Code Connection

Referenced Standards

Did you know that some material from ANSI/TPI 1-2002 is included in the IBC and IRC?

by WTCA Staff

Building codes cannot and do not include all design, installation and testing provisions for all materials and methods. To do so would make a building code too unwieldy and too expensive.

The ICC provides A Guide to the Use of Standards in the ICC International Codes. It includes a discussion of the use of referenced standards in model building codes. A portion from the preface to the 1999 edition is included here:

> There is a long-standing relationship between construction codes and standards that address design, installation, testing and materials related to building construction. Building regulation cannot be effectively carried out without such standards. The critical role of standards in the building regulatory process is such that the standards are an extension of the code requirements and are therefore equally enforceable. Consequently, standards that are referenced in codes carry an expectation of being as clear, direct and enforceable as code requirements that are primary text.
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> A standard is a published technical document that represents an industry consensus on how a material, product or assembly is to be designed, manufactured, tested or installed so that a specific level of performance is obtained. Standards are primarily developed by industry organizations and professional associations incorporating the views of interested parties. A standard is developed in response to an identified need and typically contains information which is based on experience, knowledge, testing, analyses and research.
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> A standard is not intended to be used as primary law but as a referenced authoritative resource. While a model code becomes law when it is adopted by a jurisdiction, a standard becomes law to the extent to which it is referenced in a model code. When a standard that is referenced in the code (first-tier reference) in turn references another standard (second tier reference), the second-tier referenced standard is equally applicable, again, to the prescribed extent of the reference to it in the first-tier reference. This trail of applicability extends throughout all tiers of references.
>
> A model code establishes minimum quality and performance criteria for the materials and methods regulated by the code. For many materials and methods the code relies on referenced standards to provide these criteria. The referenced standards are an enforceable extension of the code. Standards supplement the code by setting forth conditions or requirements that a material or method must meet, thereby providing an acceptable level of safety for building occupants. To comply with the provisions of the model code, a method or material must meet the requirements of the referenced standard.
>
> When the code has specific requirements that vary from those found in a referenced standard, the requirements of the code take precedence over the standard. If the code is silent on a particular issue, then the provisions in the standard are applicable to the prescribed extent of the reference to that standard.

Referenced standards may include a wide range of content. ANSI/TPI 1, National Design Standard for Metal Plate Connected Wood Truss Construction, contains chapters on the following:

- design responsibilities
- quality criteria for manufacturing
- metal plate connector manufacturing
- performance evaluation of metal connector plates
- material and general design considerations
- member design procedures
- metal connector plate joint design

at a glance

- ❑ To comply with the provisions of the model code, a method or material must meet the requirements of the referenced standard
- ❑ A Project Committee has been formed to evaluate the 2002 edition of ANSI/TPI 1.
- ❑ WTCA is planning to propose changes to the I-Codes for the 2007 code cycle that will move in the direction of having the metal plate connected wood truss requirements currently included in the IBC and IRC also placed into TPI 1 so that both are consistent and ultimately most of the information about truss design and construction will be in TPI 1.

Some of the material from ANSI/TPI 1 is included in the IBC and IRC, especially the information that must be provided on a Truss Design Drawing.

A Project Committee has been formed to evaluate the 2002 edition of ANSI/TPI 1. In addition to addressing technical issues related to member and joint design and quality criteria, the Project Committee will evaluate the relationship of ANSI/TPI 1 to the current model codes.

WTCA is planning to propose changes to the I-Codes for the 2007 code cycle that will move in the direction of having the metal plate connected wood truss requirements currently included in the IBC and IRC also placed into TPI 1 so that both are consistent and ultimately most of the information about truss design and construction will be in TPI 1. This is the general direction in which the code process is moving, per the IBC structural committee staff. WTCA Staff will develop a code change plan based on the work done in developing The Load Guide and from what we have learned during the last code change cycle. The discussion in the Project Committee will include what "code type" language should be added to TPI 1 rather than placing the language in the IBC/IRC in deference to the desire of the code to use reference standards to contain language specific to a given industry. SBC

For more information about how to get involved in the code process, contact WTCA staff at 608/274-4849 or codes@sbcindustry.com.

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