



Warehouse



Ground Improvement – Installing Aggregate Piers

PROJECT OVERVIEW

A proposed new structure consisted of a 400 x 600-foot warehouse with column supports on a 40 x 40-foot grid.

The new warehouse features an open bay structure with lightly loaded columns and a floor slab supporting heavily loaded storage racks.

Typical column loads being 56 kips, and rack loading on the floor slab in the range of 1,000 psf.

REQUIREMENTS AND CHALLENGES

The existing soils consisted of fill material variable in depth across the project site, with a soft alluvial material underneath and extending to depths approximately 35 feet below ground surface.

Due to the variability in strength, depth of the fill materials, low strengths, and high compressibility of the alluvium material, significant differential settlement was expected in the column pads and slab.

SOLUTION AND RESULTS

CNC Foundations' design-build aggregate pier system was selected as the best possible way to minimize differential and long-term settlement. On-site testing verified CNC Foundations' design and confirmed minimum differential and long-term settlement.

Project Details

SECTOR
Warehouse

LOCATION
Peoria, Illinois

APPLICATION(S)
Ground Improvement,
Aggregate Piers / VSCs

