



Clockwise from top left: Artist rendering of the New Mets Stadium, Construction proceeds in the parking lot of the existing stadium; Pile driving with three rigs in September 2006; MRCE inspector observes pile installation.

New Mets Stadium (Shea Stadium)

Willets Point, Queens, NY

Mueser Rutledge Consulting Engineers (MRCE) provided geotechnical and foundation engineering services for the design of the new \$800 million Mets Stadium, which will be known as CitiField as a result of the 20-year sponsorship deal between Citigroup, Inc. and the Mets. The site is located in Flushing, Queens, adjacent to the existing stadium.

The firm provided the foundation design from the conceptual to the final phase. Using the information from the boring investigations and laboratory testing, MRCE developed a conceptual design. Due to difficult subsurface conditions, including deep organic clays and varved silt deposits, MRCE recommended a pre-production pile load test program to evaluate the performance of two types of tapered piles in three different test areas. These load tests were used to finalize the pile design capacities for the new stadium. The design team evaluated the impacts of using the International Building Code (IBC) as alternative to the current New York City Building Code (NYCBC) for the seismic assessment of the proposed stadium. The firm also completed a site-specific seismic study intended to derive design ground motions at the proposed foundation elevations based on geologic, seismologic, and soil characteristics of the site.

MRCE applied its experience at an adjacent site to develop cost effective engineering solutions for the foundation design and construction for the New Mets Stadium, which is expected to be completed in time for the 2009 season. Additionally, the firm is providing resident engineering during construction.

MRCE design support services included:

- A comprehensive geotechnical investigation, consisting of preliminary and final boring programs and laboratory testing.
- A pre-production pile load test program including vertical, lateral, and uplift testing and two different pile types and diameters.
- A site-specific seismic study and extensive settlement analyses of the stadium, the playing field, and the surrounding plaza, including studies of lightweight fill alternatives.