

GEOPIER®



Geopier Rammed Aggregate Pier® Elements Installed to Support 64,000 sf Warehouse

CLIENT'S CHALLENGE

Total foundation settlement of +/-2 inches was estimated for unimproved ground conditions for the proposed 64,000 sf warehouse at the Manchester-Boston Regional Airport. Geopier® elements were selected for ground improvement to reduce total foundation settlement to less than 1 inch, supporting the new warehouse foundations and slab on grade. The airport was an active airport, and therefore maintaining the construction schedule was a key driver for this project.

SUBSURFACE CONDITIONS

Soil conditions consisted of a shallow granular fill layer underlain by very loose to loose native sand. Groundwater was present at about 10 feet below grade.

GEOPIER® SOLUTION

Geopier X1® Rammed Aggregate Pier® (RAP) elements were selected for supporting new foundations and slabs due to the effectiveness of the elements for improving ground conditions, as well as their ability to be installed rapidly. A total of 657 RAP elements were installed to an average depth of about 10 feet. Production rates of more than 150 elements/day were achieved. With average element spacings of about 8 feet, these production rates resulted in completion of up to nearly 10,000 square feet of building area in a day's work. Ground improvement was completed ahead of schedule.



MHT Cargo Facility

Manchester, New Hampshire

Aero Manchester III, LLC
Owner/General Contractor

John Turner Consulting, Inc.
Geotechnical Engineer

Foley-Buhl Roberts & Associates, Inc.
Structural Engineer

Whiting-Turner Contracting Co.
General Contractor

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