# *Helical Piles of New York Underpins Police Annex Structure in Mamaroneck NY with Helical Piles in Very Restricted Working Space*

*August, 2014*

**Helical Piles of New York**
1145 William Floyd Pwky
Shirley, NY 11967
516-250-2515
www.helicalpilesny.com

| | |
|---|---|
| **Project Name & Location:** | Foundation Repair on Police Annex, Mamaroneck, NY |
| **Project Date:** | August, 2014 |
| **Project Type:** | New Above Grade Annex Building Alongside Existing Police Station Needed Underpinning as Settlement was Occurring During Construction |
| **Helical Pile Installation Contractor:** | Helical Piles of New York - Div. of High-Rise Industries |
| **Village Structural Engineer:** | Anthony Carr |
| **Helical Pile & Bracket Specifications:** | (12) 1.5" SS5 Piles with 8",10",12"Helix Bearing Plates; 40 KIP Ultimate Capacity; Low Profile Underpinning Bracket; All Galvanized |
| **Soils & Embedment Depth:** | Clay with Shallow Bedrock. Average Pile Embedment 7-10 ft. |
| **Project Timeline:** | Helical Pile Installation - 3 days |
| **Helical Pile Manufacturer:** | A.B. Chance - Centralia, MO |

## Project Overview

Helical Piles of NY, a division of High Rise Industries with headquarters located in Shirley, NY, recently completed a very challenging underpinning project on a police annex building that was under construction in Mamaroneck, NY. The 16 x 50 ft. structure was designed as an above grade building sitting upon sono tube concrete piles that were placed a minimum of 36" below grade. An old fuel tank had recently been removed from the site before construction began, and the void was filled with crushed stone. Helical Piles of NY was contacted to propose a solution once the general contractor noticed there was active settlement occurring during construction.


Plans called for the new annex building to be constructed just 6-7 ft. from the existing police station, which made the underpinning project challenging with very little space to maneuver equipment and install the helical piles.

No soils information was available, so the crew was instructed to install Chance SS5 leads with 8",10",12" helix bearing plates. The crew immediately discovered that bedrock existed anywhere from (3-10) feet, which made installation of the (3) blade piles virtually impossible. It was determined that replacing the triple blade leads with single blade leads would delay the project too much, so the decision was made to modify the (3) blade leads by cutting off the 10" and 12" bearing plates. This decision proved to be a good one, as the piles were installed successfully to bedrock so they would become end bearing piles.

The underpinning plan also called for the helical piles to be encased in a concrete column that was poured (2) feet below grade and high enough above grade to encase the helical piles all the way up to the low profile brackets.

Even with the restricted working area, the challenges with the bedrock and the concrete encasement work, the project was successfully completed in (3) days.

**Click the link below to see a video of the project**

Helical Pile Installation Video - http://youtu.be/5pzoFnUa5gs