

EFFECTS OF VARIOUS TYPES OF STEEL BRACINGS ON RCC STRUCTURE UNDER SEISMIC LOADS

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One of the most dangerous, environmentally harmful, damaging, and life-threatening natural occurrences that produces ground shaking is an earthquake. We must therefore construct the buildings to resist these earthquakes, which may occur at least once over the life of the structure, in order to prevent damage to the structures. In order to increase the stiffness and strength of structures, lateral load resisting systems are added to the frames. Elements that can withstand lateral loads are bracing, shear walls, dampers, etc. In the current work, Response spectrum analysis is used to examine a G+10 RCC building with different types of bracing, including V, chevron, diagonal and X bracing. The bracing is provided for corner bays of peripheral columns of structure. The modelling and analysis of the structure is done by using ETABS software in accordance with IS: 1893 (Part1):2016. In this work, story displacement and story drift of 5 braced building models are examined and compared with bare frame model. It is found that after using of steel bracing in building its stiffness increases.

Keywords—Response spectrum analysis, story displacement, story drift, steel bracing, etc.