

Investigation of the Effect of Fine-Grained and Its Plastic Properties on Liquefaction Resistance of Sand

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Abstract : The purpose of this paper is to investigate the effect of fine grain content in soil and its plastic properties on soil liquefaction potential. For this purpose, the conditions for considering the fine grains effect and percentage of plastic fine on the liquefaction resistance of saturated sand presented by researchers has been investigated. Then, some comprehensive results of all the issues raised by some researchers are stated. From these investigations it was observed that by increasing the percentage of cohesive fine grains in the sandy soil (up to 20%), the maximum shear strength decreases and by adding more fine-grained percentage, the maximum shear strength of the resulting soil increases but never reaches the amount of clean sand.

Keywords : fine-grained, liquefaction, plasticity, shear strength, sand

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