

## عنوان مقاله:

Effect of fine content on lateral wall movement of bearing reinforcement earth (BRE) Walls

## محل انتشار:

چهارمین کنفرانس بین‌المللی رفتار بلندمدت و فن‌آوری‌های نوسازی سازگار با محیط زیست سدها (سال: 1396)

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## خلاصه مقاله:

This paper presents a numerical parametric study on lateral movement of bearing reinforcement earth (BRE) walls with different backfill properties using the finite element method software PLAXIS 2D. The backfill materials consisted of four types of soils, which were mixtures of silty clay and sand at different fine contents of 2, 20, 40, and 80% by dry weight. The model parameters for the numerical simulation were obtained from the conventional laboratory tests and back-calculated from the laboratory pullout tests of the bearing reinforcement. The geotextile elements were used to model the bearing reinforcements by converting the contribution of friction and bearing resistances to the equivalent friction resistance, which was represented by the soil-bearing reinforcement interaction ratio,  $R_{um}$ . The relationship between the maximum horizontal wall movement and the fine content can be expressed by a polynomial function. The maximum horizontal wall movement significantly increased as the fine content increased. The excessive movement was realized when the fine content was greater than 45%. The increase of the fine content moved the location of the maximum wall movement higher up from the mid to the top of the wall.

## کلمات کلیدی:

Bearing reinforcement, Fine content, Lateral movement, Bearing reinforcement earth wall

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/680175>

