



Cresskill, NJ

# Sunrise at Cresskill

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Structures

a TERRATEST Company

**OWNER:** Sunrise Properties, Inc  
**GENERAL CONTRACTOR:** Glen Construction Company, Inc  
**ARCHITECT:** Moseley Architects (formerly BeeryRio)  
**STRUCTURAL ENGINEER:** Elhert Bryan, Inc  
**GEOTECHNICAL ENGINEER:** Geo-Technologies, Inc  
**PRODUCTS:** Geopier Impact® System



## DESCRIPTION

Sunrise at Cresskill is a three-story masonry-timber frame structure that serves as an Assisted Living Facility.

## CHALLENGE

Due to localized contamination in the upper strata of silty sands, the use of 30 to 35 ft long timber piles were prohibited since penetration through a clay-silt barrier layer would have occurred and caused contamination to migrate into the underlying sand aquifer. Subsurface conditions consisted of approximately 4 to 10 ft of silty and clayey sands with various amounts of concrete, rock, asphalt and rock fragments. Ground water was encountered at approximately 7 to 15 ft below ground surface.

## SOLUTION

A total of 311 Impact Pier elements were used to support strip footings designed for an allowable bearing pressure of up to five ksf. The Impact Pier elements provided a capacity of 60 kips per element at depths of only 12 to 15 ft and provided a cost effective alternative to timber piles, with no contaminated spoils. The Impact Pier elements provided the capacity needed at a much shallower depth so that contamination would not penetrate into the aquifer below. The Impact Pier system saved money compared to the timber piles by reducing the footing thickness and allowing construction to proceed quickly.

Product: Geopier Impact® System

Brownfields