

Project Location:

Hawesville, Kentucky, USA

Main Contractor:

Walsh Construction Co.

Stone Column Contractor:

Moretrench America Corp.

Client:

American Municipal Power Inc.

Project period

2011

Method Applied:

Over 140,000 cubic meters of soil treated with stone columns, up to 70 ft (\approx 21 m) deep, max. diameter up to 2 m, installed in 8 ft and 9 ft triangular spacings.



Aerial photo of excavation



Two rigs working on slope

Betterground GmbH

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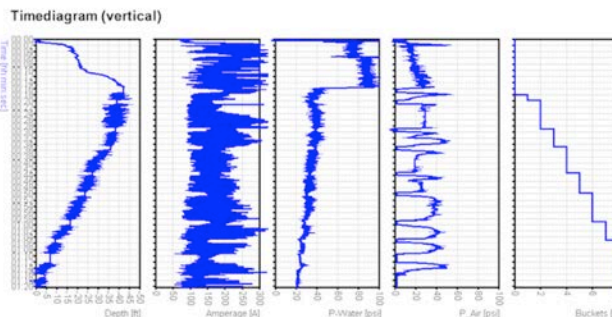
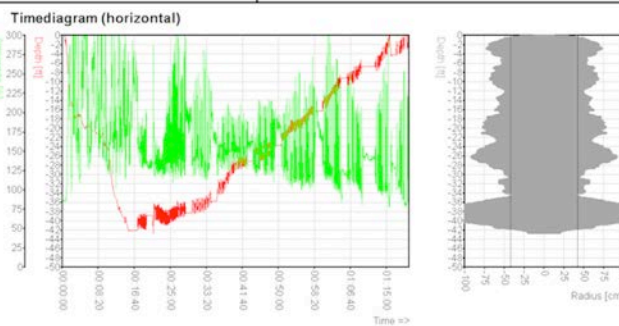
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Technical Requirements:

For the Cannelton Hydroelectric Project Stone Columns had to be installed up to 70 ft (\approx 21 m) into an existing slope. Loader access was impossible. Betterground's Gravelpump was used to transport the gravel to the stone column rig that operated in the slope. Columns were installed to increase slope stability by preventing soil liquefaction due to earthquakes that would originate from the close by New Madrid EQ zone.



Job Site Data:	Data for Column No: LP6
Project name: Testarea	Date: 5/11/2011
Area: West	Start time: 8:04:33 AM
Client: ?	End time: 9:24:48 AM
Contractor: Betterground	Total time: 01:20:15
Vibro ID: Vibronumber	Penetration time: 00:21:03
	Compaction time: 00:59:14
	Soil length: 42.72 ft
	No. of Buckets: 10
	Total Weight: 15.66 tons
	Total Volume: 11.59 yd ³



Quality Control Monitoring and Testing:

The design asked for very strong (= installed at high Amps) stone columns that at certain soil horizons reached up to 2 m diameter, as can be seen in the grey representation of such a column on the left graph. In that graph GREEN are the Amps of the vibroflot motor and RED the depth.

Columns were installed to so high Amps that the vibroflot's motor reached its limit load level and sometimes went beyond it, as can be seen here.