

Part 1 General

1.1 REFERENCES

- .1 National Building Code 2010 (NBC)
- .2 ASTM International
 - .1 ASTM A123/A123M-09, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - .2 ASTM A653/A653M-11, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvaneal) by the Hot-Dip Process.
 - .3 ASTM C578-11a, Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
 - .4 ASTM C1396/C1396M-11, Standard Specification for Gypsum Board.
 - .5 ASTM D5055-11, Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists.
 - .6 ASTM D5456-11, Standard 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 and amendment.
 - .4 CAN/CGSB-71.26-M88, Adhesive for Field-Gluing Plywood to Lumber Framing for Floor Systems.
- .4 CSA International
 - .1 CAN/CSA-A123.2-03(R2008), Asphalt Coated Roofing Sheets.
 - .2 CAN/CSA-A247-M86 (R1996), Insulating Fiberboard.
 - .3 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.
 - .4 CSA O112.9-10, Evaluation of Adhesives for Structural Wood Products (Exterior Exposure).
 - .5 CSA O121-08, Douglas Fir Plywood.
 - .6 CAN/CSA O122-06 (R2011), Structural Glued-Laminated Timber.
 - .7 CSA O141-05(R2009), Softwood Lumber.
 - .8 CSA O151-09, Canadian Softwood Plywood.
 - .9 CSA O325-07, Construction Sheathing.
 - .10 CSA O437 Series-93 (R2011), Standards on OSB and Wafer board.
- .5 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber 2010.
- .6 The Truss Plate Institute of Canada

- .1 Truss Design Procedures and Specifications for Light Metal Plate Connected Wood Trusses 2007.
- .7 Underwriters' Laboratories of Canada (ULC)
 - .1 CAN/ULC-S706-[09], Standard for Wood Fibre Insulating Boards for Buildings.

1.2 SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets.
- .3 Shop Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in the Province of Ontario, Canada.

1.3 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect materials from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.

Part 2 Products

2.1 FRAMING STRUCTURAL AND PANEL MATERIALS

- .1 Footings: cast-in-place concrete for the foundation slab on grade and foundation walls in accordance with Section 03 30 00 - Cast-In-Place Concrete.
- .2 Concrete reinforcing: in accordance with Section 03 20 00 - Concrete Reinforcing.
- .3 Anchor bolts: in accordance with Section 05 05 19 – Post-Installed Concrete Anchors.
- .4 Steel dowels embedded in the bed rock: will be hot-dipped galvanized meeting the requirements of CSA G146.
- .5 Light-frame roof wood trusses: softwood, S4S, moisture content 19% (S-dry) or less in accordance with "Truss Design and Procedures for Light Metal Connected Wood Trusses", The Truss Plate Institute of Canada and with the following standards:
 - .1 CSA O141.
 - .2 NLGA Standard Grading Rules for Canadian Lumber.
- .6 Light-frame wall wood frame studs: (140 x 38) mm size, softwood, S4S, moisture content 19% (S-dry) or less.

- .7 Glued end-jointed lumber as per NLGA Special Products Standard (SPS).
- .8 Wood I-joists in accordance with Prefabricated Wood I-Joists ASTM D5055.
- .9 Wafer board sheathing: to CAN- O4370.
- .10 Structural Composite Lumber (SCL) in accordance with ASTM D5456.
- .11 Framing and board lumber: in accordance with NBC.
- .12 Canadian softwood plywood (CSP): 19 mm thick, exterior grade plywood, to CSA O151, standard construction.
- .13 Siding: 20 gauge ribbed steel sheet baked enamel finish, colour green with moulding and trim.
- .14 Roofing: 20 gauge ribbed steel sheet baked enamel finish to match siding.
- .15 Entrance double door: 1800 x 2150 mm size, exterior galvanized steel door, primed and painted to match siding, compete with frame, exterior passage set and dead bolt lock, in accordance with Canadian Steel Door and Frame Manufacturer's Association.
- .16 Single standard door: 900 x 2150 mm size, galvanized steel door, primed and painted to match siding, compete with frame, in accordance with Canadian Steel Door and Frame Manufacturer's Association.
- .17 Masonry wall between control and generator rooms: (200 x 200 x 400) mm size and reinforcement as indicated on the drawings. Materials to CSA A165 Series 04 and reinforcing bars to CSA A370 and CSA A371.
- .18 Windows: to CAN-A440 and double glazed glass to CAN-12.1.
- .19 Louvers: as specified in Section 23 37 20 – Louvers, Intakes and Vents
- .20 Glass fibre board sheathing: 152 mm thick, non-structural, rigid, faced, fibreglass, insulating exterior sheathing board.
- .21 Expanded polystyrene sheathing: to ASTM C578.
- .22 Gypsum sheathing: 12.7 mm thick to ASTM C1396/C1396M.

2.2 ACCESSORIES

- .1 Exterior wall sheathing paper: to CAN/CGSB-51.32.
- .2 Polyethylene film: to CAN/CGSB-51.34, 0.15 mm thick.
- .3 Ridge vent: steel fascia, soffit and rim.
- .4 Roll roofing: to CAN/CSA A123.2, Type S.
- .5 General purpose adhesive: to CSA O112.9.
- .6 Nails, spikes and staples: to CSA B111.
- .7 Bolts: 12.5 mm diameter to ASTM A325M.unless indicated otherwise, complete with nuts and washers to ASTM F436M.
- .8 Joist hangers: minimum 1 mm thick sheet steel, galvanized ZF001 coating designation.
- .9 Roof sheathing H-Clips: formed "H" shape, thickness to suit panel material.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify conditions of substrates previously installed under other Sections are acceptable for product installation in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate in presence of Departmental Representative.
 - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied.

3.2 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.
- .5 Install wall sheathing in accordance with manufacturer's printed instructions.
- .6 Install roof sheathing in accordance with requirements of NBC.
- .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 furring to support siding applied vertically.
- .9 Install rough bucks, nails and linings to rough openings as required to provide backing for frames and other work.
- .10 Use dust collectors and high quality respirator masks when cutting or sanding wood panels.
- .11 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .12 Countersink bolts where necessary to provide clearance for other work.
- .13 Use nailing disks for soft sheathing as recommended by sheathing manufacturer.

3.3 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