

## عنوان مقاله:

Effect of subway tunnel depth assessment on seismic ground response

## محل انتشار:

دومین همایش ملی توسعه پایدار در راهسازی با رویکرد حفظ محیط زیست (سال: 1395)

تعداد صفحات اصل مقاله: 8

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## خلاصه مقاله:

The earthquake motion amplifies while traveling upward through the soil layers. The amplification not only depends on the properties of the soil but also the presence of underground structures such as subway tunnels, tunnel and military facilities. In this paper, the effect of subway tunnel and soil layers on ground surface response is assessed. For this purpose a finite difference approach with FLAC-2D, is considered to study the scattering of seismic shear waves. Two different models which are, without tunnel and with a horseshoe shaped tunnel are considered. The variation of the Peak Ground Acceleration (PGA) ratio ( $PGA_{\text{tunnel}} / PGA_{\text{free-field}}$ ) at the ground surface versus the horizontal distance are described as the main results of this paper. According to the results by increasing the depth of the buried tunnel, PGA ratio decreases, also the location of the highest PGA ratio shift at a larger horizontal distances.

## کلمات کلیدی:

Underground structure, Subway tunnels, Seismic ground response, PGA ratio

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/572741>

