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The Effect of Earthquake Loading on Soil Behaviour

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Abstract: Recently, a significant amount of attention has been focused on earthquake forces and the general seismicity of the Caribbean region. This has led to the formulation of a CCEO Draft Seismic Code. Based on the records of seismic activity, it has been recommended that the Caribbean region be treated as Zone 3 of the United States Uniform Building Code. It is generally accepted that local geology and soil conditions play an important part in the seismic effects on structures. This paper presents the general status of knowledge of the effects of seismic forces on the engineering properties of soil. It is the product of a relatively intensive literature search. It is hoped that this paper will permit an understanding of soil behaviour under seismic loadings so that the effects of localised soil conditions may be catered for with more confidence.

Keywords: Earthquake, seismic loadings, building code, soil behaviour, Caribbean