installation.
- .4 Touch-up all material as follows:
 - .1 Wood backing, curbs, nailers, sleepers on roof deck or below grade.
 - .2 Blocking for windows and exterior door frames.

END OF SECTION

Part 1 General

1.1 SUMMARY

- .1 Section Includes:
 - .1 Material and installation for prefabricated wood trusses.
 - .2 Sustainable requirements for construction and verification:
- .2 Related Sections:
 - .1 Section 06 10 00 – Rough Carpentry

1.2 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CSA O80 Series-[97(R2002)], Wood Preservation.
 - .2 CAN/CSA-O86-[01], Engineering Design in Wood.
 - .3 CAN/CSA-O141-[91(R1999)], Softwood Lumber.
 - .4 CSA S307-[M1980(R2001)], Load Test Procedure for Wood Roof Trusses for Houses and Small Buildings.
 - .5 CSA S347-[99(R2004)], Method of Test for Evaluation of Truss Plates Used in Lumber Joints.
 - .6 CSA W47.1-[03], 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).

1.3 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, bridging in accordance with CAN/CSA-O86.1 for loads indicated and 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.
- .5 Provide camber for trusses as indicated.

1.4 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 and on-site installations.
 - .1 Verify project requirements.
 - .2 Review installation and site conditions.
 - .3 Co-ordination with other building subtrades.
 - .4 Review manufacturer's installation instructions and warranty requirements.

1.5 SUBMITTALS

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and datasheet in accordance with Section 01 33 00 - Submittal Procedures.
- .3 Shop Drawings:
- .4 Each shop drawing submission to be signed and stamped by professional engineer registered or licensed in Manitoba, Canada.
- .5 Indicate special structural application and specification as according to local authorities having jurisdiction.
- .6 Indicate TPIC Truss Design Procedure and CSA O86 Engineering Design in Wood and specific CCMC Product Registry number of the truss plates
- .7 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.
- .8 Submit stress diagram or print-out of computer design indicating design load for truss members. Indicate allowable load and stress increase.

- .9 Show location of lateral bracing for compression members.
- .10 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.
- .11 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .12 Instructions: submit manufacturer's installation instructions.

1.6 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, handle, store and protect materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 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 Lumber: 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 Canadian Lumber.
- .2 Fastenings: to CAN/CSA-O86.
- .3 Preservative: Suitable for exterior exposure and in accordance with CSA O80 Series.
- .4 Fire retardant: Suitable for exterior exposure and in accordance with CSA O80 Series.

2.2 FABRICATION

- .1 Fabricate wood trusses in accordance with approved shop drawings.
- .2 Provide for design camber and slopes when positioning truss members.
- .3 Connect members to manufacturer's written instructions.
- .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 is 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 as indicated and 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 sheathing are installed.
- .6 Install permanent bracing in accordance with reviewed shop drawings, prior to application of loads to trusses.
- .7 Do not cut or remove any truss material without approval of Consultant.
- .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, 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 Upon completion of work, after cleaning is carried out.
- .3 Obtain reports within three days of review and submit immediately to Consultant.

3.4 CLEANING

- .1 Remove surplus materials, excess materials, rubbish, tools and equipment on completion of installation.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Finish carpentry items.
- .2 Installation of exterior cement fibre wall siding and fascia (Refer to Section 07 44 56).
- .3 Installation of Wood Benches
- .4 Installation of Plywood Soffit Panels
- .5 Hardware and attachment accessories.

1.2 RELATED SECTIONS

- .1 Section 01 45 00 – Quality Control
- .2 Section 05 50 00 - Metal Fabrications.
- .3 Section 06 10 13 - Wood Blocking and Curbing.
- .4 Section 06 41 11 - Architectural Woodwork.
- .5 Section 09 91 99 – Painting for Minor Works.

1.3 REFERENCES

- .1 AHA A135.4-2004 – Basic Hardboard.
- .2 ASTM E84-09c - Test Method for Surface Burning Characteristics of Building Materials.
- .3 BHMA A156.9-2003 - Cabinet Hardware.
- .4 CAN/CGSB-11.3-M87 - Hardboard.
- .5 CSA-O80 Series-08 - Wood Preservation.
- .6 CSA-O121-08 - Douglas Fir Plywood
- .7 CSA-O141-05 - Softwood Lumber.
- .8 CSA-O151-09 - Canadian Softwood Plywood.
- .9 CSA-O153-M1980 (R2008) - Poplar Plywood.
- .10 NPA A208.1-2009 - Particleboard.
- .11 NPA A208.2-2009 - Medium Density Fibreboard (MDF) for Interior Applications.
- .12 AWS (AWMAC Architectural Woodwork Standards) – 1st Edition, 2009.

- .13 CHPVA (Canadian Hardwood Plywood and Veneer Association) - Official Grading Rules for Canadian Hardwood Plywood.
- .14 NEMA (National Electric Manufacturers Association) LD3-2000 - High Pressure Decorative Laminates.
- .15 NLGA (National Lumber Grades Authority) - Standard Grading Rules for Canadian Lumber, 2007 Edition.
- .16 NHLA (National Hardwood Lumber Association).

1.4 ADMINISTRATIVE REQUIREMENTS

- .1 Coordination:
 - .1 Coordinate with other work having a direct bearing on work of this section.
 - .2 Coordinate the work with mechanical and electrical rough-in, installation of associated and adjacent components.

1.5 SCOPE OF WORK

- .1 Section 06 41 11 - Architectural Cabinetwork to supply custom fabricated architectural woodwork for installation by this Section. Miscellaneous material to be supplied by this Section to facilitate a complete installation.
- .2 Ensure that blocking has been provided by Section 06 10 13.
- .3 Countersink all nail fasteners and fill ready for specified finish.
- .4 Exposed fasteners: Refer to Drawings.
- .5 Finish hardware to be supplied by others unless specified in this Section.

1.6 SUBMITTALS FOR REVIEW

- .1 Section 01 33 00: Submission procedures.
- .2 Product Data: Provide data on fire retardant treatment materials and application instructions.
- .3 Shop Drawings:
 - .1 Indicate materials, component profiles, fastening methods, jointing details, and accessories.
 - .2 Provide instructions for attachment hardware and finish hardware.

1.7 SUBMITTALS FOR INFORMATION

- .1 Section 01 33 00: Submission procedures.
- .2 Installation Data: Provide application instructions.

1.8 QUALITY ASSURANCE

- .1 Perform work to AWMAC Premium quality.
- .2 Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three (3) years experience.
- .3 Installer Qualifications: Company specializing in performing the work of this section with minimum three (3) years.

1.9 REGULATORY REQUIREMENTS

- .1 Conform to applicable code for fire retardant requirements.

1.10 DELIVERY, STORAGE, AND PROTECTION

- .1 Section 01 61 00: Transport, handle, store, and protect products.
- .2 Protect work from moisture damage.

1.11 MOCK-UP

- .1 Plywood Soffit Panels
 - .1 Provide mock-up of ceiling paneling on actual substrate.
 - .2 Provide 2 panels, illustrating full panel sheet, edge trim, joint trim, fasteners, applied finish, condition around column and electrical light fixture.
 - .3 Locate where directed by Contract Administrator.
 - .4 Approved mock-up may remain as part of the Work.
 - .5 If not accepted, make necessary changes for Contract Administrator to review.
 - .6 Mock-up to be indicated on shop drawings.

1.12 ENVIRONMENTAL REQUIREMENTS

- .1 Do not install paneling when temperature or humidity conditions may have a detrimental effect on paneling.

Part 2 Products

2.1 SHEET MATERIALS

- .1 Softwood Plywood: CSA-O121; Graded to AWMAC Economy installation; veneer lumber core; Douglas Fir face species, square cut.

2.2 ADHESIVE

- .1 Adhesive: Type recommended by AWMAC to suit application.

2.3 FASTENERS

- .1 Fasteners: Of size and type to suit application; zinc finish in concealed locations and stainless steel in exposed locations, unless noted otherwise.

- .2 Concealed Joint Fasteners: Threaded steel.

2.4 ACCESSORIES

- .1 Lumber for Shimming, Blocking: Softwood lumber of SPF species.

2.5 FABRICATION

- .1 Fabricate to AWMAC Premium standards.
- .2 Shop assemble work for delivery to Site, permitting passage through building openings.
- .3 When necessary to cut and fit on Site, provide materials with ample allowance for cutting.

2.6 SHOP FINISHING

- .1 Sand work smooth and set exposed nails or screws – refer to Drawings.
- .2 Apply wood filler in exposed nail and screw indentations.
- .3 On items to receive transparent finishes, use wood filler which matches surrounding surfaces and of types recommended for applied finishes.
- .4 Seal stain and varnish clear exposed to view surfaces.

Part 3 Execution

3.1 EXAMINATION

- .1 Verify that field measurements are as indicated on Shop Drawings.
- .2 Verify adequacy of backing and support framing.
- .3 Verify mechanical, electrical, and building items affecting work of this section are placed and ready to receive this work.

3.2 INSTALLATION

- .1 Install work to AWMAC Premium Quality Standard.
- .2 Set and secure materials and components in place, plumb and level.
- .3 Carefully scribe work abutting other components, with maximum gaps of 1 mm (1/32 inch). Do not use additional overlay trim to conceal larger gaps.
- .4 Install components with nails or screws as detailed.
- .5 Install components with wall adhesive by gun application where adhesive is indicated.

3.3 ERECTION TOLERANCES

- .1 Maximum Variation from True Position: 1.5 mm (1/16 inch).

- .2 Maximum Offset from True Alignment with Abutting Materials: 1 mm (1/32 inch).

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Prefinished surfaces.
- .2 Washroom countertops
- .3 Kitchen Millwork
- .4 Wood Soffit Panels
- .5 Preparation for installing utilities.

1.2 RELATED SECTIONS

- .1 Section 01 45 00 – Quality Control
- .2 Section 05 50 00 – Metal Fabrications
- .3 Section 06 10 13 - Wood Blocking and Curbing: Grounds and support framing.
- .4 Section 06 20 00 - Finish Carpentry.
- .5 Section 09 91 99 – Painting for Minor Works.
- .6 Structural, Mechanical and Electrical Specifications.

1.3 REFERENCES

- .1 ASTM E84-09c - Test Method for Surface Burning Characteristics of Building Materials.
- .2 ASTM C97/C97M-09 - Standard Test Methods for Absorption and Bulk Specific Gravity of Dimension Stone.
- .3 ASTM D3884-09 - Standard Guide for Abrasion Resistance of Textile Fabrics (Rotary Platform, Double-Head Method).
- .4 ASTM D4705-00(2010) - Standard Test Method for Stitch Tear Strength of Leather, Double Hole.
- .5 BHMA A156.9-2003 - Cabinet Hardware.
- .6 CAN/CGSB-11.3-M87 - Hardboard.
- .7 CSA-O141-05 - Softwood Lumber.
- .8 CSA-O121-08 - Douglas Fir Plywood.
- .9 CSA-O80 Series-08 - Wood Preservation.
- .10 CSA O112.4 Series, Standards for Wood Adhesives.

- .11 CSA O112.5 Series, Urea Resin Adhesives for Wood (Room and High Temperature Curing).
- .12 CSA O112.7 Series, Resorcinol and Phenol Resorcinol Resin Adhesives for Wood (Room and Intermediate Temperature Curing).
- .13 CSA O151, Canadian Softwood Plywood.
- .14 CSA O153, Poplar Plywood.
- .15 HPVA HP-1, Standard for Hardwood and Decorative Plywood.
- .16 NPA A208.1-2009 - Particleboard.
- .17 NPA A208.2-2009 - Medium Density Fibreboard (MDF) for Interior Applications.
- .18 National Hardwood Lumber Association (NHLA) - Rules for the Measurement and Inspection of Hardwood and Cypress.
- .19 National Lumber Grades Authority (NLGA) - Standard Grading Rules for Canadian Lumber.
- .20 AWS (AWMAC Architectural Woodwork Standards) – 1st Edition, 2009.
- .21 NEMA (National Electrical Manufacturers Association) LD3-2005 - High-Pressure Decorative Laminates.

1.4 ADMINISTRATIVE REQUIREMENTS

- .1 Pre-installation Meetings: Convene one (1) week before starting work of this section.
- .2 Site installation to be quoted to the Contractor separately on the same bid form. The Architectural Woodwork Subcontractor is to supply, fabricate and Site install the work specified in this Section.

1.5 SUBMITTALS FOR REVIEW

- .1 Section 01 33 00: Submission procedures.
- .2 Submittals of manufacturer's data, installation instructions, and samples are required upon Contract Administrator's request.
- .3 Shop Drawings: Indicate materials, component profiles and elevations, layout, ends, cross sections, service run spaces, and location of services assembly methods, joint and anchorage details and locations, fastening methods, accessory listings, hardware location and schedule of finishes.
 - .1 Include layout of units with relation to surrounding walls, doors, windows and other building components. Site confirm and indicate on the drawings critical dimensions.
 - .2 Co-ordinate shop drawings with other work involved.
 - .3 Scales: profiles full size, details half full size.

- .4 Indicate locations of service outlets in casework, typical and special installation conditions, and connections, attachments, anchorage and location of exposed fastenings.
- .4 Product Data: Provide data for hardware accessories.
- .5 Samples:
 - .1 Washroom Countertop
 - .1 Submit two (2), 300mm x 300mm (12 x 12 inch) samples, showing, veneer, surface finish and edge profile.
 - .2 Samples will be reviewed by Contract Administrator for colour, texture, and pattern only. Compliance with other specified requirements is the exclusive responsibility of the Contractor.

1.6 CLOSEOUT SUBMITTALS

- .1 Section 01 78 00: Closeout Submittals.

1.7 QUALITY ASSURANCE

- .1 Products of This Section: Manufactured to ISO 9000 certification requirements.
- .2 Perform work to AWMAC/AWS Premium quality.
- .3 Maintain one copy of AWMAC/AWS Manual on Site.
- .4 Fabricator Qualifications: Company in good standing with AWMAC/AWS and specializing in fabricating Products specified in this section with minimum five (5) years documented experience.
- .5 Installer Qualifications: Company specializing in performing the work of this section with minimum five (5) years documented experience.

1.8 DELIVERY, STORAGE, AND PROTECTION

- .1 Section 01 61 00: Transport, handle, store, and protect products.
- .2 Protect units from moisture damage as specified in AWMAC/AWS QSI Section 1700.

1.9 ENVIRONMENTAL REQUIREMENTS

- .1 During and after installation of work of this section, maintain the same temperature and humidity conditions in building spaces as will occur after occupancy.

1.10 WARRANTY

- .1 All materials and workmanship covered by this Section will carry a one (1) year warranty from date of acceptance.

Part 2 Products

2.1 LUMBER MATERIALS

- .1 Lumber: To the requirements of AWMAC/AWS grades specified.
- .2 Hardwood Lumber: to NHLA "FAS" Grade.
 - .1 Birch species, plain sawn, maximum moisture content of 7%; with vertical grain, of quality suitable for transparent finish. Finger jointing not permitted.
- .3 Softwood Lumber: to CSA 0141 1970.
 - .1 Douglas Fir species, plain sawn, maximum moisture content of 6%; with grain, of quality suitable for transparent finish; to AWMAC premium grade.

2.2 SHEET MATERIALS

- .1 Refer to drawings for locations.
- .2 Sheet Materials: To the requirements of AWMAC/AWS grade specified.
- .3 Hardwood Plywood: CSA O121; Veneer core; Douglas Fir Birch face species, rotary cut; of quality suitable for opaque finish.
- .4 Softwood Plywood: to CSA 0151 M1978; Veneer core; Douglas Fir to CSA 0121 face species, rotary cut; of quality suitable for opaque finish.
- .5 Particleboard: NPA A208.1; medium density; of grade to suit application; sanded faces.
- .6 Medium Density Fibreboard (MDF): NPA A208.2; composed of wood fibres, medium density, moisture resistant (when in plumbing cabinetry); of grade to suit application; sanded faces.

2.3 ACCESSORIES

- .1 Adhesive Type recommended by AWMAC/AWS to suit application
- .2 Fasteners: Size and type to suit application as recommended by AWMAC/AWS.
- .3 Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; zinc finish in concealed locations and stainless steel finish in exposed locations.
- .4 Concealed Joint Fasteners: Threaded steel.
- .5 Tape: Aluminum foil, insulating and heat dissipating tape.
- .6 Adhesive: To manufactures recommendations.

2.4 CUSTOM FABRICATED WOODWORK

- .1 Shop assemble work where applicable in sizes that can be easily transportable to the Site. Custom cabinetry integrated with building walls and structure to be Site constructed.

.2 Provide cutouts for plumbing fixtures, electrical services, kitchen appliances and other equipment and fixtures built.

.3 Refer to Drawings for custom fabricated woodwork details, materials and finishes.

.1 WASHROOM COUNTERTOPS

- .1 Refer to Drawings and Schedules.
- .2 Fabricate to AWS Premium quality grade.
- .3 Fasteners to be concealed as indicated on drawings.
- .4 Install countertop support hardware per drawings and hardware manufacturer's written instructions.
- .5 Clear coat Finish
 - .1 Refer to Section 09 91 99 – Painting for Minor Work

.2 KITCHEN MILLWORK:

- .1 Refer to Drawings and Schedules.
- .2 Fabricate to AWS Premium quality grade.
- .3 Fasteners to be concealed as indicated on drawings.
- .4 Install countertop support hardware per drawings and hardware manufacturer's written instructions.

.3 WOOD BENCH IN UNIVERSAL WASHROOM 105:

- .1 Standard of Acceptance:
 - .1 Grade: Select Aspen, Edge Grain Fir, S4S
 - .2 Size: 1 ½" thick x 3 ½" wide
 - .3 Fasteners: As detailed on Drawings.
 - .4 Finish: Natural penetrating stain (by Section 09 91 99)

.4 PLYWOOD SOFFIT PANELS

- .1 Refer to Drawings.
- .2 Fabricate to AWS Premium quality grade.
- .3 Panel Material to be 13mm (1/2") Marine Grade FIR ACX (Good One Side)
 - .1 McKillican Canadian Inc
- .4 Panels and fastener holes to be CNC cut
- .5 Field measure all dimension prior to fabricating panels for conformance to geometry of drawings
- .6 Sand smooth and finish Exposed Plywood Edges
- .7 Clear coat Finish
 - .1 Refer to Section 09 91 99 – Painting for Minor Work

.5 MISCELLANEOUS MILLWORK HARDWARE (not noted on Drawings):

Note: Hardware substitutions are acceptable on written request and approval by Contract Administrator. Confirm prior to shop drawing submission.

- .1 Countertop Support Brackets (Room 106):
 - .1 Richelieu EU-1818. Supply milled finish. Paint to match wall colour by Section 09 91 99.
 - .2 Hinges: 110 degree semi-concealed, complete with spring closure, mounting, Blum 90-200 plate, 3 way adjustment and lifetime warranty.
 - .1 Doors 800 – 1500mm high: provide three (3) hinges
 - Doors 1500 – 2000mm high: provide four (4) hinges
 - .3 Drawer Slides: sizes as required to suit drawer:
 - .1 Kitchen drawers: 100 lbs. capacity, Accuride 3832A
 - .4 Grommets: 40mm (2”) diameter, epoxy coated black. Hafele 429.94.310

2.5 FABRICATION

- .1 Shop prepare and identify components for matching during Site assembly.
- .2 Shop assemble for delivery to Site in units easily handled and to permit passage through building openings.
- .3 When necessary to cut and fit on Site, provide materials with ample allowance for Site cutting and scribing.
- .4 Inspect material for defects prior to fabrication.
- .5 Obtain governing dimensions before fabricating items which are to accommodate or abut appliances, equipment and other materials.
- .6 Ensure adjacent parts of continuous work match in colour and pattern.
- .7 Provide cutouts for service penetrations. Verify locations of cutouts from on-Site dimensions. Finish cut edges as indicated.

Part 3 Execution

3.1 EXAMINATION

- .1 Verify adequacy of backing, substrates, and support framing.
- .2 Verify location and sizes of utility rough-in associated with work of this section.

3.2 INSTALLATION

- .1 Install Work to AWMAC/AWS Premium Grade.
- .2 Install to manufactures recommendations.
- .3 Set and secure casework in place; rigid, plumb, and level.
- .4 Use attachments in concealed locations for wall mounted components.
 - .1 Attachments to fasten into structural wall elements. Use coarse threaded screw with minimum 25mm (1inch) penetration through studs. Fasteners to be located at 400mm (16inch) o.c. horizontally and 300mm (1') o.c. vertically.
- .5 Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.
- .6 Co-ordinate painting requirements with 09 91 99.

3.3 ADJUSTING

- .1 Test installed work for rigidity and ability to support loads.
- .2 Adjust moving or operating parts to function smoothly and correctly.
- .3 Fill and retouch nicks, chips, and scratches. Replace damaged items that cannot be repaired.

3.4 PROTECTION AND CLEANING

- .1 Section 01 74 00: Cleaning installed work.
- .2 Protect finished surfaces as per manufactures recommendations.
- .3 Protect woodwork from damage until final inspection.
- .4 Remove excess glue from surfaces.
- .5 Remove masking and excessive adhesives and sealants. Clean exposed surfaces.

3.5 SCHEDULES

- .1 Refer to Drawings.

END OF SECTION