

## EFFECTIVENESS OF INCLUSION OF STEEL BRACING IN EXISTING RC FRAMED STRUCTURE

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### ABSTRACT

Steel braced frame is one of the structural systems used to resist earthquake loads in structures. Many existing reinforced concrete structures need retrofitting to overcome deficiencies and to resist seismic loads. The use of steel bracing systems for strengthening or retrofitting seismically in adequate reinforced concrete frames is a viable solution for enhancing earthquake resistance. Steel bracing is economical, easy to erect, occupies less space and has flexibility to design for meeting the required strength and stiffness. In the present study multi-storey building, of ten storey with varying length to breadth ratio have been modelled using SAP 2000. SAP 2000 is used to perform linear and nonlinear dynamic analysis. In this study R.C.C. building is modeled and analyzed in three Parts I) Model without bracing and shear wall II) Model with shear wall system III) Model with different bracing system. It was found that steel bracing significantly reduces the lateral drift.

**KEYWORDS:** Analysis, Earthquake Strengthening, Retrofit, Seismic Performance, Steel Braced RC Structures