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**Abstract: On the Performance of Ground Improvement during Strong Earthquakes –Observations and Lessons Learned**

Ground Improvement technologies have been applied to mitigate geotechnical earthquake hazards since the mid 1960's with general good performance. Design concepts and the understanding of potentially liquefiable soils have evolved over the past 30 years and a number of strong earthquakes (Loma Prieta '89, Kobe '95, Kocaeli '99, Christchurch '11, and Tohoku '11) have provided valuable observations of ground improvement performance. This presentation compiles notable performance records and highlights a number of ground improvement case histories and lessons learned that could assist the design and implementation of ground improvement for future earthquake prone liquefaction and/or lateral spreading mitigation.

**Biography:** Dr. Baez obtained a Civil Engineering degree in Construction Management (1986) and Master's degree in Geotechnical Engineering (1988) from NC State University; after some years of industry experience he obtained a PhD in Geotechnical Engineering from the University of Southern California (1995) under the advising committee of Professors Geoff Martin and Jim Mitchell.

Dr. Baez has over 28 years of experience as contractor, designer, and consultant in geotechnical construction and Ground Improvement Technologies. He is president and founder of Advanced Geosolutions Inc (AGI), a geotechnical contractor specializing in Design-Build ground improvement and specialty piles.

Juan has directly managed or supervised over 250 significant geotechnical construction projects in the US as well as Canada, Central and South America. Dr. Baez is author/co-author of more than 35 publications on seismic related ground improvement mitigation and geotechnical construction. He is an active member of the DFI Deep Soil Mixing and Ground Improvement committees, and has served as past chairman for the ASCE Geo-Institute's sponsored US-Japan Ground Improvement workshop committee. Juan is also a registered professional engineer in California, Oregon, Washington, Utah, as well as the Province of British Columbia.