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Titolo	ICE manual of geotechnical engineering . Volume 2 Geotechnical design, construction and verification / / edited by Michael Brown (University of Dundee, UK), John Burland (Imperial College London, UK), Tim Chapman (UK), Kelvin Higgins (Geotechnical Consulting Group LLP, UK), Hilary Skinner (COWI, UK), David Toll (Durham University, UK)
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Nota di contenuto	Contents and Preliminary Pages -- Section 5 Design of foundations -- Introduction to Section 5 -- Foundation types and conceptual design principles -- Shallow foundations -- Single piles -- Pile-group design -- Rafts and piled rafts -- Global ground movements and their effects on piles -- Building on fills -- Design principles for ground improvement -- Foundations subjected to cyclic and dynamic loads -- Section 6 Design of retaining structures -- Introduction to Section 6 -- Types of retaining walls -- Principles of retaining wall design -- Geotechnical design of retaining walls -- Geotechnical design of retaining wall support systems -- Geotechnical design of grouted anchors -- Retaining walls as part of complete underground structure -- Section 7 Design of earthworks, slopes and pavements -- Introduction to Section 7 -- Earthworks design principles -- Design of new earthworks -- Earthworks asset management and remedial design -- Slope stabilisation methods -- Design of soil reinforced slopes and structures -- Design of soil nails -- Earthworks material specification, compaction and control -- Pavement foundation design -- Section 8 Construction processes -- Introduction to Section 8 -- Procurement

and specification -- Sequencing of geotechnical works -- Groundwater control -- Types of bearing piles -- Piling problems -- Underpinning -- Ground improvement -- Embedded walls -- Soil reinforcement construction -- Rock stabilisation -- Soil nailing construction -- Grouted anchor construction -- Geotechnical grouting and soil mixing -- Modular foundations and retaining walls -- Section 9 Construction verification -- Introduction to Section 9 -- Quality assurance -- Principles of geotechnical monitoring -- Types of geotechnical instrumentation and their usage -- Technical supervision of site works -- Pile integrity testing -- Pile capacity testing -- Materials and material testing for foundations -- Observational method -- Close-out reports -- Index.

Sommario/riassunto

ICE Manual of Geotechnical Engineering, Second edition brings together an exceptional breadth of material to provide a definitive reference on geotechnical engineering solutions. Written and edited by leading specialists, now revised and updated with the latest guidelines and references, each chapter provides contemporary guidance and best practice knowledge for civil and structural engineers in the field. It considers the higher importance attached to the effects of construction on the environment and society. Key features in this wide-ranging update include * comprehensive reference for the core geotechnical engineering principles * theoretical principles and practical techniques in geotechnical engineering * uncertainties that may arise during the process of ground investigation * topic-focused chapters, including problematic soils, foundations, earthworks and retaining structures * fundamental principles of site investigation, design and construction processes. Volume II covers design of foundations, retaining structures and earthworks, slopes and pavements, construction processes and verification.This volume uses and builds on the principles and concepts, problematic soils and site investigation detail covered in Volume I. Part of the ICE Manuals series, ICE Manual of Geotechnical Engineering, Second edition is an essential guide and invaluable reference for practising civil and structural engineers, engineering geologists, architects, designers, consultants and contractors.