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Geotechnical Properties of Problematic Soils Emphasis on Collapsible Cases

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ABSTRACT

Soils are unconsolidated materials that are result of weathering and erosion process of rocks. When water content of some soils change, it makes problems to civil activities. These problems include swelling, dispersing and collapse. The change of water content of expansive soils causes to changes their volume. The volume change can damage structures that have built on the soils. In dispersive soils, particles move through soils with water flow. It may be conduits form in the soils. Collapsible soils are settled when saturated under loading. The rapid collapse of soils damages the structures which have built on soil. Problematic soils are formed in especial geological conditions. For example, collapsible soils are often founded in semi-arid area. Field observation and laboratory test can be useful to identify problematic soils. Some properties of soils such as dry density and liquid limit are helpful to estimate collapsibility potential of soils. In this regard, it was done a series laboratory tests to evaluate the collapsibility rate.

KEYWORDS

Soil; Collapse; South Rudasht; Dorcheh; Sivand

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