1. Record Nr. UNINA9910483229203321 Autore Zhu Hanhua Titolo Methodology of highway engineering structural design and construction // Hanhua Zhu, Lei Shi Pubbl/distr/stampa Singapore:,: Springer,, [2021] ©2021 **ISBN** 981-15-6544-9 Edizione [1st ed. 2021.] Descrizione fisica 1 online resource (XI, 269 p. 171 illus., 89 illus. in color.) Collana Advanced Topics in Science and Technology in China; ; Volume 59 Disciplina 625.7 Soggetti Highway engineering Roads - Design and construction Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references. Philosophy and thinking methods -- Methodology of highway Nota di contenuto engineering -- Comprehensive research analysis -- Simplification of complex engineering problems -- Typical engineering applications --Typical engineering suggestions. Sommario/riassunto This book mainly studies the methodologies of structural design and construction for highway engineering, which are applicable to the overall control and the precise operation of engineering structures. It explores the method of comprehensive analysis, the simplification of complex problems, and the application of typical engineering tools. In turn, the book presents a number of innovative approaches, e.g. the coordinated control of structural deformation method, the theory of underground engineering balance and stability, and the soft soil foundation treatment of "bumping at the bridgehead." These methodologies are then illustrated in typical cases and representative problems, explained from a practical standpoint. Examples in special settings are also discussed, e.g. highway construction in Tibet, and

rebuilding after the Wenchuan earthquake. The book offers a valuable reference guide for all those whose work involves highway engineering

design, construction, management, and scientific research.