



I-170/I-270 Interchange MSE Wall

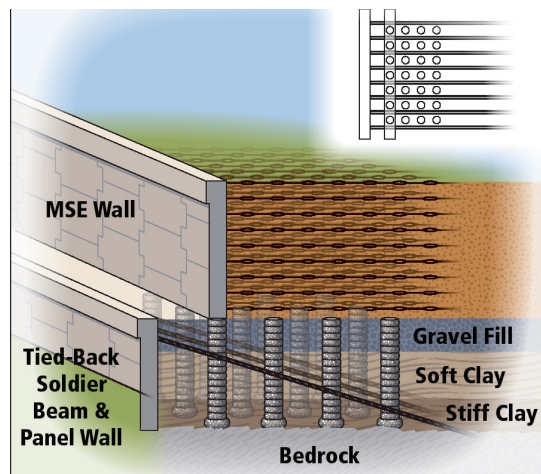
Hazelwood, Missouri

A total of 248 Geopier elements were carefully threaded between the existing rock tie-back anchors located four foot on center, resulting in anticipated total settlement of less than one inch beneath the 21 foot high MSE wall

Description: The temporary shoring system behind the proposed wall failed, remodeling the foundation soils beneath the MSE wall and obliterating the leveling pad. To stabilize the slide, a tied-back soldier pile and panel wall was constructed along the planned alignment. The MSE wall was constructed just behind the top of the soldier pile wall and soon experienced excessive settlements, severely damaging the facing. A 300 foot long stretch of MSE wall was removed.

Subsurface Conditions: Medium stiff to very stiff, shaley fat clay over bedrock, which was encountered at approximately 17 feet below the top of the soldier pile wall.

Geopier Solution: Rammed Aggregate Pier® (RAP) elements were installed on a four foot grid pattern beneath the MSE footprint. A total of 248, 24-inch diameter RAP elements were carefully threaded between the existing rock tie-back anchors located four foot on center. Total settlement of less than one inch is anticipated beneath the 21 foot high MSE wall.



PROJECT TEAM

Owner:

Missouri Dept of Transportation

General Contractor:

Edward Kraemer & Sons, Inc.

Geopier Installer:

Foundation Service Corp.

Geopier Designer:

GFC-St. Louis