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Comparison of Analysis and Design of Regular and Irregular Configuration of Multi Story Building in Various Seismic Zones and Short Column Effect through Various Types of Soils using in STAAD

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Abstract: *Short column effect is cause to failure of columns which may result in severe damages or even collapse during earthquakes. The scope of the study is mainly to reveal the effect of short column on the holistic behavior of the buildings. The adverse effect of the short column on the response of buildings is shown in terms of the total load factor and displacement capacity of building. The response of buildings in terms of ground storey displacements is presented in figures and discussed. Various other factors influencing the short column behavior are discussed. A G+4 storey RCC building responses are checked for both the building constructed on plane and at an inclined ground using STAAD pro. Both the static and dynamic analysis are performed on both the buildings. The buildings members are thus compared with various important components of structural analysis such as for shear force, bending moments, displacements, deflections and torsion. Shear wall as a solution to the prevention of short column effect is designed and used at different positions and checked for the changes in terms of the torsion, displacements, shear and frequency of vibration and time period of vibration through mode shapes.*

Keywords: Short Column Effect

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