PART 1 GENERAL

1.1 References

.1 Canadian Standards Association (CSA International)

.1 CSA O80 Series, Wood Preservation.

.2 CAN/CSA-O86, 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.

.2 National Lumber Grades Authority (NLGA)

.1 NLGA, Standard Grading Rules for Canadian Lumber.

.3 Truss Plate Institute of Canada (TPIC)

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

1.2 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 and uplift anchorage in accordance with CAN/CSA-O86.1 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 of span where gypsum board ceilings are hung directly from trusses.

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

.6 Provide camber for trusses as indicated.

1.3 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.

1.4 Submittals

.1 Shop Drawings:

.2 Each shop drawing submission to be signed and stamped by a professional engineer registered or licensed in the Province of Manitoba.

.3 Indicate special structural application and specification as according to local authorities having jurisdiction.

.4 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.

.5 Submit stress diagram or print-out of computer design indicating design load for truss members. Indicate allowable load and stress increase.

.6 Indicate arrangement of webs or other members to accommodate ducts and other specialties.

.7 Show location of lateral bracing for compression members.

.8 Instructions: submit manufacturer's installation instructions.

1.5 Delivery, Storage And Handling

.1 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.

.2 Waste Management and Disposal:

.1 Remove from site and dispose of packaging materials at appropriate recycling facilities.

PART 2 PRODUCTS

2.1 Materials

.1 Lumber: spruce species, fire retardant treated grade, 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.

2.2 Fabrication

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

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

.3 Connect members using bolts and nuts metal gussets.

.4 Apply 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 fire retardant treated wood 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 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 decking are installed.

.6 Install permanent bracing in accordance with approved shop drawings, prior to application of loads to trusses.

.7 Do not cut or remove any truss material without approval of Contract Administrator.

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

3.3 CLEANING

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

PART 4 MEASUREMENT AND PAYMENT

4.1 Method of Measurement and Payment

The Shop – Fabricated Wood Trusses will be measured and paid for at the Contract Lump Sum Price for “Electrical Building”, which price shall be payment in full for supplying all materials and for performing all operations herein described and all other items incidental to the work included in this Specification.

END OF SECTION