

## Updating the Seismic Provisions

BY JAMES O. MALLEY, S.E.

The AISC Seismic Provisions are the result of input from several experts—including you.

### AISC TASK COMMITTEE 9 ON SEISMIC DESIGN

is made up of a large group of hard-working professionals that span the breadth of the structural steel industry, with practicing engineers, researchers, and fabricators/erectors all well represented. Since 1995, I have had the honor and privilege of chairing this committed, highly productive group of experts in seismic design.

TC9 is responsible for developing AISC Document 341, *Seismic Provisions for Structural Steel Buildings*. The AISC 341 Provisions provide the detailed system requirements for the seismic design of all steel buildings and non-building structures in jurisdictions that adopt the International Building Code through their adoption by reference in ASCE 7. An extensive Commentary is also written by AISC TC9 to provide the background for the Provisions of AISC 341.

It should be noted that the work of AISC TC9 is done in conjunction with the ASCE 7 Seismic Subcommittee and the Building Seismic Safety Council's Provisions Update Committee. These two committees are responsible for defining the system design parameters ( $R$ ,  $C_d$ , and  $\Omega_0$ ) and height limits for the various Seismic Design Categories for all structural systems defined in ASCE 7, including the incorporation of new structural systems or changes to the design parameters of existing systems. Close coordination is required between ASCE 7 Seismic Subcommittee and standards-writing committees for the different building materials (such as AISC TC9 for structural steel) to ensure that the system design parameters and height limits are consistent with the detailed member and connection design and detailing requirements.

Since their initial publication in 1992 (under the direction of then-chair Professor Egor Popov), the AISC Seismic Provisions have been constantly reviewed, updated, and hopefully improved. The 1997 edition of the Seismic Provisions was a major revision that tried to incorporate many of the early lessons learned in the aftermath of the Northridge earthquake damage. In both 1999 and 2000, TC9 published two brief amendment documents in an attempt to stay as current as possible with the large influx of new information being generated by the FEMA/SAC Steel Program and many other studies. In 2002, a complete update to the provisions was completed to fully integrate this information. The most recent edition, completed in 2005,

included two new structural systems (Buckling-Restrained Braced Frames and Special Plate Shear Walls), a major expansion to the requirements for project documentation and quality control and assurance, and a number of other updates to the various sections of the document.

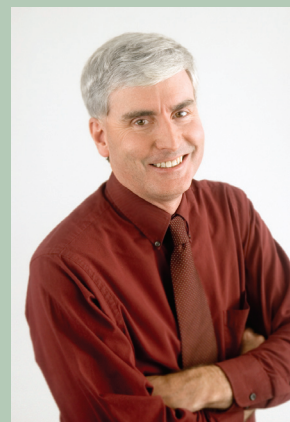
### Next Edition

The next edition of AISC 341 is planned for publication in 2010. This will be done in conjunction with the main steel specification, AISC 360, *Specification for Structural Steel Buildings*. It is intended that this and all future updates will also be on a five-year cycle to properly coordinate with the ASCE 7 and IBC publication cycles. The present schedule calls for the 2010 edition of AISC 341 to be incorporated into the 2012 edition of the IBC.

Our TC 9 Committee is hard at work on the 2010 edition, with the first ballot versions to be reviewed by the AISC Committee on Specifications this fall. We are working on a revised format that will more closely correlate with AISC 360 and incorporate the composite construction provisions more directly into the document (previous editions placed the composite provisions into a separate part of the document) in addition to the typical technical updates that incorporate the latest information and thinking of the committee. As with all the previous editions, we hope that the 2010 edition will be more transparent and easier for the structural engineers that design and detail steel buildings to use.

### Make Yourself Heard

Here's where those you that use AISC 341 on a regular or semi-regular basis can help: In our quest to continually improve the document, we want to encourage questions, comments, suggestions, and even complaints about it. While our group attempts to write provisions that are clear, concise, and complete, we understand that the design process is different from that of developing specification language. Comments and suggestions received



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