

Hurricane and Storm Damage Reduction Project

Hurricane Sandy hit the coastline of New Jersey at the end of October 2012, causing millions of dollars in damages, including 750 homes impacted by the storm in Port Monmouth township, New Jersey. Due to this event and the other hurricanes devastating the coastline in more recent years, the U.S. Army Corps of Engineers decided to take a proactive approach to help mitigate the effects of future storms by commissioning a four-phase project which is scheduled to be completed by 2020. Part of phase II of the project included constructing a 2,661 linear foot floodwall requiring a new foundation to be installed for which GRL Engineers provided assistance.

GRL's services for the Hurricane and Storm Damage Reduction Project included completing a multitude of Wave Equation Analyses which included Bearing Graph and Driveability analyses. The Driveability results predicted that the predesigned foundation would potentially not meet the required capacity, raising awareness to the client and owner. [Dynamic Pile Testing \(PDA\)](#) and [CAPWAP®](#) analysis on the HP 12x84 H-piles were substantiated with [Static Load Testing](#) results which showed that the predicted results from the Wave Equation Analyses were accurate, resulting in a new design for the foundation. Once production started, GRL monitored numerous H-piles throughout installation for this important project to the residences and residents of the Northeast New Jersey coastline.

To learn more about GRL Engineers, visit www.grlengineers.com or email us at info@grlengineers.com.

Project Details

Client: Kyle Conti Construction

Location: Raritan and Sandy Hook Bay in Port Monmouth, New Jersey

GRL Office: Pennsylvania

GRL Services

- Preliminary GRLWEAP Analysis
- Dynamic Pile Monitoring
- CAPWAP® Analysis

