Department : **Civil**

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Guided By

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Project Title

"SOIL STABILISATION USING WASTE PLASTIC"

Abstract:

Soil stabilisation can be done in number of ways. But the stabilisation using waste plastic strips is an economic method since the stabilizer used here is waste plastic materials, which are easily and cheaply available. This report presents the various tests conducted on fiber reinforced soil with varying fiber content and different aspect ratio and their results are analyzed such that it can be used in the fields. Therefore, it is of utmost importance considering the design and construction methodology to maintain and improve the performance of such pavements. In this project, plastic such as shopping bags is used to as a reinforcement to perform the CBR studies while mixing with soil for improving engineering performance of sub grade soil. Plastic strips obtained from waste plastic were mixed randomly with the soil. A series of California Bearing Ratio (CBR) tests were carried out on randomly reinforced soil by varying percentage of plastic strips with different lengths and proportions. Results of CBR tests demonstrated that inclusion of waste plastic strips in soil with appropriate amounts improved strength and deformation behavior of sub grade soils substantially. The proposed technique can be used to advantage in embankment/road construction, industrial yards etc.

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