DOWNLOAD PDF PRINCIPLES OF FOUNDATION ENGINEERING BOOK

Chapter 1 : Principles of Foundation Engineering-9e- B. M. Das

A must-have resource for all foundation engineering courses, PRINCIPLES OF FOUNDATION ENGINEERING, 9th Edition provides a careful balance between current research and practical field applications as it introduces civil engineering students to the core concepts and applications of foundation analysis design.

Throughout the book, author Braja M. Das emphasizes the judgment needed to properly apply theories and analysis to the evaluation of soils and foundation design. In addition a wealth of worked out examples and figures show students how to do the work they will be doing as civil engineers, while homework problems at the end of each chapter help them hone their problem-solving skills. General Format of the Text. Numerical Methods in Geotechnical Engineering. Geotechnical Properties of Soil. Size Limits for Soils. Hydraulic Conductivity of Soil. Calculation of Primary Consolidation Settlement. Time Rate of Consolidation. Degree of Consolidation under Ramp Loading. Comments on Friction Angle. Correlations of Undrained Shear Strength. Natural Soil Deposits and Subsoil Exploration. Some Local Terms for Soil. Purpose of Subsurface Exploration. Exploratory Borings in the Field. Procedures for Sampling Soil. Sampling with a Scraper Bucket. Sampling with a Thin-Walled Tube. Sampling with a Piston Sampler. Observation of Water Tables. Iowa Borehole Shear Test. Preparation of Boring Logs. The General Bearing Capacity Equation. Case Studies on Ultimate Bearing Capacity. Effect of Soil Compressibility. Ultimate Bearing Capacity of Shallow Foundations: Foundations on Layered Clay. Bearing Capacity of Layered Soils: Stronger Soil Underlain by Weaker Soil. Weaker Soils Underlain by Stronger Soils. Bearing Capacity of Foundations on Top of a Slope. Bearing Capacity of Foundations on a Slope. Uplift Capacity of Foundations. Vertical Stress Increase in Soil. Stress Due to a Concentrated Load. Stress Due to a Circularly Loaded Area. Stress Due to a Line Load. Stress below a Rectangular Area. Stress Increase under an Embankment. Settlement of Shallow Foundation. Elastic Settlement of Foundation on Saturated Clay. Settlement Based on the Theory of Elasticity. Use of Strain Influence Factor. Primary Consolidation Settlement Relationships. Settlement Due to Secondary Consolidation. Tolerable Settlement of Buildings. Common Types of Mat Foundations. Bearing Capacity of Mat Foundations. Differential Settlement of Mats. Field Settlement Observations for Mat Foundations. Structural Design of Mat Foundations. Types of Piles and Their Structural Characteristics. Continuous Flight of Auger Pile. Equations for Estimating Pile Capacity. Frictionless Resistance Qs in Sand. Frictional Skin Resistance in Clay. Elastic Settlement of Piles. Pile Capacity for Vibration-Driven Piles. Elastic Settlement of Group Piles. Consolidation Settlement of Group Piles. Types of Drilled Shafts. Estimation of Load-Bearing Capacity. Drilled Shafts in Granular Soil: Load-Bearing Capacity Based on Settlement. Drilled Shafts in Clay: Settlement of Drilled Shafts at Working Load. Drilled Shafts Extending into Rock. Foundations on Difficult Soil. Definition and Types of Collapsible Soils. Physical Parameters for Identification. Foundation Design in Soils Susceptible to Wetting. General Nature of Expansive Soils. Foundation Considerations for Expansive Soils. Construction on Expansive Soils. General Nature of Sanitary Landfills. Settlement of Sanitary Landfills. Lateral Earth Pressure at Rest. Rankine Active Earth Pressure. Lateral Earth Pressure due to Surcharge. Rankine Passive Earth Pressure. Passive Pressure under Earthquake Conditions. Gravity and Cantilever Walls. Stability of Retaining Walls. Check for Sliding along the Base. Check for Bearing Capacity Failure. Construction Joints and Drainage from Backfill. Mechanically Stabilized Retaining Walls. Considerations in Soil Reinforcement. Retaining Walls with Metallic Strip Reinforcement. Retaining Walls with Geotextile Reinforcement. Retaining Walls with Georigid Reinforcement-General. Cantilever Sheet Pile Walls. Cantilever Sheet Piling Penetrating Clay. Holding Capacity of Anchor Plates in Sand. Ultimate Resistance of Tiebacks. Pressure Envelope for Braced Cut Design. Pressure Envelope for Cuts in Layered Soil.

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Chapter 2 : PDF Principles Of Geotechnical Engineering Free Download | Download PDF Journalist Esdeb

Originally published in the fall of , Braja M. Das' Seventh Edition of PRINCIPLES OF FOUNDATION ENGINEERING continues to maintain the careful balance of current research and practical field applications that has made it the leading text in foundation engineering courses.

Das and Nagaratnam Sivakugan Edition: Das is a renowned writer of his era and he wrote much best selling book in the field of geotechnical engineering, soil mechanics and foundation engineering. In thousands of civil engineering schools worldwide, books of B. Das are compulsory for undergraduate, graduate and research. Principles of Foundation Engineering by B. Das is one of the most read and practiced book in the field of foundation engineering. Students worldwide are learning the basics of this awesome foundation engineering book. Many more researchers are using this book to complete their research with thoughtful information. The ninth edition of Principles of Foundation Engineering is full of attractions. It includes new ideas and things that were not present in the previous versions. Principles of Foundation Engineering, 9e enriches its text with the proper insertion of references of recently done researches. The new edition includes more pictures, tables, graphs and annexures that will help you learn foundation engineering better than ever. Das emphasized on the worked out problems so that the real-life foundation engineering problems become easy to solve and realistic. The authors included three types of worked out examples, easy problems; simple problems and hard problems. These help the student get a better idea of the concept of solving maths related to foundation engineering. The realistic approach is one of the key ideas they inserted throughout the book. The authors made a good combination of practiced approaches in foundation engineering and theories. They showed the variation between theory and real-life situation. This book is a must-have book if you really realize the necessity of learning. Know more about B.

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Chapter 3 : Principles of Foundation Engineering: Books | eBay

Principles of Foundation Engineering by Braja M. Das A readable copy. All pages are intact, and the cover is intact. Pages can include considerable notes-in pen or highlighter-but the notes cannot obs.

Ads Book Preface The design of foundations of structures such as buildings, bridges, and dams generally requires a knowledge of such factors as a the load that will be transmitted by the superstructure to the foundation system, b the requirements of the local building code, c the behavior and stress-related deformability of soils that will support the foundation system, and d the geological conditions of the soil under consideration. To a foundation engineer, the last two factors are extremely important because they concern soil mechanics. The geotechnical properties of a soilâ€”such as its grain-size distribution, plasticity, compressibility, and shear strengthâ€”can be assessed by proper laboratory testing. In addition, recently emphasis has been placed on the in situ determination of strength and deformation properties of soil, because this process avoids disturbing samples during field exploration. However, under certain circumstances, not all of the needed parameters can be or are determined, because of economic or other reasons. In such cases, the engineer must make certain assumptions regarding the properties of the soil. To assess the accuracy of soil parametersâ€”whether they were determined in the laboratory and the field or whether they were assumedâ€”the engineer must have a good grasp of the basic principles of soil mechanics. At the same time, he or she must realize that the natural soil deposits on which foundations are constructed are not homogeneous in most cases. Thus, the engineer must have a thorough understanding of the geology of the areaâ€”that is, the origin and nature of soil stratification and also the groundwater conditions. Foundation engineering is a clever combination of soil mechanics, engineering geology, and proper judgment derived from past experience. To a certain extent, it may be called an art. When determining which foundation is the most economical, the engineer must consider the superstructure load, the subsoil conditions, and the desired tolerable settlement. In general, foundations of buildings and bridges may be divided into two major categories: Spread footings, wall footings, and mat foundations are all shallow foundations. In most shallow foundations, the depth of embedment can be equal to or less than three to four times the width of the foundation. Pile and drilled shaft foundations are deep foundations. They are used when top layers have poor load-bearing capacity and when the use of shallow foundations will cause considerable structural damage or instability. The problems relating to shallow foundations and mat foundations are considered in Chapters 3, 4, 5, and 6. Chapter 11 discusses pile foundations, and Chapter 12 examines drilled shafts. This chapter serves primarily as a review of the basic geotechnical properties of soils. It includes topics such as grain-size distribution, plasticity, soil classification, effective stress, consolidation, and shear strength parameters. It is based on the assumption that you have already been exposed to these concepts in a basic soil mechanics course.

Chapter 4 : Principles of Foundation Engineering

Braja M. Das' Sixth Edition of PRINCIPLES OF FOUNDATION ENGINEERING maintains the careful balance of current research and practical field applications that has made it the leading text in foundation engineering courses. Featuring a wealth of worked-out examples and figures that help students with.

Chapter 5 : Principles of Foundation Engineering by Braja M. Das

Dr. Braja Das is Dean Emeritus of the College of Engineering and Computer Science at California State University, Sacramento. He received his M.S. in Civil Engineering from the University of Iowa and his Ph.D. in Geotechnical Engineering from the University of Wisconsin.

Chapter 6 : Principles of Foundation Engineering - Braja M. Das - Google Books

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FUNDAMENTALS OF GEOTECHNICAL ENGINEERING, 5E offers a powerful combination of essential components from Braja Das' market-leading books: PRINCIPLES OF GEOTECHNICAL ENGINEERING and PRINCIPLES OF FOUNDATION ENGINEERING in one cohesive book.

Chapter 7 : Principles of Foundation Engineering, SI Edition | RedShelf

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Chapter 9 : Principles of Foundation Engineering (7th edition) - PDF Book

Featuring a wealth of worked-out examples and figures that help students with theory and problem-solving skills, the book introduces civil engineering students to the fundamental concepts and application of foundation analysis design.