



## Truss Plate Institute: Today & Tomorrow

by Michael A. Cassidy, Truss Plate Institute Executive Director

**TPI's new Executive Director provides a fresh perspective on TPI's defining philosophies and what the future holds for the association.**

**W**hen I was asked to write an article about the Truss Plate Institute (TPI) today and what direction its future will take, I was a bit apprehensive. How could I write about what TPI is and where it's going only having been on board for a short period of time? My past experience is helpful—12 years as a residential construction architect and 13 years with CSI, the Construction Specifications Institute in association management—but it by no means qualifies me as an expert on TPI or the building components industry. After further thought, I realized that my experience, coupled with recent visits with TPI plate manufacturers and WTCA component manufacturers has, in fact, given me a good understanding of where TPI is today and a good sense about its future. In addition, I realized the TPI and the building component industry's future share many things.

### Defining Catch Phrases

- Maintaining the truss industry on “.....a sound engineering basis” (TPI Mission)
- Connecting the truss industry (TPI Motto)
- Riding on Tradition and Innovation (BCMC 2005 Theme)

All of these phrases represent where TPI is today. They also serve as a solid foundation upon which to build the future. The first two are directly from TPI literature with which many of you may already be familiar, while the third is the theme of the upcoming BCMC show in Milwaukee. While TPI cannot take any credit for the latter, I believe it also represents TPI's beliefs about the future, not only for the association but for the industry.

To understand who TPI is and where I believe we are headed, I would like to briefly highlight, from my perspective, what each of the phrases means.

### **TPI Mission: To maintain the truss industry on “.....a sound engineering basis”**

#### at a glance

- ❑ The Truss Plate Institute's mission is to maintain the truss industry on “...a sound engineering basis.”
- ❑ TPI accomplishes its mission through the development of standards and with an industry-wide consensus process.
- ❑ TPI and WTCA together serve the industry through several cooperative agreements.
- ❑ As new technology impacts standards development, TPI will continue to apply sound engineering principles to those innovations.

### **Standards Development**

TPI is maintaining and building on its solid tradition (sound engineering) of establishing methods of truss design and construction (engineering) using metal connector plates. We accomplish this through the regular and active participation of TPI members (professional engineers and technicians employed by plate manufacturer members and other associate members such as WTCA) in our Technical Advisory Committee (TAC) and various workgroups established by TAC for specific tasks. TAC is the body responsible for the ongoing maintenance of ANSI/TPI 1, *National Standard for Metal Plate Connected Wood Truss Construction*. TAC receives comments on current TPI standards and makes recommendations, based on input from the industry, to the TPI Board for updates. Recent TAC activities have included updates to Chapters 2 and 6 of ANSI/TPI 1–2002, which were released in January 2005. TAC continues to research, test, refine and update the current moment equation in ANSI/TPI 1–2002. All the updates have been pursued with a desire and commitment of all TAC members to refine and improve key truss engineering principles and to better coordinate the standards and guidelines with other documents being used or mandated in the industry. TPI members also provide technical feedback to industry associations such as WTCA, American Forest & Paper Association

(AF&PA), and the International Code Council (ICC) to name a few. Participation in industry associations is crucial to TPI, as these groups have a significant impact on the industry and also provide valuable input back into TPI's standards.

### **Quality Standard**

Defining an acceptable quality standard and incorporating manufacturing tolerances into the engineering behind such a standard is critical for maintaining truss design and manufacturing on a sound engineering basis. ANSI/TPI 1 does this and reflects input received from the industry through an industry consensus process (discussed in the sidebar on page 88). For component manufacturers, designing, manufacturing and performing in-plant quality control procedures helps them to consistently produce high quality components that meet industry standards. The ability to demonstrate that the manufactured trusses have been designed and manufactured according to the industry standard is important for a successful business operation and also strengthens the industry's reputation.

To aid the industry's quality assurance process, TPI offers a third party quality assurance inspection program that builds on the standards outlined in ANSI/TPI 1. Participation in this program is another way that TPI and component manufacturers can let the residential and commercial construction industries know that the manufacturing plant is producing trusses that meet industry standards. This is beneficial for the individual plants that participate and for the industry as a whole because it promotes wood trusses as a sound and safe construction product.

From incorporation of the quality control material in ANSI/TPI 1-2002 to aiding component manufacturers with their third party quality assurance inspection program, TPI continues to serve the industry with sound engineering and management principles.

### **TPI Motto: Connecting the Truss Industry**

#### **Consensus Process**

While TPI has been connecting the industry in a traditional sense (in the sense that plates connect the wood members of a truss), TPI also connects different interests with its consensus process. A true standard requires input and the consensus of all players involved or impacted by the standard. This is achieved with the establishment of a Project Committee composed of a cross section of industry volunteers. In addition, various proposed drafts of the standard or portions of the standard are submitted for public review and comment. Input from only one segment of the industry is not an option; TPI has and will continue to pursue diverse industry participation. **The guidelines and standards developed through the consensus process will only become better with broad-based and ongoing participation.** In this way, TPI truly "connects" the entire truss industry.

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### Cooperative Agreements

Also in keeping with “connecting” the industry, TPI and WTCA realized that cooperative efforts between the two organizations were in the best interest of the industry. Both agreed that it is counterproductive to pursue similar and sometimes competing activities. Additionally, it was not the best use of valuable staff time or financial resources. Outlining areas where each organization should take the lead was and continues to be beneficial for both the organizations and the industry. From this realization, two significant agreements were developed between TPI and WTCA that have helped direct the two organizations in recent years and are the foundation for the continued relationship.

- TPI/WTCA “Litmus Test” Guidelines (see the June/July 2002 issue of **SBC**, “WTCA & TPI—An Important Step Forward”): the Litmus Test outlined the general responsibilities of each organization and serves as a guide to define

A current recommendation from TPI TAC to the TPI Board calls for opening up the ANSI/TPI 1–2002 standard for update through the consensus process. This recommendation is in part due to the requirement that the standard be re-affirmed or updated within a five-year timeframe, but also as a result of industry input received to date. Other items under consideration for update are the revised moment equation and potential refinements to the quality control sections of the standard. The last time the entire standard was opened for review and comment, it took approximately three years from beginning to final publication release. It is our hope that the upcoming update, assuming TPI Board approval of opening the standard, will take less time. TPI encourages active participation by all and will make public announcements of how this can be accomplished as the process progresses. We are committed to working closely with WTCA as well as others in the industry to ensure the industry is informed and involved in the process.

future activities of the two organizations.

- Joint Copyright and Publishing Agreement between TPI and WTCA (see the August 2004 issue of **SBC**, “WTCA & TPI Sign Joint Publications Agreement”): the Joint Copyright and Publishing Agreement outlines collaborative efforts on specific publications (BCSI 1-03 documents) and truss warning tags.

TPI and WTCA continue regular and ongoing dialog and I anticipate continued collaboration with WTCA and its membership in the future all for the betterment of the industry.

### BCMC Theme: Riding on Tradition & Innovation

As mentioned previously, TPI is building on past tradition: engineering guidelines and standards for truss design and construction. Additionally, innovation in the industry continues to be realized through new capabilities made possible

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thanks to advances in technology. Today's technology opens so many new doors for the industry from pure computing power to new concepts like whole house design (see the May issue's "Component Manufacturers Divided on Whole House Design") that were not contemplated previously. TPI's engineering principles are incorporated into the technology that is available today as well as continuing to be an integral part of tomorrow's technology. TPI members not only contribute to the engineering standards and principles, but also contribute to the technology that incorporates those principles. These advancements and innovations will permit the indus-

try to realize business opportunities that were not possible before. Roles and responsibilities of all the players in the building components industry are potentially being revised as a result of the new innovations being driven out of this technology. While everyone may not see eye-to-eye on some innovations, it is important for all of us to maintain a dialog to constructively move forward and progress in a positive and fruitful manner to the benefit of all who are involved in our chain of commerce. I anticipate technology and its impact on the truss industry will continue to be topics of discussion and debate in the future.

## Conclusion

While this article does not permit me to go into more depth of all TPI activities and its future, it touches on a few of them. The phrases explained in this article represent who TPI is today and offers a glimpse into our tomorrow. Developing sound engineering principles is our tradition. We have and will continue to connect the industry through established and industry accepted engineering principles and through engagement in the industry consensus process.

The future is hard to predict, but I know it will be a continued cooperative effort between TPI, WTCA and others in the industry. TPI will build on our traditions and incorporate the new technological and engineering innovations as they develop. **The TPI/WTCA relationship and the agreements reached to date have ensured that we are headed in the right direction together.** By working together, we can accomplish great things while building a bigger and stronger future for the truss industry. When it comes to sound engineering guidance, I encourage

you to continue looking to TPI and continue to participate in TPI's consensus process. Together we can "connect" the building components industry. **SBC**

*Mike Cassidy became Executive Director of the Truss Plate Institute, Inc. (TPI) in December 2004. Prior to joining TPI, he spent 14 years with the Construction Specifications Institute (CSI), Alexandria, VA, as Director of Technical Programs & Services. Prior to his employment with CSI, Cassidy worked as the director of production for an architectural firm servicing the multi-family and residential housing industry. He is a licensed architect in the state of Virginia and is a graduate of Virginia Polytechnic Institute and State University.*

Visit [www.tpinst.org](http://www.tpinst.org) for more information on the consensus process.

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