

Navy Lodge Building Groton (New London), Connecticut



Description: Construction of a 2 to 3 story Navy Lodge building. Maximum strip footing loads were on the order of 4.7 kips per foot.

Subsurface Conditions: Approximately 5 feet of fill underlain by loose to dense silt and silty sand (glacial till). SPT "N-values" at the site ranged from 6 to greater than 20 blows per foot.

Design Details: *Geopier*® soil reinforcement used to reinforce the fill or short caissons bearing on the underlying glacial till were recommended by the project geotechnical engineer to support the structure. The *Geopier* system proved to be the lower cost alternative when compared to the short caissons. A total of 94 *Geopier* elements were installed at an average depth of 9 feet in less than one week in October 2002. The use of *Geopier* soil reinforcement provided additional cost savings to the project by allowing the use of conventional strip footings, rather than grade beams as required for the caisson alternate. Additionally, the *Geopier* system provided a lump sum bid eliminating possible cost overruns associated with caissons.

Geopier Designer & Licensee: GeoStructures, Inc., GeoConstructors, Inc.

General Contractor: Forrester Construction Company, Rockville, MD

Owner: U.S. Department of Defense, U.S. Navy

Geotechnical Engineer: Haley & Aldrich, Inc., Glastonbury, CT

Structural Engineer: Rathgeber/Goss Associates, Rockville, MD