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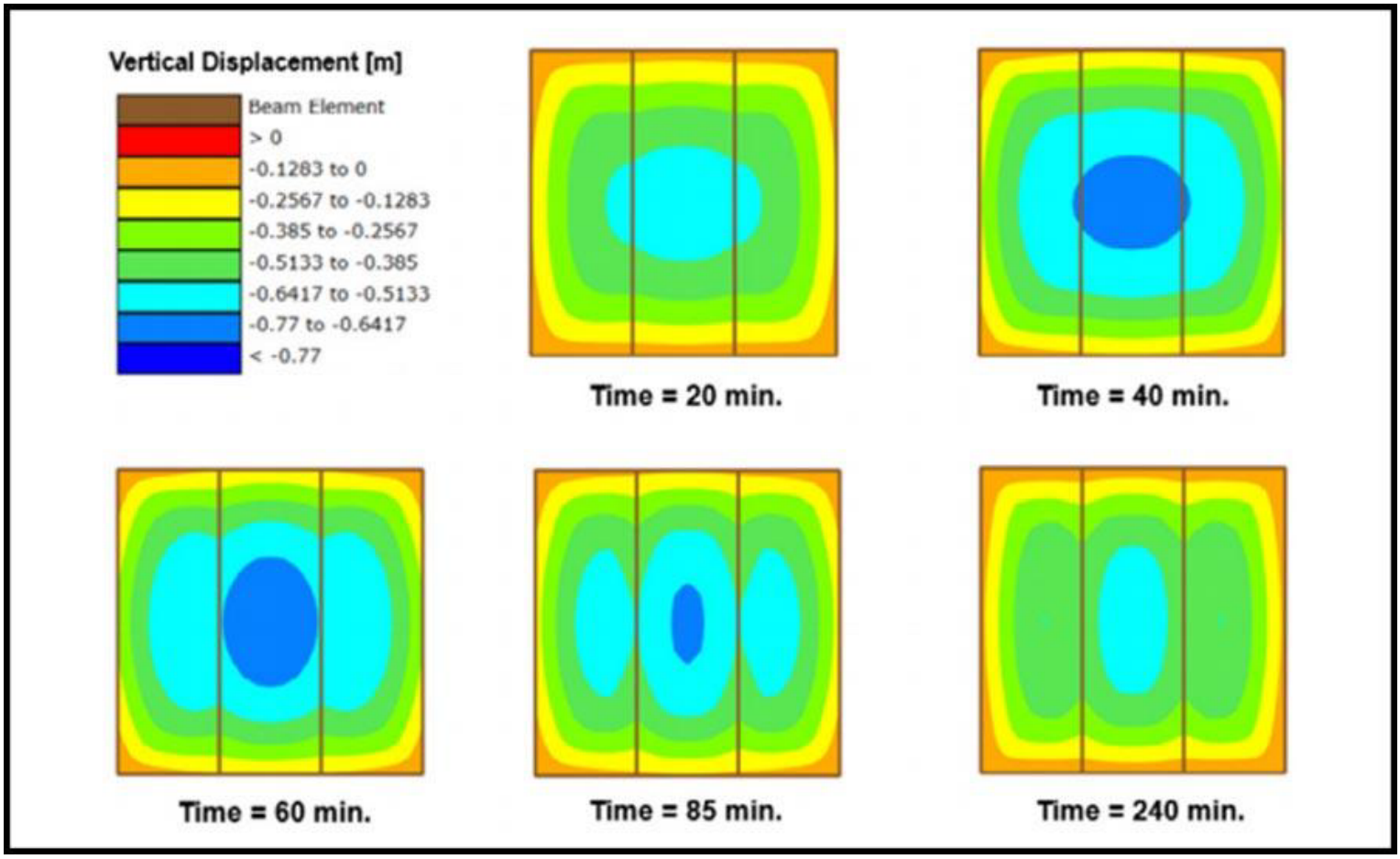
Performance-based Structural Fire Design Aid Published



Using PBSFD, engineers can predict the behavior of a frame in fire, such as vertical displacement of floor beams over time.

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Nadine M. Post

Two years in the making, Performance-Based Structural Fire Design—to date the most in-depth guidance in the U.S. for the "proper execution and potential benefits of structural fire protection"—is available free-of-charge for download. The publication, released Oct. 6, includes examples of four existing structural steel frames analyzed by four different structural engineers, using PBSFD.

The purpose of the 268-page publication, created by a collaboration of 40 engineers, is to “showcase structural fire engineering as an emerging technology in the U.S. that can benefit public safety and deliver more efficient and economical buildings,” says Kevin LaMalva, principal fire consultant for Warringtonfire and principal investigator for the initiative, a project of the Structural Engineering Institute of the American Society of Civil Engineers and the Charles Pankow Foundation, which provided a $230,000 grant.

Fine-tune Fire Protection

Using PBSFD, engineers can fine-tune structural fire protection, putting it only where it is most needed, says LaMalva. This can reduce the construction schedule, improve construction site conditions, enhance aesthetics and quality control and decrease a building’s carbon footprint, adds LaMalva.

Applying the principles of PBSD to multiple building types, in multiple geographic locations, by four structural engineering practices “demonstrates the potential opportunities and challenges associated with this approach,” says Ron Klemencic, chairman and CEO of Magnusson Klemencic Associates, ENR’s 2018 Award of Excellence winner and a director of the Pankow foundation. “Structural engineers seeking to implement PBSFD will find this resource useful to inform and guide decision-making,” adds Klemencic, who is one of the Pankow project’s industry champions.

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Nadine M. Post, *ENR's* editor-at-large for the design and construction of buildings, is an award-winning journalist with more than 40 years of experience covering buildings-related trends, issues, innovations and challenging projects. Post has written about many industry giants, including seven ENR Award of Excellence winners. And she has covered disasters, failures and attacks, including the 1993 bombing and the 2001 destruction of the World Trade Center. A sampling of Post's project stories includes the redevelopment of the World Trade Center; the 828-meter-tall Burj Khalifa; Los Angeles’ Disney Concert Hall; and Seattle’s Experience Music Project, Central Library, Bullitt Center and Rainier Square Tower. In 1985, Post wrote McGraw-Hill's book *Restoring the Statue of Liberty* (1986) for the restoration’s architects—Richard S. Hayden and Thierry W. Despont.