عنوان مقاله:
An Investigation of Local Site Effects Using Linear and Nonlinear Analysis and Comparison between Them

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خلاصه مقاله:
Recent code provisions for building and other structures (1994 and 1997 NEHRP provisions, 1997 UBC) have adopted new site classification. The new site classification system is based on average shear wave velocity to a depth of 30 m. when the shear wave velocity is not available; other soil properties such as undrained shear strength can be used. The study of propagation damages in various earthquakes illustrates the importance of the site effect on the ground seismic characteristics. From the point of the earthquake engineering view, the most important characteristics of the strong ground motion are amplitude, frequency content and duration. All of these properties have a significant effect on earthquake damage. The behavior of soils under cyclic loading is basically nonlinear and hysteretic. Ground response analysis is used to predict the movements of the ground and develop a design response spectrum in order to determine the dynamic stresses and strains and earthquake forces. The profile was studied by using various methods of soil response analysis and finally, the results were examined. In this paper, soil responses were examined by NERA, EERA software and the results compared with each other. Eventually, we concluded that the values obtained from the EERA are more than the value obtained from the NEERA software.

كلمات کلیدی:
EERA; NERA; Site Effect; Ground Response

لینک نیت مقاله در سویلیکا:

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