

## **PART I GENERAL**

### **1.1 SECTION INCLUDES**

- .1 Exterior & partition wood framed walls.
- .2 Roof Framing.
- .3 Concealed wood blocking for support of toilet and bath accessories wall cabinets wood trim and all items and equipment deriving support from the walls.
- .4 Telephone and electrical panel back boards.

### **1.2 RELATED SECTIONS**

- .1 Section 03300 - Cast-In-Place Concrete: Concrete openings to receive wood blocking.
- .2 Section 06200 - Finish Carpentry.
- .3 Section 09250 - Gypsum Board.
- .4 Section 10805 - Washrooms Accessories

### **1.3 REFERENCES**

- .1 American National Standards Institute (ANSI)
  - .1 ANSI A208.1-[1999], Particleboard, Mat Formed Wood.
- .2 American Society for Testing and Materials (ASTM)
  - .1 ASTM A 653/A653M-[01a], Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanealed) by the Hot-Dip Process.
  - .2 ASTM C 36/C36M-[01], Specification for Gypsum Wallboard.
  - .3 ASTM C 578-[01], Specification for Rigid, Cellular Polystyrene Thermal Insulation.
  - .4 ASTM C 1289-[01], Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
  - .5 ASTM D 1761-[00], Standard Test Methods for Mechanical Fasteners in Wood.
  - .6 ASTM D 5456-[01ae1], Specification for Evaluation of

**Structural Composite Lumber Products.**

- .3 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.
  - .4 CAN/CGSB-71.26-[M88], Adhesive for Field-Gluing Plywood to Lumber Framing for Floor Systems.
  
- .4 Canadian Standards Association (CSA)
  - .1 CSA A123.2-[M1979(R1999)], Asphalt Coated Roofing Sheets.
  - .2 CAN/CSA-A247-[M86], Insulating Fiberboard.
  - .3 CSA B111-[1974], Wire Nails, Spikes and Staples.
  - .4 CAN/CSA-G164-[M92], Hot Dip Galvanizing of Irregularly Shaped Articles.
  - .5 CSA 0112 Series-[M1977], CSA Standards for Wood Adhesives.
  - .6 CSA 0121-[M1978], Douglas Fir Plywood.
  - .7 CAN/CSA-0122-[M89], Structural Glued-Laminated Timber.
  - .8 CAN/CSA-0141-[91], Softwood Lumber.
  - .9 CSA 0151-[M1978], Canadian Softwood Plywood.
  - .10 CSA 0153-[M1980], Poplar Plywood.
  - .11 CAN/CSA-0325.0-[92(R1988)], Construction Sheathing.
  - .12 CAN3-0437 Series-[93], Standards on OSB and Waferboard.
  
- .5 National Lumber Grades Authority (NLGA)
  - .1 Standard Grading Rules for Canadian Lumber [2000].

**1.4 QUALITY ASSURANCE**

- .1 Perform Work in accordance with the following agencies:

- .1 Lumber Grading Agency: Certified by NLGA.
- .2 Wood Treatment: CSA 080M.
- .2 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .3 Plywood, particleboard, OSB and wood based composite panels in accordance with CSA and ANSI standards.

## **1.6 DESIGN CRITERIA**

- .1 Roof System:
  - .1 Design roof system to withstand all dead and live loads including ceiling, mechanical and electrical, snow build-up and uplift in accordance with NBC.
  - .2 Maximum Deflection:
    - .1 Live load :  $1/360$  of SPAN LENGTH
    - .2 Dead load :  $1/180$  of SPAN LENGTH
  - .3 Design all related post caps, bases and framing connectors to loads indicated on the drawings.
    - .1 Acceptable manufacturer: Simpson Strong Tie.

## **1.8 SHOP DRAWINGS**

- .1 Submit shop drawings bearing stamp and signature of Registered Professional Engineer in the Province of Manitoba.
- .2 Indicate plan and grid lines, structural members and connections, anchorage details, openings, accessories and assembly details.
- .3 Framing connectors (wood to wood) to be designed and detailed by Engineered lumber supplier. Design connectors to loads indicated on the drawings.

## **PART 2 PRODUCTS**

### **2.1 FRAMING AND STRUCTURAL MATERIALS**

- .1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% (S-dry) or less in accordance with following standards:

- .1 CAN/CSA-0141.
- .2 NLGA Standard Grading Rules for Canadian Lumber.

.2 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.

## **2.2 PANEL MATERIALS**

- .1 Plywood, OSB and wood based composite panels: to CAN/CSA-0325.0.
- .2 Douglas fir plywood (DFP): to CSA 0121, standard construction.
- .3 Mat-formed structural panel boards (OSB wafer): to CAN3-0437.0.

## **2.3 ACCESSORIES**

- .1 General purpose adhesive: to CSA 0112 Series.
- .2 Nails, spikes and staples: to CSA B111.
- .3 Bolts: [12.5] mm diameter unless indicated otherwise, complete with nuts and washers.
- .4 Sill Gasket: as approved by Contract Administrator
- .5 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, explosive actuated fastening devices, masonry screw anchors, recommended for purpose by manufacturer.
  - .1 Acceptable manufacturers: Simpson Strong Tie, Hilti, Tapcon.
- .5 Joist hangers: minimum [1] mm thick sheet steel, galvanized [ZF001] coating designation.
  - .1 Acceptable manufacturer: Simpson Strong Tie.
- .6 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.

- .7 Roof sheathing H-Clips: formed "H" shape, thickness to suit panel material, [extruded 6063-T6 aluminum alloy].

## **2.4 FASTENER FINISHES:**

- .1 Galvanizing: to CAN/CSA-G164, use galvanized fasteners for exterior work, high humidity and treated wood locations, unfinished steel elsewhere.

## **2.5 FACTORY WOOD TREATMENT**

- .1 Wood Preservative (Pressure Treatment): CSA 080M using water borne preservative with 0.30 percent retainage, manufactured by Wolman.

## **PART 3 EXECUTION**

### **3.1 FRAMING**

- .1 Comply with requirements of NBC 1995 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 Provide sill gasket beneath all exterior walls which are fastened directly to concrete.
- .5 Install spanning members with "crown-edge" up.
- .6 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.
- .7 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.
- .8 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.
- .9 Install wood cants, fascia backing, nailers, curbs and other wood supports as required and secure using approved fasteners.

- .10 Install sleepers as indicated.
- .11 Use dust collectors and high quality respirator masks when cutting or sanding wood panels.
- .12 Coordinate the casting of post bases and anchor bolts with Section 03300.
- .13 Space framing and furring 16" oc unless otherwise indicated.

### **3.2 SHEATHING**

- .1 Place sheathing with end joints staggered. Secure sheets over firm bearing. Maintain minimum 1.5 mm and maximum 3 mm spacing between joints on walls. Place perpendicular to framing members.
- .2 Install telephone and electrical panel back boards with plywood sheathing materials where required. Size the back board by 300 mm beyond size of electrical panel.
- .3 Install wall sheathing in accordance with manufacturer's printed instructions.
- .4 Install roof sheathing in accordance with requirements of NBC.

### **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.

### **3.4 SITE APPLIED WOOD TREATMENT**

- .1 Apply preservative treatment in accordance with manufacturer's instructions.
- .2 Brush apply one coat of preservative treatment on wood in contact with cementitious materials and roofing and related metal flashings. Treat site-sawn cuts.
- .3 Allow preservative to dry according to manufacturer's recommendations prior to erecting members.

### **3.5 SCHEDULES**

- .1 Roof sheathing:

- .1 Plywood, DFP or CSP sheathing grade, edge and thickness as indicated on structural drawings.
- .2 Exterior wall sheathing:
  - .1 OSB, thickness as indicated on structural drawings.

**END OF SECTION**

**Part 1            General**

**1.1                SECTION INCLUDES**

- .1 Interior and exterior frames.

**1.2                REFERENCES**

- .1 Architectural Woodwork Manufacturers Association of Canada (AWMAC)
  - .1 Architectural Woodwork Quality Standards Illustrated 2003.
- .2 Canadian Standards Association (CSA)
  - .1 CSA B111-74(R1998), Wire Nails, Spikes and Staples.
  - .2 CAN/CSA-G164-M92(R1998), Hot Dip Galvanizing of Irregularly Shaped Articles.
- .3 National Lumber Grades Authority (NLGA)
  - .1 Standard Grading Rules for Canadian Lumber 2000.

**1.3                SHOP DRAWINGS**

- .1 Submit shop drawings in accordance with Section 01330 - Submittal Procedures.
- .2 Indicate details of construction, profiles, jointing, fastening and other related details.
- .3 Indicate materials, thicknesses, finishes and hardware.

**1.4                SAMPLES**

- .1 Submit samples in accordance with Section 01330 - Submittal Procedures.
- .2 Submit duplicate samples: of all materials.

**1.5                DELIVERY, STORAGE, AND HANDLING**

- .1 Protect materials against dampness during and after delivery.
- .2 All exterior wood to be sealed on all faces on arrival at site to prevent warping.
- .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-0141.
- .2 NLGA Standard Grading Rules for Canadian Lumber.
- .3 AWMAC custom grade, moisture content as specified.
- .2 Hardwood lumber: moisture content in accordance with following standards:
  - .1 AWMAC custom grade, moisture content as specified.

## **2.2 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: electroplated, type and size to suit application.
- .3 Splines: wood. Plastic, metal.
- .4 Adhesive: recommended by manufacturer.
- .5 Use water-based and 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 Set finishing nails to receive filler. Where screws are used to secure members, countersink screw in round cleanly cut hole and plug with wood plug to match material being secured.
  - .4 Replace items of finish carpentry with damage to wood surfaces including hammer and other bruises.
- .2 Interior and exterior frames.
  - .1 Set frames with plumb sides and level heads and sills and secure.

**.3 Hardware.**

- .1 Install as per manufacturer's instructions.**

**END OF SECTION**