

PROJECT DESCRIPTION

Replacement of Kiantone Road Bridge over Stillwater Creek

**Location:**

Kiantone, New York

Client:

Watts Engineers for
Chautauqua County
DPF

Client Contact:

Mr. Phillip M. Galbo,
P.E.
(716) 836-1540

Drilling in Preparation for Pile Driving for Integral Abutments

MMCE served as the geotechnical engineering consultant to Watts Engineers for the design and construction of the replacement of the Kiantone Road Bridge over Stillwater Creek in Kiantone, New York.

MMCE explored the subsurface conditions with test borings behind each bridge abutment and developed design and construction recommendations for a replacement bridge supported by integral abutments. Our recommendations included the length and capacity of piles for the integral abutments. We estimated that 35-foot piles would be required to achieve the 45-ton design capacity.

MMCE used the Wave Equation Analysis of Piles and the contractor's proposed pile hammer to develop driving criteria for the piles. During construction, MMCE monitored the pile installation and measured the capacity of two piles to confirm the driving criteria. The pile capacity was measured in the field using a Pile Driving Analyzer. The pile lengths ranged from 30 to 40 feet, within the range we estimated during design.