

Abstract

Manar Abd-El-Hameed

Soil Improvement Techniques

Soil at a construction site may not always be totally suitable for supporting structures in its natural state. In such a case, the soil needs to be improved to increase its bearing capacity and decrease the expected settlement. This paper gives an overview of techniques that are commonly used to improve the performance of saturated clayey soil in situ, its functions, methods of installation, the applicable soil types and cost of those techniques. Then, this study concluded that there is an urgent need to study the technique of removal and replacement for improving soil behavior taking into consideration geotechnical requirements (i.e. bearing capacity and settlement) and cost to achieve the optimum thickness of replacement layers and the most suitable material corresponding to minimum total cost of foundation works.