

J.W. MARRIOTT HOTEL & PARKING STRUCTURE Grand Rapids, MI



- **Owner:**
Altacor, Inc., Grand Rapids, MI
- **General Contractor**
Rockford/Pepper, Chicago, IL
- **Technique(s) Utilized:**
Micropiles, Low-Mobility Grouting

The J.W. Marriott Hotel in Grand Rapids welcomed its first guests in fall 2007. The 340-room glass-enclosed and uniquely designed hotel is 24 stories tall. An adjacent 750-space parking structure is located on the hotel's south side.

For the main hotel structure, Nicholson installed 405, 7-inch micropiles with capacities ranging from 150 to 200 tons. Nicholson also installed 141 micropiles of similar diameter and capacities for the adjacent parking structure.

Because of the voided gypsum rock at the site, Nicholson installed these micropiles using low-mobility grout to protect the structure from future settlement. One of the advantages that low mobility grouted micropiles have over other available foundation systems is their ability to be installed through difficult ground conditions not suitable for other techniques. Using specialized drilling methods, the drill casing can be advanced through man-made obstructions, cobbles, boulders, and deep into rock formations, which is typical of Western Michigan. Where some projects may require the use of low-mobility grout to fill these voids, micropiles can serve a dual purpose by providing a structural deep foundation element as well as a mechanism for delivering ground treatment.