

Investigation on, Suitability of Cohesionless Soil as a Highway Construction Material

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Major part of the Eastern and Northern provinces of Sri Lanka covered with Cohesionless soil which is available abundance in this region. It is important that utilization of locally available soil for the construction of the sub base of these roads to optimize the cost and reduce the environment impact. Recently it was noticed that failure in these roads which were constructed with this soil.

It is suspected that failure, such as developing cracks and settlements due to properties of used locally available sandy soil which was complied with specification requirement. Objective of this paper is to analyse and improve specification requirements. As well propose methods of utilization of cohesionless soil as a highway construction material. Initially, visited related road constructions and spoke to resource personalities. Further, observed the change of soil properties such as grading, maximum dry density, CBR value, Plasticity index, and liquid limit by mixing different type of clays with pure coarse sand. Laboratory test results and field visit experiences have helped us to propose the construction methods when cohesionless soil is used.

Key words: Cohesionless soil, Sieve Analysis, Proctor Compaction, Atterberg Limit, CBR

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