

عنوان مقاله:

Assessment of seismic behavior of RC buildings retrofitted with steel knee bracing based on non-linear dynamic analysis

محل انتشار:

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خلاصه مقاله:

In this study, the seismic reliability of a short-rise reinforced concrete (RC) building retrofitted using knee steel braces is investigated through non-linear dynamic analysis. As a case study, a three story RC building was selected. The design of selected sample building was made with reference to Iran seismic resistant design of building-code of practice 2800. The effectiveness of using knee braces in retrofitting buildings was examined. The effect of distributing the steel braces over the height of the RC frame on the seismic performance of retrofitted building was studied. For the strengthening of the original structure knee bracing frame (KBF) was applied with four different spatial distribution in the structure. The improvement of seismic reliability achieved through the use of knee braces was evaluated by comparing the displacement of stories. As a result of this study, the improvement in seismic performance of this type of short-rise RC building resulting from retrofits by steel knee braces was obtained by stories displacement diagrams

کلمات کلیدی:

knee bracing frame; RC buildings; non-linear dynamic analysis

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