Seismic Analysis of Horizontal and Vertical Irregular RC Multi Storey Building With Effect of Opening in Shear Wall

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Abstract: *At present days building a structure with all the regular configurations is not feasible in most of the cases due to the irregular plot dimensions, aesthetic visual and functional requirements in the urban cities. The structure with more irregular configuration either horizontally or vertically are more vulnerable to earthquake which leads to collapses of structure, property loss and casualties. The shear walls are commonly used as a vertical element. Shear walls may have one or more openings for functional reasons such as windows, ventilation and other types of openings in shear wall. Frequently the shear wall is provided with openings thus necessary to study effect of irregular building. The present study was carried out the opening in shear wall with different shape of RC multi-Storey building and Study different building model with Combination of Horizontal & Vertical irregularities. The models were created using the ETABS software with Full Shear walls, Shear walls with a 25% opening. The location of the Shear wall was optimal. Prepared models of G+9 story and Analyze the model by Response Spectrum Analysis and Compare the Result with different buildings layout with parameters like storey Displacement, Storey Shear, Storey Drift, Storey Stiffness, Base shear, Torsion, Time Period and Mode Shape*

Keywords: Response Spectrum Analysis, Vertical & Horizontal Combination of Irregularity, Regular and Irregular building, Shear wall with Opening