

## عنوان مقاله:

Effect of Soil Improvement on Seismic Behaviors of Anchored Sheet Pile Walls Embedded in Liquefiable Sites

## محل انتشار:

دهمین کنگره بین المللی مهندسی عمران (سال: 1394)

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## خلاصه مقاله:

Dynamic response of anchored sheet pile quay walls embedded in liquefaction susceptible soil was investigated numerically utilizing strain space plasticity model for cyclic mobility available in DIANA finite element program. Based on the results, the extension of liquefiable soil around the wall root, leads to the failure at embedment mode. Remediation method by deep vibro-compaction of weak area is considered as the liquefaction countermeasure. Effectiveness of soil improvement in zones adjacent to embedded section is discussed based on analytical dynamic responses. Implemented countermeasures are found to considerably reduce deformations of the wall. The compacting of this section not only reduces driving moment applied to the wall root, but also creates resistant moment against root escaping. In addition to the impacts of base acceleration amplitude, the optimum extension of improved zones is introduced

## کلمات کلیدی:

Liquefaction, Sheet pile, Compaction, Numerical

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/364638>

