

**Part 1 General****1.1 RELATED REQUIREMENTS**

- .1 Section 08 44 13 – Glazed Aluminum Curtain Walls
- .2 Section 08 71 10 - Door Hardware
- .3 Section 09 22 16 - Non-structural Metal Framing.
- .4 Section 12 21 19 – Roller Blinds

**1.2 REFERENCES**

- .1 American National Standards Institute/National Particleboard Association (ANSI/NPA)
  - .1 ANSI/NPA A208.1-2009, Particleboard.
- .2 American Society for Testing and Materials (ASTM)
  - .1 ASTM A123/A123M-15, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
  - .2 ASTM A653/A653M-11, Standard Specification for Steel Sheet, Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
  - .3 ASTM D1761-12, Standard Test Methods for Mechanical Fasteners in Wood.
- .3 CSA International
  - .1 CSA-B111-1974 (R2003), Wire Nails, Spikes and Staples (Clous, fiches et cavaliers en fil d'acier).
  - .2 CSA-O112.9-10 (R2014) - Evaluation of adhesives for structural wood products (exterior exposure).
  - .3 CSA-O121-08 (R2013), Douglas fir plywood.
  - .4 CSA-O141-05 (R2014), Softwood lumber.
  - .5 CSA-O153-13, Poplar plywood.
  - .6 CSA-Z809-16, Sustainable forest management.
- .4 National Lumber Grade Authority (NLGA)
  - .1 Standard Grading Rules for Canadian Lumber, 2014.
- .5 Forest Stewardship Council (FSC)
  - .1 FSC-STD-01-001 V5-0-2012, FSC Principle and Criteria for Forest Stewardship (Principes et critères de gestion forestière).
- .6 Sustainable Forestry Initiative (SFI)
  - .1 SFI 2015-2019, Standards and rules.

**1.3 ACTION AND INFORMATIONAL SUBMITTALS**

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

1. Submit product data and instructions and the manufacturer's documentation for wood products and accessories. The technical data must include product characteristics, performance criteria, physical size, finish and limitations.

#### **1.4 QUALITY ASSURANCE**

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

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

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labeled with the name and address of the manufacturer.
- .3 Storage and Handling
  - .1 Store materials so they do not rest on the floor in a clean, dry, well ventilated, according to the manufacturer's recommendations.
  - .2 Store wood in order to protect against marks, scratches and scrapes.
  - .3 Replace materials and damaged or defective materials with new materials and equipment.

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

- .1 Separate and recycle waste materials in accordance with Section 01 74 21, Management and disposal of construction / demolition waste.

### **Part 2 Products**

#### **2.1 LUMBER**

- .1 Sawed lumber: softwood with S4S finish (bleached on all 4 sides).
  - .1 No more than 19% moisture.
  - .2 Complies to CSA O141.
  - .3 Complies with NLGA Standard Grading Rules for Canadian Lumber.
- .2 Anti-rot treatment, coloured pentachlorophenol base.
- .3 Hardware: nails, bolts, screws, nuts, screws, washers, lag screws and any other required item, to CSA B111 and ASTM D1761.
- .4 Furring, wedges, nailing strips, rough frames, battens and grounds, and sleepers:
  - .1 S4S finish.
  - .2 Boards of Standard or higher category.
  - .3 Dimensioned wood: light frame classification of Standard or higher category.
  - .4 Columns and square wood pieces: Standard or higher category.

- .5 Panels
  - .1 Outdoor use: immersion-treated Douglas fir plywood, water-resistant, marine-grade, to standards CSA-O121.
  - .2 Interior use: Douglas fir plywood, to standards CSA-O121, standard construction, appropriate thickness, humidity 8%, good both sides for carpentry and interior work. Plywood for indoor use must not contain any added urea-formaldehyde resin.
  - .3 Poplar plywood: to CSA-O153, fire retardant.
    - .1 Pressure treated to improve fire resistance.
    - .2 Labelled by certified test agency such as Underwriters Laboratories of Canada.
  - .4 Wood particle board for interior finishing: in accordance with standard NLGA.

## 2.2 ACCESSORIES

- .1 All-purpose glue: complies with CSA standards O112.9 series.
- .2 Nails, staples and horsemen conform to CSA-B111 and ASTM-D1761.
- .3 Bolts: with nuts and washers, with a diameter of 12.5 mm, unless otherwise stated.
- .4 Patented Attachments: toggle bolts, expandable pads with coach screws, screw with lead sleeves or inorganic fibers, explosive actuated devices recommended by the manufacturer.
- .5 H Staples for roof coverings: a thickness suitable for the panels, and approved by the Ministry Representative.
- .6 Finished fasteners
  - .1 Galvanized Metal: according to ASTM A123 / A123M and ASTM A653 for wood structures.

## Part 3 Execution

### 3.1 EXAMINATION

- .1 Verification of Conditions: before proceeding with product installation, ensure that the state of surfaces / materials previously implemented under other sections or contracts is acceptable and can perform the work in accordance with instructions written by manufacturer.
- .2 A visual inspection of surfaces / materials in the presence of Ministry Representative.
- .3 Immediately notify the Ministry Representative of unacceptable conditions detected.
- .4 Start the installation work only after correcting the unacceptable conditions and written approval of the Ministry Representative.

### 3.2 PREPARATION

- .1 Treat surfaces of material with wood preservative, before installation.
- .2 Apply preservative by dipping, or by brush to completely saturate and maintain wet film on surface for minimum 3 minute soak on lumber and one minute soak on plywood.

- .3 Re-treat surfaces exposed by cutting, trimming or boring with liberal brush application of preservative before installation.

### **3.3 INSTALLATION**

- .1 Install members true to line, levels and elevations, square and plumb.
- .2 Construct continuous members from pieces of longest practical length.
- .3 Install spanning members with "crown-edge" up.
- .4 Select exposed framing for appearance. Install lumber materials so that grade-marks and other defacing marks are concealed or are removed by sanding where materials are left exposed.
- .5 Install roof sheathing in accordance with requirements of NBC.
- .6 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.
- .7 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.
- .8 Install wood cants, fascia backing, nailers, curbs and other wood supports as required and secure using [galvanized] [steel] fasteners.
- .9 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.

### **3.4 ASSEMBLY**

- .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.

### **3.5 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.

### **3.6 PROTECTION**

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

**END OF SECTION**