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## *Stabilization of soil using geogrids*

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## **Abstract:**

Soil Stabilization can be done in many ways. Soil Stabilization is mainly done to improve the strength of soil and bearing capacity of sub grade soil. Geogrid is most used stabilizer in stabilization of soil in increasing the engineering properties of geogrid. Our project includes the usage of geogrids in reinforcement of soil. As we know that the civil structures have the problems like embankments, steep slopes, soil erosion, cracks, potholes, settlement, etc. These are mainly due to insufficient Engineering properties (like shear strength, specific gravity, etc.). In this case we use the geogrid material for increase the engineering properties of the soil. In laboratory we do Standard Proctor Compaction test, California Bearing Ratio Test (CBR) using soil samples with and without the inclusion of geogrid. In CBR Test the Geogrid strips are tested by varying the position of it in the mould at  $h/4$ ,  $h/2$ , and  $3h/4$  from the bottom of the positions and results showed that at  $3h/4$  position from the bottom of the specimen has high CBR value compare to other positions and without geogrid. In Compaction Test the geogrid was cut into little pieces of 2%, 4%, 6%, 8%, and 10% of geogrid and added to the soil then compacted, the experimental results showed that there was a significant improvement in dry density up to 6%, then it decreased due to the replacement of soil particles by too many geogrid pieces.

## **Keywords:**

Soil Stabilization, Geogrids, Reinforcement, Soil Compaction, CBR Value.