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H.S. Lew carries out a broad range of research programs in the fields of structural and earthquake engineering. After joining the National Institute of Standards and Technology more than 35 years ago, he served in various capacities: chief of the Construction Safety Section, chief of the Structural Evaluation Section, and chief of the Structures Division. Before joining NIST, he was an assistant professor at the University of Texas at Austin.

He is a fellow of the American Society of Civil Engineers and the American Concrete Institute, and is a member of the Earthquake Engineering Research Institute and the Structural Stability Research Council. His time is also spent with the ACI Building Code Committee and the SEI/ASCE Executive Committee of the Codes and Standards Activities.

Dr. Lew has received the ACI Wason Medal, the Henry Kennedy Award, the Henry C. Turner Medal, and the U.S. Department of Commerce Silver Medal. He is the 2005 recipient of the SEI/ASCE Walter P. Moore Jr. Award. He was named the Department of Commerce "Engineer of the Year" in 1995.

Dr. Lew is a registered professional engineer in the District of Columbia, and the states of Maryland and New York.

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Are Serviceability Requirements Covered Adequately in Current Codes and Standards?

Traditionally, building codes and standards require that serviceability be considered in the structural design to both ensure the building's functional performance and maintain the comfort for building occupants. Vertical deflection of floors, lateral deflection or drift of structural frames, and vibration of floors are some of the serviceability requirements that the designer is advised to consider in the design.

Because these requirements are not considered to be directly related to the safety of building, codes and standards have avoided establishing specific limits. Thus, actual practice to meet serviceability requirements varies considerably from region to region and from one designer to another. With advanced structural design tools and availability of high-performance construction materials, buildings have become lighter and more flexible than before, and as a result, are more susceptible to becoming non-functioning buildings.

This presentation will summarize available technical data relevant to the serviceability requirements and will examine current design practices in relation to the requirements in codes and standards.