

Hotel Draws Strength from GeoStructures Support System

Sand Aggregate Used to Build Rammed Aggregate Pier® Elements

PURCELLVILLE, VA, May 7, 2010 – A ground improvement system of 253 RAP elements, constructed of a sand aggregate backfill, is supporting the spread foundations of a new Holiday Inn Express hotel in Havelock, NC. Designed and installed by GeoStructures, Inc., the sand RAP system reinforces the soft site soils underneath the four-story hotel due to open this year at 103 Branchside Drive.

The patented RAP system eliminates the costly options of deep foundations or over excavation and replacement of weak soil with engineered fill. The RAP construction technique required drilling 24-inch diameter shafts to depths of approximately 9 to 10 feet, and then backfilling with sand fill material placed in nominal 12 to 18 inch compacted lifts. A beveled tamper attached to a hydraulic hammer then delivered a downward high-energy, high frequency impact to each lift.

“Our design allowed for use of the sand backfill material and to achieve the capacity required for supporting the spread foundations, which are designed for a bearing pressure of 4,000 psf,” says Kevin Nadeau, project engineer for GeoStructures.

Adds Nyle Hothem, GeoStructures’ regional manager, “In some locales, the cost of sand fill material can be roughly 15 to 25 percent less than the cost of the more traditional aggregate base course backfill material. Customers like East Coast Hospitality, the owner of the Holiday Inn Express project, appreciate that we are constantly looking at ways for them to trim project costs.”

Other project team members are the geotechnical engineer, [GeoTechnologies, Inc.](#) of Raleigh, and the structural engineer and architect, J.W. McGinnis of Shelby, North Carolina.

About GeoStructures

[GeoStructures](#) is a design-build contractor with solutions for integrated foundation improvement, earth support and wall construction on commercial, industrial and transportation projects. By deploying its engineering expertise at the design stage, the company efficiently addresses unique site-development challenges and makes the best use of construction schedules and budgets.

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