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PET as Soil Stabilization Material

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Abstract: This project deals with complete analysis improvement of soil properties and its stabilization using plastic waste bottles [PET]. Improving an onsite soil engineering properties is known as soil stabilization. This technique of soil stabilization can be effectively used to meet the challenges of society. Since soil is a key element of this nature and all this basic needs of life such as food, clothes and houses are fulfilled by soil and use of plastic as soil stabilizer would reduce the amount of waste dumped in land, oceans and to reduce hazardous effects on environment. In present situation, stabilizing of soils is of almost importance in balamathi region on Vellore, which makes them suitable for various construction activities. Through this project laboratory investigation is carried out on sub grade soil sample admixed with plastic bottle strips at different percentages of 1% and 2% and they are tested to increase properties and behaviors of soil sub base by various experiments like specific gravity , sieve analysis , proctor compaction test , swell index test , unconfined compressive strength test and CBR test . Then the experimental data isanalyzed to find out variation in properties of the plastic admixed soil with respect to soil sample.

Keywords: PET Strips, soil samples, CBR test, UCC test, proctor compaction test, free swell index test.

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