

PREFACE

An earthquake is a very dangerous natural disaster i.e. brought on by the tectonic plates moving within the earth's core. Many constructions fall as a result of earthquakes, causing fatalities among people. The Base Isolation System is a technique for minimizing an earthquake's effects on the building by absorbing its shaking forces. In order to minimize base shear, increase time & storey-displacement, and decrease storey-drift, the design of base isolation bearing is optimized from the cumulative load of column of fixed base structure.

Here, we are considering the design of G+12 & G+22 storey RC building with fixed base and isolated base. For design of a based isolated structure, LRB and TFPB are used. Analyzing and designed of these two type of structure with different model case are carried out by response spectrum method in ETABS 2016 software. LRB & TFPB are design according to axial load, biaxial load and uniaxial load (Cumulative load from fixed base modal). Time period, base shear, story displacement, story-drift, percentage reduction in steel, and overall cost economy will be determined for all model situations after evaluating the framework. With the use of LRB and TFPB as base isolators, it is found from this study that time period and story displacement increased while base shear, story drift, percentage of steel reduction, and overall cost were reasonably enhanced.