Part 1 General

1.1 Related Sections

.1 E3 – Shop Drawings

.2 D13 – Environmental Protection Plan

.3 E20 – Structural Concrete.

.4 Section 05 50 00 – Metal Fabrications.

1.2 References

.1 National Building Code of Canada (NBC).

.2 Manitoba Building Code (MBC).

.3 Canadian Standards Association (CSA International)

- .1 CSA B111-1974(R1998), Wire Nails, Spikes and Staples.
- .2 CAN/CSA-G164-M92 (R1998), Hot Dip Galvanizing of Irregularly Shaped Articles.
- .3 CAN/CSA-O141-91(R1999), Softwood Lumber.
- .4 CSA O151-M1978 (R1998), Canadian Softwood Plywood.

.4 National Lumber Grades Authority (NLGA)

- .1 Standard Grading Rules for Canadian Lumber 2000.

1.3 Quality Assurance

.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.

1.4 Waste Management and Disposal

.1 Separate and recycle waste materials in accordance with D13 – 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 napthenate 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.

Part 3 Execution

3.1 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 three 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 or masonry.

3.2 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.

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.

3.4 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.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Section 06 10 11 – Rough Carpentry.

1.2 REFERENCES

.1 National Building Code of Canada (NBC).

.2 Manitoba Building Code (MBC).

.3 Canadian Standards Association (CSA):

.1 CAN/CSA-O80 Series, Wood Preservation.

.2 CAN/CSA-O86.1, Engineering Design in Wood.

.3 CAN/CSA-O141, Softwood Lumber.

.4 CSA S307-, Load Test Procedure for Wood Roof Trusses for Houses and Small Buildings.

.5 CSA S347, Method of Test for Evaluation of Truss Plates Used in Lumber Joints.

.6 CSA W47.1, Certification of Companies for Fusion Welding of Steel.

.4 National Lumber Grades Authority (NLGA):

.1 NLGA, Standard Grading Rules for Canadian Lumber.

.5 Truss Plate Institute of Canada (TPIC):

.1 TPIC, Truss Design Procedures and Specifications for Light Metal Plate Connected Trusses (Limit States Design).

1.3 DESIGN REQUIREMENTS

.1 Design trusses, bracing (permanent and temporary) and bridging (permanent and temporary) in accordance with CAN/CSA-O86.1 for loads indicated and minimum uniform and minimum concentrated loadings stipulated in NBC commentary. The designer shall be sure to include loads from mechanical and electrical equipment shown on the drawings.

.2 Limit live load deflection to 1/360th of span where plaster gypsum board ceilings are hung directly from trusses.

.3 Limit live load deflections to 1/240th of span unless otherwise specified or indicated.

.4 Provide camber for trusses as required.

1.4 SOURCE QUALITY CONTROL

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

.2 Certify preservative and fire retardant treated wood in accordance with CAN/CSA-O80 Series.

1.5 QUALIFICATION OF MANUFACTURERS

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

1.6 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.

1.7 SUBMITTALS

.1 Each shop drawing submission shall bear signature and stamp of the Contract Administrator.

.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 lifting points for storage, handling and erection.

.7 Show location of lateral bracing for compression members.

.8 Show all permanent and temporary bracing required.

1.8 DELIVERY AND STORAGE

.1 Deliver, handle, store and protect materials.

.2 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: 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 Canadian Lumber.

.2 Fastenings: to CAN/CSA-O86.1.

2.2 FABRICATION

.1 Fabricate wood trusses in accordance with reviewed shop drawings.

.2 Provide for design camber and roof slopes when positioning truss members.

.3 Connect members using metal connector plates.

Part 3 Execution

3.1 ERECTION

.1 Erect wood trusses in accordance with reviewed erection drawings.

.2 Indicated lifting points to be used to hoist trusses into position.

.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 reviewed shop drawings, prior to application of loads to trusses.

.7 Do not cut or remove any truss material without approval of the City's Representative.

.8 Remove chemical and other surface deposits on treated wood, in preparation for applied finishes.

3.2 CLEANING

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

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 A208.1-99, Particleboard.
- .2 .ANSI A208.2-94, Medium Density Fiberboard (MDF).

.4 Architectural Woodwork Manufacturers Association of Canada (AWMAC):

- .1 AWMAC Quality Standards for Architectural Woodwork, 1994.

.5 Canadian General Standards Board (CGSB):

- .1 .CAN/CGSB-71.20-M88, Adhesive, Contact, Brushable.

.6 Canadian Standards Association (CSA):

- .1 CSA B111-74(R1998), Wire Nails, Spikes and Staples.
- .2 CSA O112.4-M1977 (R1999), Standards for Wood Adhesives.
- .3 CSA O121-M89 (R1998), Douglas Fir Plywood.

1.3 SHOP DRAWINGS

.1 Submit shop drawings in accordance with Specification 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 DELIVERY, STORAGE, AND HANDLING

.1 Deliver, handle, store and protect materials of this section in accordance with General Requirements.

.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 19% or less in accordance with following standards:

- .1 CAN/CSA-O141.
- .2 NLGA Standard Grading Rules for Canadian Lumber.
- .3 AWMAC custom premium grade, moisture content as specified.

.2 Machine stress-rated lumber is acceptable for all purposes.

.3 Hardwood lumber: moisture content 15% or less in accordance with following standards:

- .1 National Hardwood Lumber Association (NHLA).
- .2 AWMAC custom grade, moisture content as specified.

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

.5 Melamine Component Panel (MCP) with thermoset melamine impregnated paper permanently bonded to particleboard substrate.

.6 Particleboard Substrate shall be of 47 lb. Density and balanced construction with moisture content not to exceed 8%.

.7 Laminated plastic for flatwork: GP grade, satin finish, selected from standard solid colour or woodgrain range.

.8 Laminated plastic for counter tops and window sills: to lab grade, matte finish.

.9 Nails and staples: to CSA B111.

.10 Wood screws: plated steel, type and size to suit application.

.11 Splines: wood.

.12 Sealant: clear silicone.

.13 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 casework 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.

.3 Case bodies (ends, divisions and bottoms):

.1 MCP square edge, 19 mm 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, 12 mm thick, with PVC colour matched edge trim, full thickness of panel material, minimum 3mm thickness.

.3 Bottoms:

.1 MCP square edges 12 mm thick.

.4 Fronts:

.1 MCP square edge, 12 mm thick, with PVC colour matched edge trim, full thickness of panel material, minimum 3 mm thickness.

.3 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 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 1¼ 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 Apply laminate backing sheet to reverse side of core of plastic laminate work.

.11 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 25mm 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.

Part 3 Execution

3.1 INSTALLATION

.1 Do architectural woodwork to Quality 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 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 window sills 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.

3.2 CLEANING

.1 Clean millwork and cabinet work inside cupboards and drawers and outside surfaces.

.2 Remove excess glue from surfaces.

3.3 PROTECTION

.1 Protect millwork and cabinet work from damage until final inspection.

END OF SECTION