

Roads & Tunnels

Coastline Protection Along the New Jersey Shore

Route 35 isn't just a road winding down the New Jersey shore. Along one stretch, it's the transportation lifeline for island towns like Bay Head and Mantoloking, towns that sit on a sliver of land between the ocean and bay.

Superstorm Sandy tore through these towns and ripped up Route 35. The New Jersey Department of Transportation made immediate stopgap repairs to reopen the road, and is using Xylem's technology so that the rebuilt roadway will be able to stand up to the most intense storms. Xylem pumps and controllers are a key element in creating a safer and stronger highway. "When it's complete, this road will be ready to withstand even the worst of the worst-case scenarios," says Chuck Narod, a Xylem sales representative in the U.S.

The road redesign includes improvements to the pavement, utilities and landscaping, but a new drainage system featuring Xylem's products is the key to storm-proofing this vulnerable stretch of Route 35. As part of the \$265 million reconstruction project, Xylem will supply nearly 50 powerful Flygt Slimline submersible propeller pumps and another 27 smaller submersible pumps in nine pump stations along the 12-mile section of the road that was hardest hit during Superstorm Sandy. The Xylem pumps - located in concrete-encased pump stations underneath the road - are capable of working underwater, and each Slimline propeller pump can move 9,000 gallons of water a minute. If a storm overwhelms the regular drainage sewers, Xylem's pumps will kick in and push the excess water back into the bay.

"There's not a lot of room for these pump stations under the road, so the unique small-footprint design of our Flygt Slimline pumps was a big plus for the contractors working on this project," says Mark Umile, Manager of the Xylem sales branch located in Malvern, Pennsylvania, about 100 miles from the

New Jersey coast. "It allowed them to design smaller concrete vaults for the pump stations" - thereby reducing capital costs even further.

Each pump station is connected to a control panel - located 12 feet above the ground level to protect it from storm surges. The role of the control panel is to coordinate the operation of the multiple pumps inside each station. Again, Xylem had the right product for this part of the job: Xylem's MultiSmart controller. The MultiSmart is a pre-programmed controller that can run multiple pumps without complication.

"You don't need to hire someone to control the pumps or create a custom control system for each pump station," says Narod. "For this job, one MultiSmart controller can be programmed quite easily to run the multiple Xylem pumps down in the pump station to ensure we're getting out as much water as possible, as fast and efficiently as possible."

For Narod and Umile, both long-time industry veterans, this project has a little more meaning than most. It's not just that they are helping New Jersey recover from Superstorm Sandy, it's that they are helping the state in ways that will be fully realized for years to come.

"Our company doesn't just sell products and walk away from the job," says Umile. "We're an industry leader with a large service department that's going to be here when we're needed. So while we're solving a problem for the state today, New Jersey is also going to find out years from now that we are still here to help them out. They might not know it today, but they'll find out tomorrow when another huge storm hits and they need somebody they can depend on to help them get through it. That's where we come in. And that feels good."



Route 35 after Superstorm Sandy made landfall.



Destruction from Superstorm Sandy in Mantoloking, NJ.