ABSTRACT :

In this research the variation of the base shear and lateral displacement of tall buildings with regard to factors such as different resisting systems and soil structure interaction is studied .

It is meant to do a close investigation on how the amplification factor of a building on different flexible soils changes .

This amplification is computed due to ground acceleration as well as displacement .

Then it can be concluded that from which periods the design of a tall building is more sensitive to displacements rather than forces .

The structural systems included are multistory buildings having two different lateral resisting systems , namely , tube and outrigger bracing . These are modeled as plane frames with a lateral stiffness according to their specific resisting systems .

A series of dynamic and spectral analysis is conducted on these buildings supported on soil springs and dampers using consistent earthquake records and period-related maximum base shears and displacements are calculated .