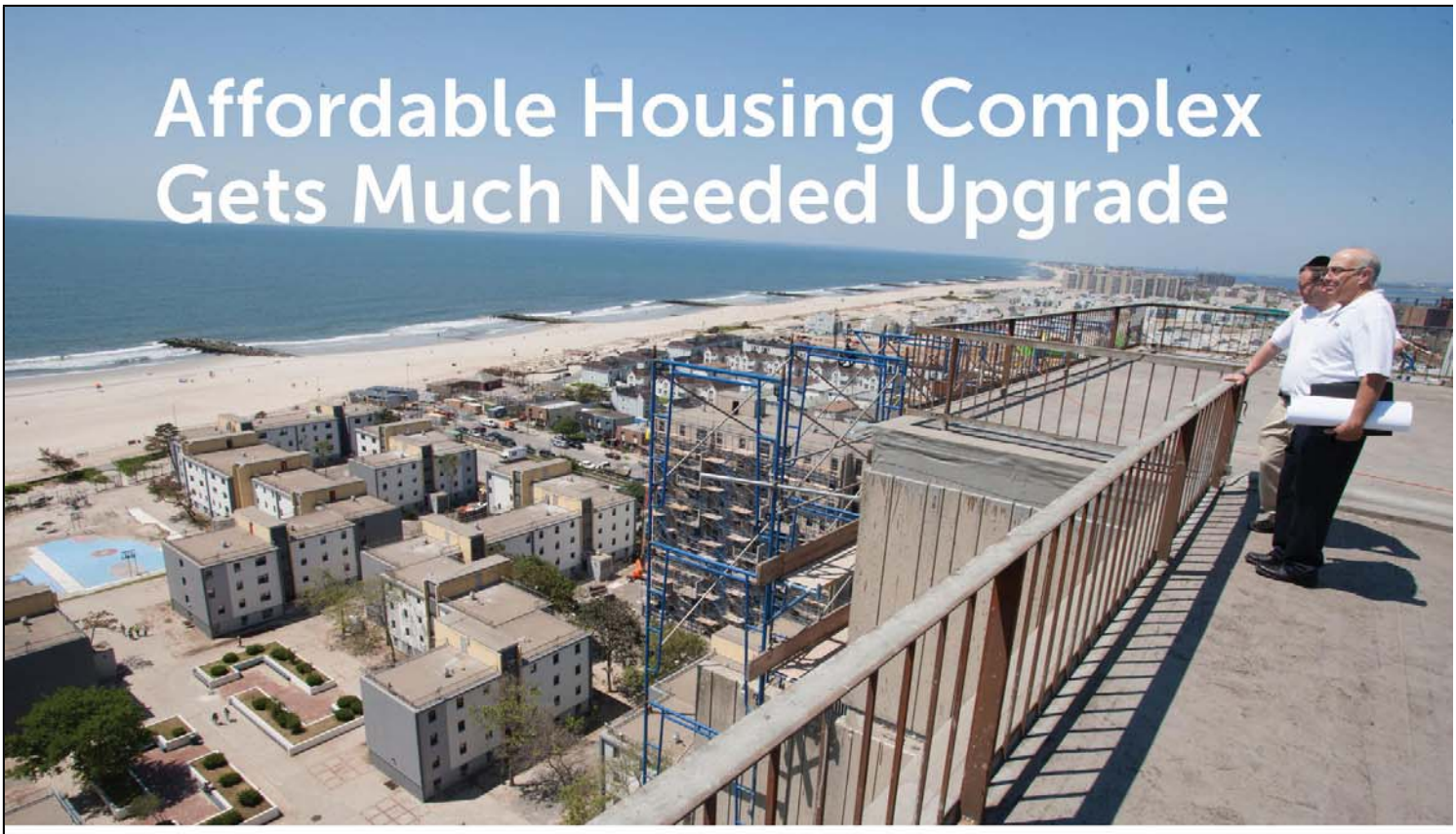
Affordable Housing Complex Gets Much Needed Upgrade



There aren't many affordable housing projects that offer oceanfront living. One that does is the Ocean Village complex, located in Queens, N.Y.

Through the years, all 11 of the Ocean Village buildings – two 19-story towers, two 11-story towers and 74-story structures – bore the appearance of gradual deterioration. Though today a Renaissance has brought new life and hope to Ocean Village. But, it wasn't without challenge.

On October 29, 2012, Superstorm Sandy hit New York with a vengeance. Ocean Village was directly in her path.

The storm was the deadliest and most destructive hurricane of the 2012 season as well as the second-costliest hurricane in U.S. history. Sandy was a Category 3 storm at its peak and the largest Atlantic hurricane on record. In her wake, almost 300 people lost their lives and the damages were assessed to be more than $68 billion, a total surpassed only by Hurricane Katrina.

The hurricane battered the entire Ocean Village complex, flooding all of the buildings and leaving them without power for several weeks. A total of 350 living units were vacated.

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Last fall, in the wake of the storm, a developer bought the complex with the intent to rehabilitate the property. Now, two-thirds of the way through the two-year, multi-million-dollar rehabilitation effort it's clear they'll succeed.

While renovations are in full swing, the developer is working hard to attract new renters to the abandoned apartments. It is also a goal to eventually fix apartments that have made residents miserable for years with mold, leaks and infestations, following what critics say was mismanagement by the site's former owners.

Multimillion-dollar rescue plan

Life at Ocean Village is improving. As vacant apartments are repaired, people displaced by the storm are given priority to rent them. The scope of the rehabbing work includes everything from kitchen and bathroom upgrades to security improvements to facade restoration and roof replacement to improve energy efficiency and sustainability.

An ongoing goal for the developer, when upgrading mechanical rooms, is to reduce maintenance issues and utility costs by installing high efficient equipment and reduce their overall carbon footprint. This project had 30-year-old technology modular boilers that were operating less than 65 percent efficiency at best and almost half of these boilers were in serious need of repair, explained Don Rathe, president of the manufacturer's rep firm Rathe Associates based in Farmingdale, N.Y.

Boilers make an impact

The new boilers, chosen by the developer's director of MEP, are Laars NeoTherm condensing boilers. The systems by Laars are a fully packaged, space-saving hydronic solution that offers 94 percent thermal efficiency. The boilers are direct vented with sealed combustion, offering

modulation with a 10-to-1 turndown.

"Several years ago, the developer standardized on Laars boilers. Their equipment is part of a recipe for building systems that they've come to rely on," Rathe explained. "An important part of this is the relationship they've built with us."

According to Bob DeMarco, VP of operations at SNS, a division of the Platinum Energy Group, Lindenhurst, N.Y., the new boilers at Ocean Village are being used chiefly for domestic hot water production. Each individual living unit has electric heat.

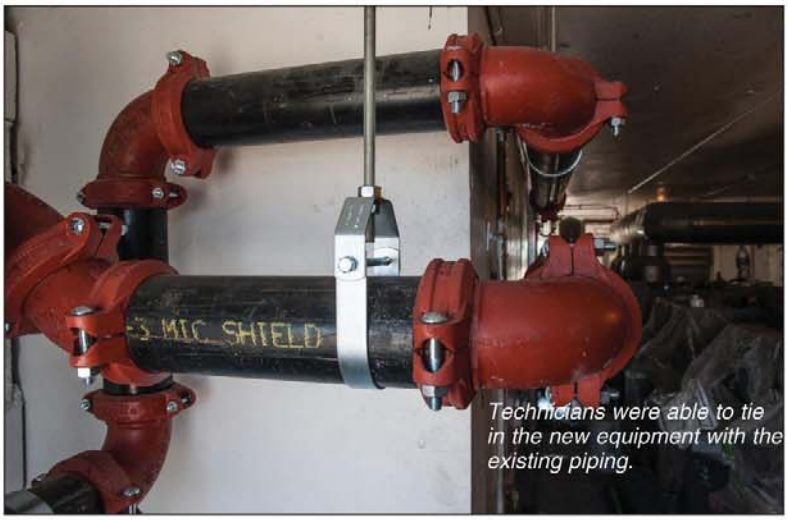
Simon Rodkin, PE, of Rodkin Cardinale Consulting Engineers based in New York, N.Y., explained that their firm was tapped to engineer the mechanical systems at Ocean Village, including the mechanical overhaul.

"The existing boiler systems there were modular cast iron sectional, gas-fired boilers, all of which provided domestic how water through heat exchangers," Rodkin noted.

"To conserve energy, the new Laars boilers were installed to provide domestic hot water for all residents, but also to heat each building's main lobby, hallways and common areas," Rodkin added. "That way, many areas that were previously heated with electric heaters and baseboard were soon receiving warmth from the new hydronic systems through fin-tube baseboards, hot water coils and PTAC units."

"Overall, the boiler replacement was a pretty simple upgrade," DeMarco said. "Technicians were easily able to tie in the new equipment with the existing piping. We've developed techniques to do boiler replacements at projects like these. We have a fleet of mostly large, flat-bed-mounted steam boilers that can create temporary space and domestic water heat for buildings. These gas- or oil-fired systems enable us to supply steam heat, or to exchange heat with water to be circulated if hot water is needed instead."

A crew of 12 SNS technicians worked at the site for about five months. Three one million BTU NeoTherm boilers were installed in each of the complex's four towers while NeoTherm 295 MBH units were installed in the seven smaller buildings. A total of 32 new boilers were installed at Ocean Village.



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To meet code, DeMarco's crews placed most of the new hydronic equipment on vibration eliminators because many of the systems were installed above living areas. Also, most of the small NeoTherms were rack-mounted to save space in the lower building's tight mechanical rooms.

Douglas DeAngelis, Laars' Eastern

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Atlantic regional manager, visited the jobsite toward the end of the mechanical system retrofit stage.

"I was very impressed with the quality of the work by SNS. They put a lot of thought into the serviceability of the equipment," DeAngelis said. "What struck me was the immensity of the undertaking which I really didn't have an appreciation for until I went onto the rooftop of one of the towers. Seeing the entire Ocean Village campus and its proximity to the beach was impressive – and gave me real appreciation for the extent of work being done there."

Getting the controls right

Another facet of the "recipe" that the developer settled on are tekmar controls, also offered by Rathe Associates.

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"The NeoTherm boilers now have integrated controls, on board, that would meet the developer's needs, though because they've used tekmar for decades, they wanted to stay the course so that any technician or facility manager familiar with controls at one facility would have immediate familiarity with those at Ocean Village," Rathe explained.

"The developer and SNS pros favor the tekmar controls because they're easy to program and understand," Rathe said. "The tekmar controls provide prescribed boiler and pump sequencing, or staging control, automatically alternating operation so that all equipment gets equal run time and – if any equipment should fail – stand-by equipment takes over."

The tekmar controls also provide alerts so that, if problems arise, maintenance personnel know about it. The controls can be connected to building management systems.

Development on the mend

According to the developer, renovations are costing, on average, between $35,000 and $40,000 for each of the village's 1,093 apartments. As apartment renovations are completed, they're made available to tenants, crisp and new. There's new vibrancy and hope in Ocean Village, plentiful warmth for winter comfort and a veritable sea of heated domestic water.

New plans call for placing key mechanical systems on higher floors out of the ocean's path. Also, there are plans to install photovoltaic arrays on rooftops. ■