

# **Soils, Earthwork, and Foundations**

**A Practical Approach,  
Based on 2012 IRC® and IBC®**

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Soils, Earthwork, and Foundations:  
A Practical Approach  
Second Edition

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## ***PREFACE to 2<sup>nd</sup> EDITION***

The subjects in the first edition of this book were soils, earthwork, and foundations with insights into design, plan review, construction, and inspection. That book and the 2<sup>nd</sup> edition are intended to fill a void in technical publishing that has long existed between textbooks intended for use by professional engineers and knowledge gained by experience and on the job training that has been the traditional training ground for inspectors, construction personnel, and technicians. The contents are based on sound principles and up-to-date technology sharpened by the author's extensive construction exposure and forensic studies of failures. The first edition contained frequent references and coordination with the applicable chapters of the 2006 *International Residential Code*<sup>®</sup> and 2006 *International Building Code*<sup>®</sup>. The 2<sup>nd</sup> edition makes similar references to the 2012 *International Residential Code*<sup>®</sup> (IRC<sup>®</sup>) and the 2012 *International Building Code*<sup>®</sup> (IBC<sup>®</sup>). This is a unique feature rarely found in any similar textbook on the subject.

Studying the book will not make the reader an expert professional but will permit the reader to better communicate with geotechnical and structural professionals and benefit those who do code enforcement, plan reviews, construction inspections, laboratory testing, and construction related to foundations and earthwork. Architects and engineers will also benefit from the information on design and field applications. Engineering students and graduate engineers who are starting to work as professionals will find it helpful in bringing together coursework topics and practical applications.

While it is labeled a practical book, many of the topics are not thoroughly understood by all practicing engineers. One difficulty is that geotechnical engineers understand their discipline very well but may not always be familiar with the work of structural engineers; the opposite is also true. Designing foundations requires some crossover knowledge of geotechnical engineering, and geotechnical engineers should understand the needs of structural engineers. The author hopes that this book will help bridge that gap.

Important added features of the 2<sup>nd</sup> edition include greatly expanded discussions of earthwork, fill, compaction control, grading control, inspection, and Special Inspectors. Considerable discussion has also been added regarding the construction and inspection of roadways and parking lots.

The *Workbook* available with the first edition has been discontinued. Test questions are included at the end of each chapter in the 2<sup>nd</sup> edition, and there is an answer key following the Glossary.

This book will also benefit those who plan to participate in a certification exam on the subject of soils, earthwork, grading, and foundations through gained knowledge on the most important issues relevant to the subjects.

## ***ABOUT THE AUTHOR***

Kirby T. Meyer is a professional engineer licensed in Texas and Colorado who has a bachelor's and a master's degree in civil and geotechnical engineering from Texas A&M University and has studied at Harvard and the University of Texas, concentrating in geotechnical and foundation engineering. He has over 40 years' experience in the subjects of this book and is a Fellow of the American Society of Civil Engineers and a Diplomate of the Academy of Geo-Professionals. Contact him with questions and comments at MLAW Consultants and Engineers in Austin, Texas. E-mail address is [ktmeyer@mlaw-eng.com](mailto:ktmeyer@mlaw-eng.com).

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