RAND

Chiller Replacement and Relocation

135 Montgomery Street, Jersey City, NJ

PROPERTY
21-story, 200-unit residential cooperative along the waterfront in Jersey City, NJ.

FLOOD DAMAGE
After the cooperative replaced its 1963 original electric chiller with three gas-fired units in 2009, Hurricane Irene flooded the mechanical room in 2011, destroying all three of the new units.

The chillers were replaced in kind, but just a year later, Superstorm Sandy hit the co-op hard, flooding the lobby, mailroom, mechanical room, and everything in its path, including the practically new replacement chillers.

UP ON THE ROOF
Given the increased threat of severe future storms, the board decided it wasn't worth the risk of installing new chillers in the same ground-level location as before. Instead, the replacement chillers were installed on the roof. The new "double-effect" chillers **RAND** specified also provide back-up heating in the winter.

STRUCTURAL SUPPORT
RAND conducted a structural feasibility study of an existing steel platform on the roof to assess its ability to support the new chillers. In addition, repairs were made to the existing boilers, pumps, and electrical equipment.

The new double-effect chillers also provide back-up heating in winter.

After ground-floor chillers at 135 Montgomery Street were destroyed by Hurricane Irene in 2011 and then Superstorm Sandy a year later, new replacement chillers were relocated on the roof and placed on a reinforced steel platform.

TIGHT TIME FRAME
Although a project of this scope can take up to two years, **RAND** and the contractor National Mechanical, working under a tight deadline, were able to complete the project in six months, providing residents with air conditioning for the summer.

SCOPE OF WORK
RAND specified and administered the following work items:

- 100-ton and 150-ton Yazaki chillers installed on roof
- New circulating pump motors and water pump
- Gas and electrical lines routed from mechanical room to roof level to service the chillers
- Supplemental structural steel beam assembly installed on roof to support the new chillers
- Existing boiler, pumps, and electrical equipment repaired

ENGINEER
RAND Engineering & Architecture, DPC

CONTRACTOR
National Mechanical Services

PROPERTY MANAGER
TKR Property Services, Inc.

COMPLETION DATE
May 2013

CONSTRUCTION COST
$1 million