OJCE> Vol.2 No.4, December 2012

OPEN ACCESS

Analysis of the Influence Factors of Differential Settlement of High Embankment in Mountain Area

PDF (Size:271KB) PP. 214-217 DOI: 10.4236/ojce.2012.24028

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ABSTRACT

This paper reveals and analyses various influence factors which cause differential settlement of high embankment in mountain area using indoor consolidation test and field loading test. In this research, the actual stress characteristics of high embankment are simplified, stability compression value of stuffing with loads under lateral restricted conditions can be measured, e-p curves and p-s curves are drawn, we can calculate compression modulus as computation criteria to estimate the settlement of high embankment. The results indicate that unconsolidated flow of high embankment is the main factor to cause differential settlement of high embankment in mountain area. As the soil consolidated, compressive deformation and the strength gradually increase, the bearing capacity of the foundation is enhanced to reduce differential settlement of the post-construction of high embankment.

KEYWORDS

Road Engineering; High Embankment; Differential Settlement; Consolidation Test

Cite this paper

M. Geng and Y. Dou, "Analysis of the Influence Factors of Differential Settlement of High Embankment in Mountain Area," *Open Journal of Civil Engineering*, Vol. 2 No. 4, 2012, pp. 214-217. doi: 10.4236/ojce.2012.24028.

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