GEOTECHNICAL PRACTICE PUBLICATION NO. 6

GeoTrends

The Progress of Geological and Geotechnical Engineering in Colorado at the Cusp of a New Decade

Edited by
Christoph M. Goss, Ph.D., P.E.
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PROCEEDINGS OF THE 2010 BIENNIAL GEOTECHNICAL SEMINAR

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Colorado Association of Geotechnical Engineers

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Preface

Like our dynamic earth, the practice of geotechnical engineering is always changing. Like the wind slowly carving a stone, we tweak methods developed by the soil mechanics pioneers. Like a massive rockslide, we switch from rules of thumb to detailed computer models. Like a fault, trending across the arid west, our practice seeks out weaknesses in our knowledge and technique and uplifts them to new levels of understanding. This book celebrates these GeoTrends as its papers reveal the changes in shoring and foundations, explore the role of sustainability and energy efficiency, expand our techniques for slope stability evaluation, and tie together the past and present as geophysical methods are used to locate the underground workings designed and built by our geo-ancestors.

Since 1984, the ASCE Colorado Section's Geotechnical Group, in collaboration with the Rocky Mountain Section of the Association of Environmental and Engineering Geologists and the Colorado Association of Geotechnical Engineers, has organized a biennial series of geotechnical seminars on a wide variety of themes that have been attended by as many as 270 civil/geotechnical engineers, geologists, and other geo-professionals. The geotechnical seminars have been held at area universities or hotels and have offered the opportunity for sharing ideas and experiences among Colorado's diverse geo-disciplines. Since 2004, ASCE's Geo-Institute has published the papers of these seminars in Geotechnical Practice Publications, allowing the experiences to be shared with a worldwide audience.

The GeoTrends Steering Committee convened in August 2009 and held monthly meetings to plan for the 2010 Biennial Geotechnical Seminar. The Steering Committee members included Joseph Kerrigan (Conference Chair), Dustin Bennetts, Mark Brooks, Robin Dornfest, Darin Duran, Dr. Christoph Goss, Joels Malama, Dr. Bill McCarron, Minal Parekh, Becky Roland, Keith Seaton, Jere Strickland, David Thomas, Mark Vessely Chris Wienecke, and Richard Wiltshire.

Christoph Goss, Joe Kerrigan, Joels Malama, Bill McCarron, and Richard Wiltshire

Acknowledgments

The GeoTrends Steering Committee wishes to take this opportunity to thank all of the authors and reviewers of our papers, which are herein presented as Geotechnical Practice Publication No. 6. The authors have spent many hours in preparing and finalizing their papers, which will be presented at the 2010 Biennial Geotechnical Seminar on November 5, 2010. These papers have been reviewed by a volunteer group of Denver area geo-professionals who put in their valuable time and helped make these papers even better. The Geo-Institute's Committee on Technical Publications completed its review of our GeoTrends papers in a very timely manner and their adherence to our aggressive publication schedule is greatly appreciated. We would also like to acknowledge the assistance of Donna Dickert of ASCE's Book Production Department for putting this publication together.

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