

# MICROZONATION STUDIES

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Seismic microzonation is a process of subdividing a potential seismic or earthquake prone area into zones with respect to geological and geophysical characteristics of the sites such as ground shaking, liquefaction susceptibility, landslide and rock fall hazard, earthquake-related flooding, so that seismic hazards at different locations within the area can correctly be identified. Microzonation provides the basis for site-specific risk analysis, which can assist in the mitigation of earthquake damages. Thus seismic microzonation is the process of estimating the response of soil layers under





earthquake excitations and thus the variation of earthquake characteristics on the ground surface.

Regional geology can have a large effect on the characteristics of ground motion. The site response of the ground motion may vary in different locations of the city according to the local geology. This necessitates the development of microzonation maps for big cities, which can serve as a basis for evaluating site-specific risk analysis, which is essential for critical structures like nuclear power plants, subways, bridges, elevated highways, sky trains and dam sites. Seismic microzonation requires multi-disciplinary contributions as well as comprehensive understanding of the effects of earthquake generated ground motions on man made structures.

We provide an exhaustive range of multidisciplinary equipment and services both for laboratory and field testing for evaluating the dynamic characteristics of site such as Predominant Period, Amplification Factor, Shear Wave Velocity etc. Our product offerings include Standard Penetration Test equipment, Seismic Cone Penetrometer, Cyclic Ring Shear, Resonant Column, Hollow Cylinder Apparatus, Cyclic Triaxial, MASW, Crosshole Shearwave System, Multi Channel Resistivity System, Exploration Seismographs, Step Frequency GPR with borehole and wire antennas etc.

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