

Auger Cast Piles

East Grand Rapids Public Works



PROJECT: 60, 16" Auger Cast Piles driven 60' deep
CHALLENGE: "Sticky" soil; existing building foundation
SOLUTION: Adjusted drilling techniques

CUSTOMER: Wolverine Construction
LOCATION: East Grand Rapids Department of Public Works, Grand Rapids, MI
TIMING: April '09 - May '09
VALUE: \$87,000 of \$1.4 million project

Early visions of the East Grand Rapids Public Works Building included a 6,000 square-foot addition, renovations to the municipal garage for efficient storage, new offices and more. But before any of these aspects of the project became a reality, Team Elmer's was there to lay the deep foundation.

Our Team tested two auger cast piles prior to starting in order to verify the pile design was correct and could hold a 40-ton pile. We then inserted points into the ground and on the building, installing a laser level measurement apparatus to ensure building integrity during installation. Numerous overhead lines and underground utilities required additional patience, and every plane of the construction site demanded diligence.

Due to a very loose clay layer, Team Elmer's goal was to avoid using a large volume of grout to stabilize the piling. Because the soil was so "sticky," the crew had to penetrate accurately and withdraw quickly while replacing the void with grout to disturb the minimum amount of soil and install piling for the foundation. It was necessary to monitor the existing building foundation while drilling to make sure it wasn't affected.

If the soil had stuck to the auger, this could have removed two to three times the volume needed to install auger cast piles, which could have caused delays and cost overruns. Team Elmer's avoided that, helping the client stay on budget and on time. The auger cast piling project was completed within two and a half weeks.

Todd Munger of MTC Materials Testing Consultants verified pile placement, grout installation, depth, and cylinder breaking to ensure piles were installed correctly — and confirmed that project standards were met.

The entire Public Works Complex project was funded with \$1.4 million from five years of budgeted city savings.

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