

## Article

## Stabilization of expansive subgrade soil with bagasse ash and geosynthetic reinforcement

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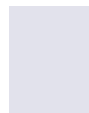
## Abstract

Expansive soil deposits are problematic to structures built over them because of their tendency to swell on wetting and shrink on drying. To overcome this, properties of soil must be improved by artificial means known as 'soil stabilization'. Soil stabilization with the objective of improving or controlling its volume stability, strength and durability is needed. The project is proceeded with an objective to study the effect on replacement of clay with bagasse ash as stabilizing agent in varying proportions and to determine the optimum content of the same. In this phase, the engineering properties of clay, such as particle size distribution, Atterberg's limits, optimum moisture content, maximum dry density, unconfined compressive strength and California bearing ratio are determined. Based on the results, the clay is classified as clay of high compressibility (CH) as per BIS. Bagasse ash was added to clay in varying proportions from 0% to 20% and all the geotechnical properties are studied. The study highlights the significant increase in properties of clay obtained at 10% replacement of bagasse ash.

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