



The Fitzgerald at UB Midtown Baltimore, MD

UNITED STATES



Owner

University of Baltimore

Engineer

Menard Group USA

General contractor

Bozzuto Construction Company

Dates of work

2008/11 2009/02

Description

The Fitzgerald at UB Midtown is a major public-private development on the University of Baltimore campus and part of the University's ongoing rejuvenation of central Baltimore, Maryland. The Fitzgerald comprises 275 luxury apartments, 24,000 sq ft of street-level retail and a 1,245-space public parking garage. The southern section of the building consists of a five-story apartment building with a retail ground level. The northern section consists of an eight-story precast concrete parking structure with an adjacent six-story residential building over one level of parking.

To eliminate the need for the heavy pile caps and grade beams associated with deep foundations, Menard proposed a design-build ground improvement solution using Controlled Modulus Column (CMC)[™] rigid inclusions.

Main figures

Controlled Modulus Columns (CMC)[™]
1400 EA.

Ground conditions

The Fitzgerald is located on a 125,000 sq ft site of a former freight depot and a surface parking lot. The subsurface conditions consisted of an upper uncontrolled fill layer of approximately 8.5 to 28.5 ft, underlain by dense silty sands and/or weathered bedrock at depths ranging from 17 to 32 ft.

Solution

To support the foundations, Menard installed approximately 1,400 CMC rigid inclusions to stiffen the ground and reduce settlement within design specifications. By implementing the CMC rigid inclusions solution, Menard was able to provide a number of cost-saving benefits to the project: removing costly heavy pile caps and grade beams, eliminating potential settlement from the fill on the site, and expediting the schedule by working around building sections still in the design process thus limiting the turnaround time of the CMC rigid inclusions redesign.

In summary, for a major development in urban Baltimore, Menard installed CMC rigid inclusions as an alternative to deep foundations. This provided an economical solution that reduced settlement and met performance criteria and scheduling requirements.