Case Study 110-8

Settlement of Fill Material During Construction of an Addition to a Bank

Atlanta, Georgia

Installed By:

Atlas Piers of Atlanta, Inc.
Alpharetta, Georgia

Designed By:

United Consulting Group, LTD
Norcross, Georgia

"MORE THAN INTEREST RATES ARE DROPPING AT THIS BANK!"

The site required compacted fill prior to construction of an addition to the bank. When the contractor noticed cracks appearing in recently installed masonry, soil tests were ordered along the problem area. The results showed that the compacted fill was not extended beyond the area of construction.

The construction schedule required that steel framing be installed, but the structure was showing serious distress. Could the building be saved? Would the structure have to be demolished and rebuilt? What about the budget and time schedule?

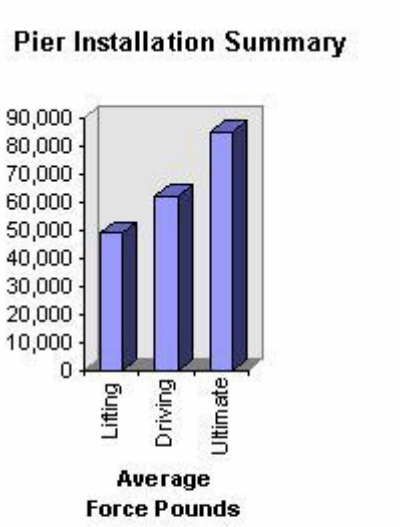
Atlas Piers of Atlanta installed ATLAS RESISTANCE PIERS along the side and at the back of the bank addition. Construction continued on schedule saving the customer time and money!

THE SOLUTION:

ATLAS RESISTANCE PIERS

STABILIZED AND RESTORED THE FOUNDATION!

PROJECT SUMMARY	
Installed By:	**Atlas Piers of Atlanta, Inc.**
Number of Piers:	25
Part Number:	AP2S-3500
Test Pier Depth:	42 feet
Test Pier Load:	48,925 pounds
Driving Force:	62,175 pounds
Ultimate Capacity:	85,000 pounds
Factor of Safety: (Averages)	1.27 : 1 (Drive to Load) 1.73 : 1 (Ultimate to Lift)



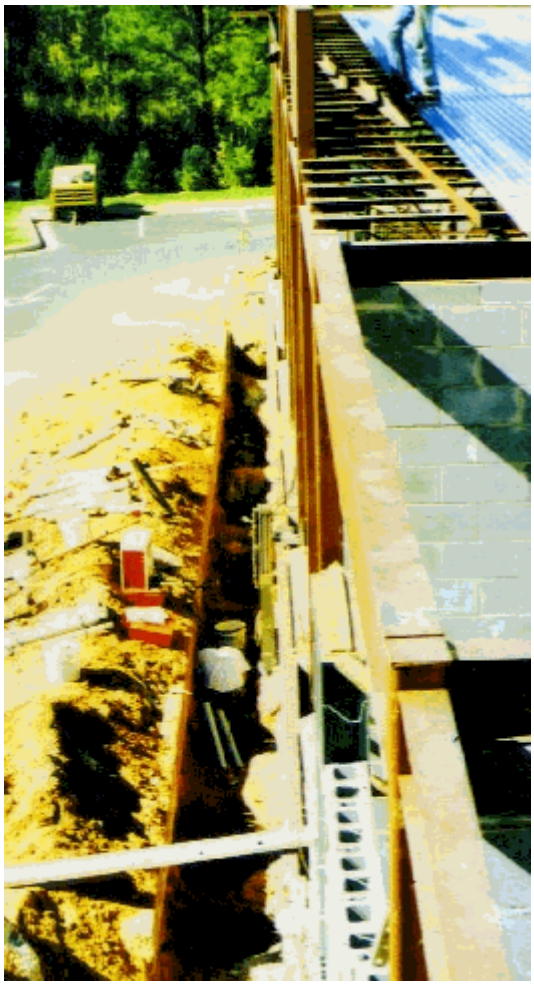
The chart above shows that ultimate pier capacity is over 36,000 pounds higher than the pier load.

The general contractor called a meeting with the geotechnical engineer, structural engineer architect and Atlas Piers of Atlanta. It was decided to install an ATLAS RESISTANCE PIER as a test pier.

The test pier proved to be successful. The pier was driven to a depth of 42 feet and tested with a force of 62,175 pounds. The project engineer and geotechnical engineer checked the test pier for any long term creep. The results showed that no creep was detected.

At the corner of the structure where settlement occurred, the total dead load, live load and wind load was estimated to be 50,000 pounds. The engineers determined the proper pier spacing after calculating loads.

The photograph at the left shows a fracture in the masonry and in the concrete floor.



ATLAS RESISTANCE PIERS are installed in small excavations using portable equipment. This photograph was taken from the steel framing as the construction continued. Each ATLAS RESISTANCE PIER is driven to a load bearing stratum and tested before the structure is supported.

The quiet hydraulic pump is visible to the left of the technician. The drive stand and hydraulic drive cylinder can be seen to the right of the technician and adjacent to the structure.

The photograph at right shows how the structure is supported and restored using the ATLAS RESISTANCE PIER. The hydraulic hand pump can be seen on the concrete floor. A manifold directs the pressure to several piers for gentle and even support of the structure.

Note that an ATLAS RESISTANCE PIER is being installed at the left side of the photograph. The hydraulic pump and pier installation equipment are visible.

SUCCESS! These photographs show the masonry fracture before and after the foundation was restored with ATLAS RESISTANCE PIERS. The crack which measured 3/8 inch was completely closed.

The construction on the bank continued with no interruptions. The general contractor was able to complete the building on schedule. These photographs show the completed building.