When my wife’s best friend, Sandee, was visiting from Toronto last week, she borrowed my daughter for a morning and ventured to a nearby park. While the swings are clearly my daughter’s favorite, she also loves running across the swaying bridge stretching between two play towers. The bridge essentially consists of plastic planking on two chains. The fun is the remarkable amount of movement that can be generated—I suppose it’s even possible that a person could be knocked off their feet.

While swaying floors are fun in playgrounds, they can be horrid in office buildings. And while serviceability concerns have always been important in the design of steel buildings, they have gained an even greater importance today, especially with the growth of the so-called electronic office. These offices tend to be wide open and lack the large paper-filled file cabinets, heavy desks and massive bookcases common in traditional offices.

However, properly engineered steel buildings can be designed for any required serviceability level. It is critical, however, to consider early-on a buildings use and to plan for vibration from the start.

On pages 24-28 of this issue, we’re featuring an article by Thomas Murray of Virginia Tech (probably the nation’s top guru on floor vibration in steel buildings) discussing how to design to prevent vibration.

However, the subject is a bit broader than a five-page article. Because AISC recognizes the importance of serviceability in the design of structures, they published late last year Design Guide #11: Floor Vibration Due to Human Activity. The book provides the basic principles and simple analytical tools for designing steel-framed floor systems. And for those trying to retrofit a building with a serviceability problem, it offers advise on remedial measures. The guide is available for $30 + s/h by calling AISC Publications at 800/644-2400.

Also available from AISC is a videotape of AISC’s most recent seminar series, including Murray’s lecture on “Designing Steel for Serviceability.” Copies of the four-volume video (V203) are available for $75 + s/h by calling AISC Publications at 800/644-2400.

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