

## Effects of Rockdust as a Soil Stabilizing Agent on Poor Subgrade Soil

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**Abstract :** Pavement destruction is normally associated with the horizontal relocation of subgrade because of pavement engrossing water and inordinate avoidance and differential settlement of material underneath the pavement. The aim of the research is to study the effect of the additives (rockdust) on the stability and the increase of bearing capacity of selected soils in Mardan City. The physical, chemical and designing properties of soil were contemplated, and the soil was treated with added admixture rockdust with the goal of stabilizing the local soil. The stabilization or modification of soil is done by blending of rock dust to soils in the scope of 0 to 85% by the rate increment of 5%, 10%, and 15% individually. The following test was done for treated sample: Atterberg limits (liquid limit, plasticity index, plastic limit), standard compaction test, the California bearing test and the direct shear test. The results demonstrated that the gradation of soil is narrow from the particle size analysis. Plasticity index (P.I), Liquid limit (L.L) and plastic limit (P.L) were shown reduction with the addition of Rock dust. It was concluded that the maximum dry density is increasing with the addition of rockdust up to 10%, beyond 10%, it shows reduction in their content. It was discovered that the Cohesion C diminished, the angle of internal friction and the California bearing ratio (C.B.R) was improved with the addition of Rock dust. The investigation demonstrated that the best stabilizer for the contextual investigation (Toru road Mardan) is the rock dust and the ideal dosage is 10 %.

**Keywords :** rockdust, stabilization, modification, CBR

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