



Ohio State University Apartments



Ground Improvement – Installing Aggregate Piers/Vibratory Stone Columns

PROJECT OVERVIEW

A residential housing design consisting of six new residential buildings was proposed on a site with poor upper soils.

REQUIREMENTS AND CHALLENGES

Three of the new buildings required a 7000 psf bearing pressure. In order to reach this bearing pressure, we were selected to install an Aggregate Pier/VSC Ground Improvement design. In addition to the poor soils, there were many project challenges, including a shale shelf that ran through site from two to ten feet below bottom of footing.

Access was limited not only due to the tight urban setting, but there were four additional buildings being constructed simultaneously alongside CNC Foundations' job site. This affected the daily delivery of rock for the aggregate columns.

SOLUTION AND RESULTS

CNC Foundations worked to install approximately 1,000 Aggregate Piers to meet the design requirements of 7000 psf with less than one inch of the total settlement, and less than a half an inch of differential settlement. We validated the design and installation by performing full-scale load tests and plate load tests.

Project Details

SECTOR

Government Facility

LOCATION

Ohio State University,
Columbus, OH

APPLICATION(S)

Aggregate Piers
VSCs and Rigid Inclusions

