GENERAL Section 061753 Shop Fabricated Wood Trusses

1.1 Related Work Specified in Other Sections

1) Section 061000: Rough carpentry

2) Section 061500: Wood deck

3) Section 061800: Glued-Laminated Structural Units

1.2 Reference Standards

1) NBCC 2010 *& applicable provincial code*

2) Engineering Design in Wood CSA-O86-01

3) Softwood Lumber CSA-O141-05

4) Standard Grading Rules for Canadian Lumber NLGA 2010 *plus amendments*

5) Truss Design Procedures and Specifications for Light Metal Plate Connected Wood Trusses TPIC 2011 *plus amendments*

6)WWTA member design guidelines

7) WWTA Handling, Erection and Bracing of Wood Trusses brochure version 2005

1.3 Definitions

1) Truss Design Engineer is a P.Eng registered in the *applicable province* who seals truss design drawings.

2) Truss Designer is either the Truss Design Engineer or a suitably qualified person working in conjunction with Truss Design Engineer.

3) "Member in Good Standing" is a WWTA Manitoba, Saskatchewan, N.W. Ontario member whose plant participates in the Quality Control Program verified by third party inspections conducted at least twice per year.

1.4 Design Criteria

1) Design wood trusses, complete with lateral bracing and truss connectors in accordance with TPIC and CSA-O86-01.

2) Design wood trusses to resist the specified loads including any built up and/or drift loading as shown on the structural drawings for the building.

3) Girder truss locations that are shown on the building structural drawings shall not be relocated without the approval of the Structural Engineer of Record.

4) Design wood trusses to accommodate mechanical ducting when cavity dimensions are shown on the building structural drawings.

5) Serviceability requirements for wood trusses are as listed in Table 4.5.1. (4) of TPIC unless specifically indicated drawings.

1.5 Wood Truss Drawings

1) Wood truss fabricator shall submit truss design drawings prior to fabrication for approval by the Structural Engineer of Record.

2) The final truss design drawings shall bear the stamp of a qualified professional engineer registered in the applicable province.

3) Truss design drawings shall indicate as a minimum the following information:

a) Truss identification number and job name,

b) Span, depth or slope and spacing of trusses,

c) Size, species and grade of lumber used for each truss member,

d) Required bearing widths,

e) Specified loads as applicable: top chord live load, top chord dead load, bottom chord live load, bottom chord dead load, concentrated loads and their points of application, controlling unbalanced, wind and earthquake loads.

f) Location, size and fastening of any required lateral truss member bracing,

g) Reactions forces, their points of occurrence and direction,

h) Adjustments to lumber and metal connector plate design values for condition of use,

i) Metal connector plate type, gauge, size and location of plate at each joint, except where symmetrically located relative to the joint interface,

j) Connection requirements for (unless shown on the truss layout drawing): truss to bearing, truss or girder ply to ply, field splices.

1.6 Truss Placement Drawing

1) Wood truss fabricator shall submit truss placement drawing(s) with the truss design drawings for approval by the Structural Engineer of Record.

2) Indicate the location of each truss and girder by using the identification number shown on the truss design drawings.

3) Identify all walls that were taken as bearing walls.

4) Indicate the hanger type to be used for connecting trusses to girder trusses and beams.

5) Connection requirements for (unless shown on the truss design drawings): truss to bearing, truss or girder ply to ply, field splices.

6) Delivery and storage shall be in accordance with Western Wood Truss Association bracing brochure version 2005.

7) Reference to the Western Wood Truss Association Handling, Erection and Bracing of Wood Trusses brochure version 2005.