

複支承設計轉換線之探討分析

The bridge is a most crucial structure as far as transportation is concerned. This structure, however, is liable to be damaged by ground excitation. The multiple-support analysis, although having been used to describe the seismic behaviors of the bridge effectively, is pretty tedious. It is therefore desired in this research to establish a "transformation curve for multiple-support design" such that those who are engaged in a rigid-base analysis may obtain the same results as acquired by the use of multiple-support scheme, as long as detecting the values of transformation coefficient from the maps concerned. During the study, the effects of multiple-support excitation would be discussed in linear range first, and extended into nonlinear domain subsequently, as to enhance the applicability of the proposed transformation curves. All the influences upon seismic behaviors of bridges due to span length, velocity of shear wave and the nature of earthquake period will also be investigated in detail.