Department of Development Services
Building Division

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Phil Rosenquist, Director • Ronald L. Lynn, Building Official

SUBJECT: TG-12-06 (Rev. No. 2) - MANUFACTURED ENGINEERED METAL PLATE CONNECTED WOOD TRUSS SUBMITTAL AND REVIEW REQUIREMENTS FOR STRUCTURES THAT HAVE A LICENSED BUILDING DESIGNER

1.0 PURPOSE: This guideline sets forth submittal procedures and standards for building designers and fabricators/manufacturers of engineered metal plate connected wood trusses.

2.0 SCOPE: To establish responsibilities for submission, review, and approval of metal plate connected wood truss design drawings and truss placement diagram. All fabricators/ manufacturers of metal plate connected wood trusses shall be approved in accordance with the latest version of the CCDDS-BD's technical guideline TG-11.

3.0 ABBREVIATIONS & ACRONYMS:

ANSI: American National Standards Institute, Inc.

CCDDS-BD: Clark County Department of Development Services-Building Division

NAC: Nevada Administrative Code

NRS: Nevada Revised Statutes

TG: Technical Guideline

TPI: Truss Plate Institute, Inc.

IBC: International Building Code

WTCA: Wood Truss Council of America

4.0 DEFINITIONS: The definitions below are specific to this document and are supplemental to those contained in the Building Administrative Code of Clark County.

EFFECTIVE DATE: January 5, 2007

APPROVED DATE: December 27, 2006

Revised By	Concurred By	Approved By
/s/	/s/	/s/
Brian Lenihan, P.E. **Senior Engineer**	**John S. Telford** **Principal Engineer**	**Theodore L. Droessler, P.E.** **Engineering Manager**

Approved Fabricator/Manufacturer: (Defined in the Clark County Building Administration Code)

Building Designer: An individual who is registered or licensed by the State of Nevada pursuant to NRS Chapters 623, 625, or NAC chapter 625 and has the responsibility for the overall building or structure design.

Construction Documents: Plans, specifications, supporting calculations and other data prepared to describe the design, materials, physical characteristics, location, orientation, and scope of a proposed project necessary to obtain a permit.

Contractor/Subcontractor: The individual, company, or corporation responsible for the field storage, handling, and installation of engineered wood products, including, but not limited to, temporary bracing, permanent bracing, anchorage, connections, and field assembly.

Drag Strut/Drag Truss/Collector: Individual member or component that is designed to transmit lateral loads to lateral resisting systems that are parallel to the applied force.

Record Documents: Documents that are representative of a structure's construction and are legally binding.

Truss: An individual metal plate connected wood structural component.

Truss Calculation Package: Consists of the truss manufacturer's placement plans, a Nevada registered engineer's wet sealed design drawings, and the building designer's acceptance review.

Truss Designer: An individual who is registered or licensed by the State of Nevada pursuant to NRS Chapter 625 or NAC Chapter 625, and has the responsibility for the development of specifications, designs, and drawings of metal plate connected wood trusses.

Truss Design Drawing: Sealed document in conformance with the currently adopted and amended building code, and the following information:

1. Project Name;
2. Structure identification (i.e. Plan number, including elevation options);
3. Truss fabricator;
4. Truss identification referenced to the manufacturer's truss placement diagram;
5. Combined stress rating;
6. Indicate non-standard loading pictorially;
7. Governing Code & Year used for the truss design; and
8. Nevada engineer's professional seal.

Truss Placement Diagram: Manufacturer's truss placement diagram in conformance with the currently adopted and amended building codes, and the following information:

1. Project name;
2. Structure identification (i.e. Plan number, including elevations options);
3. Truss Fabricator;
4. Date of layout drawing;
5. Location and spacing of all trusses;
6. Each unique truss designation shall have a corresponding truss design drawing included in the truss submittal package;
7. All bearing points;
8. Any concentrated loads (i.e. shear wall uplift or downward point loads, mechanical piping/equipment loads), drag loads, or lateral load transfers per the construction documents (connections for these loads are by others);

9. Attachment for truss to truss, truss ply to ply, and field splices may be provided on the truss design drawing or provided on a separate schedule;

5.0 REFERENCES:

ANSI/TPI 1-2002, National Design Standard for Metal Plate Connected Wood Truss Construction

Building Administrative Code of Clark County (BAC)

International Building Code (IBC)
Southern Nevada Amendments to the IBC (SNA-IBC)

TG - 11 Approval Process For Engineered Wood Products

Wood Truss Council of America (WTCA) 4-2002

6.0 RESPONSIBILITIES:

6.1 Clark County Department of Development Services -Building Division

6.1.1 Plans Examination shall review the truss design drawings and the manufacturer's truss placement diagram for conformance with the IBC and the construction design documents.

6.1.2 Inspection Services shall verify installation in accordance with the approved construction design documents and established procedures.

6.2 Building Designer Responsibilities:

6.2.1 The building designer shall specify the following information for designing and detailing of the structure:

1. Specify all design loads;
2. Allowable truss deflections;
3. Truss supports and anchorage to accommodate horizontal, vertical, or other reactions or displacements;
4. Permanent truss bracing to resist loads acting perpendicular to the plane of the truss.
5. Attachment for truss to supporting element, with the exception of the truss to truss connection, shall be specified on the Construction Documents.
6. All supporting hardware per section 2.2.2.3 of ANSI/TPI 1-2002, and bearing enhancer hardware shall be specified on the Construction Documents.

6.2.2 The building designer shall review each truss calculation package, the truss designers calculations and the manufacturer's truss placement plan, for conformance with the construction documents. Where applicable the building designer shall comply with the recommendations specified in ANSI/TPI-1-2002 "National Design Standard for Metal Plate

Connected Wood Truss Construction" Section 2.2, and the IBC.

6.3 Contractor Responsibilities:

6.3.1. Provide the truss designer the construction documents and all revisions and supplements thereto.

6.3.2 Provide the building designer with the truss design drawings and the manufacturer's truss placement diagram, including all revisions and supplements thereto for review.

6.3.3 Deliver the truss calculation package to CCDDS-BD for review and acceptance.

6.3.4 Deliver copies of the jurisdiction's approved truss design drawings and placement diagram to the truss manufacturer prior to fabrication.

6.3.5 Purchase metal plate connected wood trusses from an approved fabricator.

6.4 Truss Designer Responsibilities:

6.4.1 Receive from the truss manufacturer the necessary construction documents and all revisions and supplements thereto needed for the work to be completed in a proper and professional manner.

6.4.2 Design the wood trusses in accordance with the ANSI/TPI 1- 2002 Standard, or other design standards/methodology subject to building official approval.

6.4.3 Prepare sealed truss design drawings that provide at a minimum the requirements stated in this document, and where applicable the design information as specified in ANSI/TPI-1-2002 "National Design Standard for Metal Plate Connected Wood Truss Construction" Section 2.1 , and the IBC.

6.5 Approved Truss Fabricator/Manufacturer Responsibilities:

6.5.1 Prepare truss placement diagram that provide at a minimum the requirements stated in this document.

6.5.2 Provide the truss designer the necessary construction design documents and all revisions and supplements thereto needed for their work to be completed in a proper and professional manner.

6.5.3 Manufacture the trusses in accordance with the final approved truss design drawings using the quality criteria for Metal Plate Connected Wood Trusses established by the IBC, Chapter 23.

6.5.4 The trusses shall be marked as specified in ANSI/TPI-1-2002 "National Design Standard for Metal Plate Connected Wood Truss Construction" Section 2.4. In addition, each truss shall be clearly marked or labeled with an identification number corresponding to the truss placement plan numbers.

7.0 PROCEDURE:

7.1 General:

7.1.1 Three truss submittal packages shall be delivered to the building designer of record for review. The packages shall consist of one set of wet sealed truss design drawings, and two copied sets. The copied sets will consist of copies of the sealed and signed truss design drawing and a covet letter with an original wet seal and signature.

7.1.2 The building designer shall review the truss design drawings and manufacturer's truss placement diagram for conformance with the construction documents. Upon acceptance, the designer shall either place a signed and dated "shop drawing review stamp" on the truss submittal package or issue a letter of acceptance for dated truss submittal packages.

7.1.3 The reviewed and accepted building designer truss submittal packages shall be submitted to CCDDS-BD as part of the required documentation for permit application. Redlined truss packages will not be accepted.

7.1.4 The permittee shall provide copies of the final approved truss design drawings and the manufacturer's truss placement diagram to the truss manufacturer prior to fabrication.

7.1.5 The permittee shall maintain at the site a CCDDS-BD approved truss submittal package including approved repairs, revisions, supplements, and addendums.

7.2 Repairs:

7.2.1 Two sets of wet sealed truss repair drawings shall be submitted to CCDDS-BD Inspection Services for review. Each set shall have the job name, address, permit number, contractor's contact person and phone number listed on the cover page. The truss repair drawing must contain the lot/building number, permit number, a statement of the damage or problem that occurred, and the engineered solution. CCDDS-BD reviewed truss repair documentation shall be maintained at the site with the other permit documents.

7.3 Revisions, Supplements, and Addendum:

7.3.1 When significant design changes occur after the initial CCDDS-BD's review is completed, the truss revisions, supplements, and addendums to the CCDDS-BD's approved truss submittal package shall be reviewed by the building designer. Upon acceptance, the building designer shall either place a signed and dated "review stamp" on the revision/addendum or issue a stamped letter of approval for the revision, supplement or addendum. A significant change is defined as a truss modification that alters the original truss configuration, design requirements, or placement diagram. Truss repairs are not to be considered as a "significant" design change. Two sets of wet sealed truss revisions, supplements, and addendums shall be submitted to CCDDS-BD Inspection Services for review.

8.0 RECORDS:

8.1 The truss submittal package, revisions, and repairs are CCDDS-BD record documents.

9.0 ATTACHMENTS: None.

10.0 REVISION HISTORY:

Title	Revision/Approved Date	Effective Date
TG-12-2006	December 27, 2006	January 5, 2007
TG-12-2004	October 1, 2004	October 31, 2004
TG-12-2000	July 1, 2000	July 1, 2000