



Westpark Tollway MSE Wall Support

Harris County, Texas

393 Rammed Aggregate Pier® elements were installed in two weeks providing significant project time savings

Description: Construction of a Mechanically Stabilized Earth (MSE) wall along the Westpark Tollway with maximum wall height of 23 feet.

Subsurface Conditions: Medium stiff to stiff clay fill soils underlain by stiff clay and medium dense to dense sand. Average SPT N-values in the clay fill were seven blows per foot.

Geopier Solution: The Geopier GP3® system was selected as a cost effective alternate to over excavation and replacement. Three rows of 16 foot long Geopier® elements were installed at spacings ranging from 7 to 11 feet on-center beneath the perimeter of the MSE wall to increase the factor of safety against global instability to 1.3 and to increase the allowable bearing pressure to 6,000 psf with a factor of safety of two beneath the wall. Additional Geopier elements were installed to meet stringent construction and post-construction settlement magnitude criteria of less than two inches.



PROJECT TEAM

Geotechnical Engineer:

Tolunay-Wong Engineers, Inc.

Construction Manager:

Turner, Collie & Braden, Inc.

General Contractor:

Champagne-Webber, Inc

Geopier Installer:

Peterson Contractors, Inc.

Geopier Designer:

GFC-Houston