

READING COMMUNITY COLLEGE TECHNOLOGY TRAINING CENTER

Reading, PA



- **Owner:**
Reading Area Community College, Reading, PA
- **General Contractor**
The Quandel Group Inc., Harrisburg, PA
- **Technique(s) Utilized:**
Vibro Stone Columns

The Reading Area Community College Technology Training Center's foundations were designed with allowable bearing capacities of 3,000 to 4,000 psf. However, the existing subsurface materials at the site were not suitable to support these loads. To increase the bearing capacity of these materials, the owner's geotechnical engineer recommended a ground improvement system featuring stone columns. Subsurface conditions at the site consisted of construction debris fill and alluvial soils underlain by residual soils and weathered bedrock.

Nicholson was awarded the contract for the design and construction of a stone column system. Upon the successful completion of a compression load test performed on a non-production stone column, Nicholson redesigned the ground improvement system and reduced the number of columns by approximately 20 percent. A total of 274 stone columns were installed during production. The 24-inch diameter columns consisted of AASHTO #57 stone vibrated in the ground using the dry, top-feed method. Column depths ranged from 8 to 23 feet, and totaled 5,483 lineal feet.