

ABSTRACT

Liquefaction accompanied by strong earthquake is destructive to the built environment. If not studied and prevented, then more lives and properties will be endangered.

The general method applied is by using the unit weight, fines content and SPT blow count of the soil and the depth of water table based on Seed and Idriss' (1982) empirical relation between the standard penetration resistance and the cyclic stress ratio required to cause liquefaction and by using the simplified methods of Luna and Frost (1998) in evaluating liquefaction potential index of saturated soils.

Selected borehole sites subjected to high and moderate susceptibility of liquefaction within Cavite City, Municipality of Kawit, Municipality of Rosario, and the northern part of Bacoor City, which are located along coastlines, are evaluated in this study.

An excel program for analyzing liquefaction potential was developed. The program is capable of identifying whether a certain location is liquefiable or not using its soil properties as variables. The program developed performs all the necessary computations ending with the factor of safety and then evaluated to acquire the liquefaction potential index.

The results attained in this study are not representative as a whole of their respective areas.