Thesis Title

A Study of Free Vibration of Low Rise Public Buildings

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Abstract

This thesis studies about free vibration of low rise public building and houses, an approximation of free vibration period of low rise building, base shear and distribution of lateral forces at each level of the buildings.

The free vibration periods and mode shapes were determined by using computer program, XETABS95. Free vibration periods from this analysis vary in the range of 0.16 - 0.81 second which, according to the response spectra, indicate that the low rise buildings have high response to earthquake force.

Free vibration analysis of low rise public buildings shows that the vibration period of the building depends on the height of the building while the lateral dimension of the building in the direction parallel to the earthquake has little effect on the vibration period of the building.