

Dadi Institute of Engineering & Technology



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Study of Seismic Analysis Of Multi Story Buildings With And Without Basements

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Abstract: Plane frame analysis of three models of Reinforced concrete moment resisting frame open first storey building without basement and with basement of one level and two levels respectively has been done to study the inter storey drift, storey shears, lateral displacements, bending moments in columns of the ground storey, stiffness irregularity and column strength. The software STAAD-PRO has been effectively used for the equivalent static analysis of the building frames. The analyses of the three models have been done considering seismic loads. The seismic loads are taken in both X direction and Z direction. The loadings are defined as per IS: 875-1987 part I "Dead load", part II "Imposed load". Equivalent static analysis is performed on the models of the building as per IS: 1893-2002. The study reports on the evaluation of buildings with and without basements. The focus of the study was on columns of the open ground story. A summary of this evaluation is presented and discussed. This study report also involves in the comparisons of the lateral displacements at all floors of the open ground story building having no basement with buildings having one level and two levels of basements respectively.