


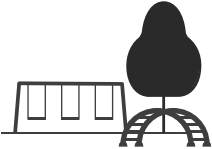






# Recovery & Resilience

In October 2012, Superstorm Sandy hit New York City, inundating large parts of the city with saltwater and leaving lasting damage to buildings and infrastructure. Thirty-five New York City Housing Authority (NYCHA) developments, home to over 60,000 New Yorkers, suffered major storm-related damage. NYCHA is investing over \$694M at the six developments located in Far Rockaway.

## Far Rockaway Progress as of Q2 2022

- 35** Buildings protected from storm surge for the 2021 hurricane season (Bayside, Oceanside and Beach 41st)
- 25** New operating boilers, serving 1,389 apartments and 3,623 residents
- 25** CCTV cameras operational
- 38** Generators started up
- 76** Hot water heaters completed
- 20** Entrances with layered access control installed
- 36** New utility buildings/additions to existing buildings
- 49** Roofs replaced

## Our Scope of Work

 <b>STANDBY GENERATORS</b> PROVIDES BACKUP POWER <hr style="width: 100%; border: 0; border-top: 1px solid #ccc; margin: 10px 0;"/>  <b>GROUND RESTORATION</b> RESTORES SITE TO PRE-SANDY CONDITION OR BETTER <hr style="width: 100%; border: 0; border-top: 1px solid #ccc; margin: 10px 0;"/>  <b>ROOF REPLACEMENT</b> IMPROVES BUILDING RESILIENCY <hr style="width: 100%; border: 0; border-top: 1px solid #ccc; margin: 10px 0;"/>  <b>SITE LIGHTING</b> IMPROVES SITE SAFETY AND ENERGY EFFICIENCY <hr style="width: 100%; border: 0; border-top: 1px solid #ccc; margin: 10px 0;"/>	 <b>FLOODPROOFING</b> PROTECTS BUILDINGS IN FLOOD-PRONE AREAS <hr style="width: 100%; border: 0; border-top: 1px solid #ccc; margin: 10px 0;"/>  <b>BOILERS</b> PROVIDES RELIABLE HEAT AND HOT WATER <hr style="width: 100%; border: 0; border-top: 1px solid #ccc; margin: 10px 0;"/>  <b>MECHANICAL, ELECTRICAL, AND PLUMBING (MEP) ANNEXES</b> IMPROVES SITE RESILIENCY <hr style="width: 100%; border: 0; border-top: 1px solid #ccc; margin: 10px 0;"/>  <b>CCTV CAMERAS</b> IMPROVES SITE SECURITY <hr style="width: 100%; border: 0; border-top: 1px solid #ccc; margin: 10px 0;"/>
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NYCHA Recovery & Resilience Department  
 website: [tinyurl.com/SANDYRECOVERY](https://www.nycha.org/SANDYRECOVERY)  
 email: [disaster.recovery@nycha.nyc.gov](mailto:disaster.recovery@nycha.nyc.gov)  
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**RECOVERY & RESILIENCE**  
NYCHA'S SUPERSTORM SANDY RECOVERY PROGRAM



NEW YORK CITY HOUSING AUTHORITY (NYCHA)  
**FAR ROCKAWAY CAMPUSES**



1

## Hammel Houses (Under Construction)

85-10 Rockaway Beach Boulevard

Site Flood Zone: X to AE | Base Flood Elevation: 10 feet

- 14 natural gas-powered stand by generators (150 – 350 kilowatt) located at each building roof in sound-attenuating enclosures with adjacent electrical rooms housing automatic transfer switch equipment to help power 712 apartments during an outage
- Four (4) dual-fuel, 350 BHP Burnham boilers located in flood-resistant boiler plant adjacent to 84-16 Rockaway Beach Boulevard. Additional boiler plant details:
  - Square footage: 3,240
  - Facade: Concrete masonry unit, brick, translucent panels
- Additional site resiliency measures:
  - 650 deployable flood barriers and other flood-proofing components
  - 28 new backwater valves
  - New cold liquid-applied roofing system at all 14 buildings

2

## Ocean Bay Apartments (Oceanside)

306 Beach 56th Street

Site Flood Zone: AE | Base Flood Elevation: 10 feet

- Seven (7) natural gas-powered standby generators (250 – 350 kilowatt) located at each building roof in sound-attenuating enclosures on steel dunnage
- Two (2) flood-resistant utility annexes by 353 Beach 54th Street and 334 Beach 56th Street to house automatic transfer switch equipment that will detect any loss of normal utility service and signal the rooftop generators to start within 60 seconds to power the adjacent residential building. Additional utility annex details:
  - Average Height: 21 feet
  - Facade: Brick
- Additional site resiliency measures:
  - Over 2,180 deployable flood barriers and other flood-proofing components across 237 locations on site
  - Structural reinforcement and waterproofing of existing indoor mechanical spaces
  - 14 new backwater valves

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## Ocean Bay Apartments (Bayside)

434 Beach 54th Street | Site Flood Zone: AE | Base Flood Elevation: 10 feet

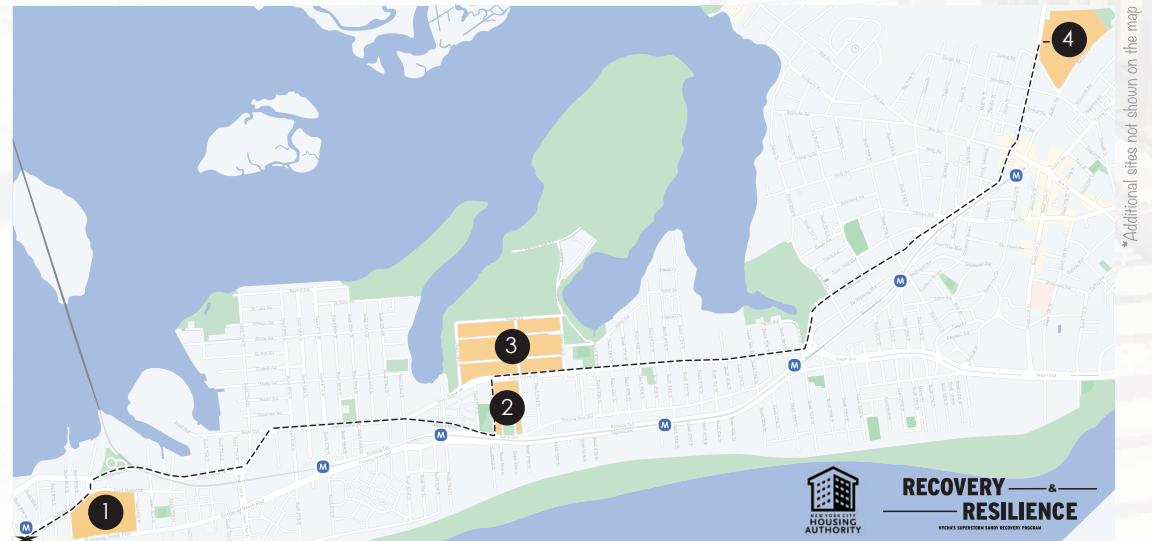
- Flood-proofing measures include 50 passive flood barriers and a flood wall around the perimeter of the site spanning 5,200 linear feet in length
- 11 flood-resistant utility annexes to house natural gas-powered standby generators (350 – 550 kilowatt) to service 24 buildings and 1,389 apartments. Additional utility annex details:
  - Average height: 27 feet
  - Average square footage: 1,731
  - Facade: Metal panel rainscreen, BarnettBates metal panel grille
- Rooftop boiler room enclosures housing domestic hot water heaters and hydronic boilers
- Additional site resiliency measures:
  - New cold liquid-applied roofing system at all buildings
  - Bioswales at 17 locations across the campus to control stormwater runoff
  - 1,716 rooftop solar panels across 20 buildings

4

## Redfern Houses

14-56 Beach Channel Drive | Site Flood Zone: AE | Base Flood Elevation: 9 feet

- 668 passive and deployable flood-proofing components at 97 locations across the site. Additional flood-proofing measures include 180 flood vents to allow for controlled flooding of unoccupied spaces in new or existing buildings
- New two-story flood-resistant childcare/community center and boiler plant located at 1490 Beach Channel Drive
- Boiler plant features four (4) dual-fuel Burnham boilers and one natural-gas powered generator
- Five (5) flood-resistant utility annexes ranging from 1,100 to 1,900 square feet to house one (1) to two (2) natural gas-powered generator(s) (250 to 550-kilowatt), automatic transfer switch equipment, and domestic water heaters to service the adjacent residential building(s). Additional utility annex details:
  - Average height: 21 feet
  - Facade: Metal panel rainscreen, insulated precast concrete
- Additional site resiliency measures:
  - Bioswales across the campus to control stormwater runoff and 28 new backwater valves



\*Additional sites not shown on the map