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## Abstract

Present scenario of the engineering practice is indulged in the search of highly developed methods to judge the earth's retaining walls under seismic conditions which are mostly empirical and based on experience rather than the theories. Understanding the nature of earth retaining structures in unstable events caused by natural phenomena is one of the oldest problems in geotechnical engineering. The destructive effects of earthquakes make the problem more crucial. Despite of the numerous in depth research and vast studies over the

years, the dynamic response of earth retaining structures is far from being well understood and controlled. As a result, current engineering practice lacks practically firm information that may be used to improve the designs. The most commonly used methods to design retaining structures under seismic conditions are Force equilibrium based pseudo-static analysis [9], Pseudo dynamic analysis [17], and Displacement based sliding block method. This Paper presents the detailed study of various finite element and numerical models for the retaining structure which are commercially available program and previously used, so as to develop a new simplified model which can help in understanding the dynamic behaviour of retaining structures.

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