



## Courtyard Marriott Baton Rouge

Baton Rouge, LA

UNITED STATES



**Owner**  
Windsor Aughtry Company

**Engineer**  
Bounds & Gillespie Architects, PLLC

**General contractor**  
Ratcliff Construction Co., LLC

**Dates of work**  
2016/10 2016/11

### Description

The construction of a new Courtyard Marriott was proposed for the southeast quadrant at the intersection of Florida (US-61) and Third Streets in Baton Rouge, LA. The \$20 million project, highlighted by an 8-story, 147-room hotel, was to be built on concrete spread footings, and slabs on grade, designed to bear on compacted subgrade soils or properly compacted fill.

Based on the results of the geotechnical investigation, excessive settlement was predicted unless ground improvement was provided.

### Main figures

Stone columns  
145 EA.

### Ground conditions

The soil profile at the site included heterogeneous fill composed primarily of loose silt and sand, underlain by medium to very stiff clay. Groundwater was encountered as shallow as 6 ft below ground surface during the geotechnical investigation. The upper fill soils were deemed unsuitable to support the proposed building column loads.

### Solution

To mitigate settlement of the new building, Menard proposed the use of Vibro Stone Columns (VSCs) for support of interior and exterior spread and strip footings. By utilizing 30-in diameter VSCs, total settlement was limited to less than an inch, with a maximum differential settlement between adjacent footings less than 1/2 in.

The VSCs allowed for the construction of footings on improved subgrades. The improved ground provided adequate bearing capacity exceeding the maximum design bearing pressures. A total of 32 helical piers were also installed to resist tensile loads in select footings.

The project met the client's requirements for safety, quality and schedule.