

# St Louis Mills Mall Hazelwood, Missouri

Geopier® Rammed Aggregate Piers™

## Project Team

**Geotechnical Engineer:** PSI, Inc.

**Structural Engineer:** McNamara-Salvia

**Construction Manager:** The Beck Group

**Foundation Sub-Contractor:** Tarlton Corp.

**Geopier Installer:** Foundation Service Corp.

**Geopier Designer:** GFC – Midsouth, LLC

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## Project Overview

### Description:

Construction of a new 1.3 million square foot mall constructed off Highway 370 in St Louis. Column loads range from 60 to 400 kips.

### Subsurface Conditions:

The subsurface conditions consist of deep deposits of soft to firm alluvial soils. Groundwater was encountered at depths ranging from 8 to 10 feet.

### Geopier Solution:

More than 500 footings were necessary to support the numerous columns of the new mall. The results of standard penetration testing and cone-penetrometer soundings revealed that the soft soils in the Mississippi and Missouri River confluence would lean to excessive settlement for footings loaded to more than about 65 kips. The project geotechnical engineer recommended that footings lighter than 65 kips could be designed for an allowable bearing pressure of 2,500 psf with no need for subgrade



improvement. The Geopier Intermediate Foundation System was recommended to support the more than 250 footings loaded higher than 65 kips. Rammed Aggregate Pier (RAP) supported footings were designed for a bearing pressure of 5,000 psf. By using RAPs under the heavier footings, the structural designer was able to use conventional spread footings for the entire project. More than 400 RAPs were installed in less than two weeks at the site.

### FOR MORE INFORMATION

Contact Geopier Foundation Company at **800-371-7470**  
or at **[www.geopier.com](http://www.geopier.com)**



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