

Project Spotlight



Citi Field: Permeable Subbase- Queens, NY



Background Information

Since the 1990's the New York Mets Major League Baseball team had been looking to replace Shea Stadium, their home-field ballpark since the 1960's. In the summer of 2006, construction on the new \$850 million Citi Field began in the parking lot adjacent to left field at Shea Stadium.

Project Details

The design called for the new playing field to be elevated five to six feet above the grade of the old parking lot. The additional fill necessary to accommodate this design would have increased the load on the weak native soils an estimated 700 pounds per square foot. The additional load would cause significant settlement, requiring lengthy and expensive soil surcharging until the settlement subsided and construction could resume. Most of the proposed solutions for this situation were costly and would have a negative impact on the construction schedule. The initial plan to reduce the load on the native soils included 4 feet of lightweight aggregate as fill, bearing a density of approximately 55 pcf after compaction.

Alternatively, the specialty contractor recommended the use of AQUAERiX™ permeable low-density cellular concrete (PLDCC) as a subbase. The PLDCC has an average density of 29 pcf, attaining strengths of 80 psi. In order for the value-engineered option to be accepted by the owner, the AQUAERiX™ PLDCC was required to be as free-draining as the originally specified lightweight aggregate resulting from the lack of an infield drainage system that would



Aerix Added Value

Using the patented AQUAERiX™ PLDCC as a subbase under the playing field directly resulted in a savings for the owner of more than \$500,000 along with significant reductions to the construction schedule. More than 1,000 cubic yards of AQUAERiX™ PLDCC was produced per shift utilizing high capacity dry mix equipment placing a total of 17,500 cubic yards. The PLDCC option offered substantial load reduction while maintaining proper drainage of the playing field; a solution attainable only by using AQUAERiX™ PLDCC.

