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عنوان البحث:

The Effects of Existence of Transfer Slab System on the Seismic Behaviour of RC Building

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Abstract: A comparative analytical study for the structural dynamic behavior of multi-story R.C. building that implies a transfer slab system in one of its floor slabs, is presented. The study aims to improve the general understanding of the effects of transfer slab system in the R.C. buildings on their seismic behavior. The vertical position of transfer slab system with respect to the building height, is investigated. A plane frame model of R.C building, subjected to different ground motions, is studied. The ground motion is simulated through sets of natural accelerograms used in time history analyses. The change in the behavior of R.C. building models is evaluated by comparing results of maximum story drift ratios, maximum shear story and local damage distribution along the height of the building for different models. The damage indices are obtained through time history analyses for different plane frame models by using modified Park-Ang damage index indication. The time history analysis is performed in computer code (IDARC2D, 2006). The study output is based upon analyzing and comparing the results of different models to infer some of the principles that should be taken into account when designing this kind of buildings.