New Seismic Retrofit Design Guides Focus on Critical Issues Affecting Existing Vulnerable Buildings

The International Code Council (ICC) has partnered with the Structural Engineers Association of Southern California (SEAOSC) to publish a landmark set of seismic retrofit Design Guides. The new Design Guides are focused on retrofits for two types of buildings targeted by the City of Los Angeles Mandatory Earthquake Hazard Reduction Ordinance. This ordinance is intended to reduce the collapse risk of vulnerable structures during a seismic event. The Design Guides, Volumes 1 and 2, explain with insightful detail the different aspects and structural design requirements of the ordinance. These important guides also can be used as a reference in other seismically active areas.

“The development of the Design Guides was entrusted to two task groups of experienced engineers and dedicated SEAOSC members under the SEAOSC Seismology and Existing Buildings Committees, with input from other industry experts,” said Jeff Ellis, SEAOSC President. “The combined expertise they have gained from years of designing and detailing retrofits for existing buildings to better resist seismic forces is provided in the extensive commentary and practical advice in each Design Guide.”

Design Guide, Volume 1: City of Los Angeles Mandatory Earthquake Hazard Reduction in Existing Non-Ductile Concrete Buildings (NDC) discusses and demonstrates methodologies for the seismic evaluation and strengthening of existing non-ductile concrete buildings. While aspects of the guide focus on the mandatory Los Angeles earthquake hazard reduction ordinance and
historical construction practices of the Southern California region, it is generally applicable to any other existing concrete buildings in areas of moderate or high seismicity. Additional insights are given based on the latest available research and next-generation standards development work.

*Design Guide, Volume 2: City of Los Angeles Mandatory Earthquake Hazard Reduction in Existing Wood-Frame Buildings with Soft, Weak or Open-Front Walls (SWOF)* provides an example and detailed commentary for the seismic strengthening of existing wood-frame buildings with soft, weak or open-front wall lines subject to the recently passed mandatory Los Angeles ordinance. The guide discusses challenges inherent in this type of retrofit, responsibilities of the design professional and additional topics to further clarify the requirements of the ordinance.

“The Design Guides are excellent resources for engineers, architects, building officials and students evaluating these types of structures,” said Hamid Naderi, ICC Senior Vice President of Business Product Development. “The Code Council is pleased to join SEAOSC in making these practical and valuable documents available to the structural community.”

*Design Guide, Volume 1 (NDC)*, and *Design Guide, Volume 2 (SWOF)*, can be ordered in printed format from the Code Council (shop.iccsafe.org) and SEAOSC (www.seaosc.org). Printed copies of the Design Guides will be available at a discount at the **SEAOSC Strengthening Our Cities Summit** on November 17–18 in Los Angeles and will be provided to SEAOSC members attending the Summit. PDF download versions will be available in December.

###

The International Code Council is a member-focused association. It is dedicated to developing model codes and standards used in the design, build and compliance process to construct safe, sustainable, affordable and resilient structures. Most U.S. communities and many global markets choose the International Codes.

The Structural Engineers Association of Southern California (SEAOSC) is the premier professional organization to which local Structural Engineers belong. The organization serves its members in the noble profession of structural engineering by fostering and promoting the
contributions of structural engineers to society. SEAOSC is a member-centric organization, where substance and image are equally promoted through fiscally responsible management and optimization of the benefits to the members. SEAOSC leadership and membership will strive to reach the ideals represented by the following five pillars of the association: membership value, image & advocacy, codes & standards, education, and legislative participation.