

MULTIFAMILY PERFORMANCE PROGRAM

First High-Rise ENERGY STAR® Multifamily Building in the Nation

1212 Martin Luther King Apartments Bronx, NY

Background

1212 Martin Luther King (MLK) Apartments is a state-of-the-art building located in the historic Highbridge neighborhood in the Bronx. It provides affordable housing to low-income working families, formerly homeless families, and adults with developmental disabilities. It is also the nation's first high-rise multifamily building to earn the ENERGY STAR® label.

Challenges

Dunn Development, a socially conscious, innovative private developer, and Beulah HDFC, Inc., a non-profit community-based organization based in the South Bronx, co-developed 1212 MLK Apartments. The challenge was to set a new standard in affordable housing by combining high-performance design, durability, spaciousness and eye-catching allure. Making sure the apartments were energy efficient was a key objective in order to reduce operating costs.

Solution

Through NYSERDA's Multifamily Performance Program, Steven Winter Associates, Inc. worked with Dunn Development and their design team to determine the suite of energy-efficient measures that could achieve the program's performance target of 20% energy savings in respect to an equivalent building designed per ASHRAE 90.1-2004 standards.

The measures identified included both conventional and custom components. Two 87% efficient, direct-vent natural gas Lochinvar® boilers were used instead of atmospheric boilers, which are typically installed in multifamily buildings. The windows were custom made, low-e, argon filled aluminum frame units, with insulated panels that can be removed to allow the installation of window air-conditioners in the summer. The use of high-performance insulation and energy-efficient lighting also resulted in significant energy savings.

Benefits

The construction of 1212 MLK Apartments cost \$145 per square foot in hard costs, with only an additional \$3 per square foot to install the energy-efficiency measures. Through the ENERGY STAR Multifamily Performance Program, NYSERDA provided incentives that covered the bulk of this additional cost. The energy measures are expected to save the building owners and tenants a combined \$12,631 per year. Working together, Dunn Development and the 1212 MLK Apartments have redefined affordable housing to include not only affordable rent, but also affordable energy bills.

Developer:	Dunn Development Corp.
Owner:	Dunn Development Corp.
Number of Units:	54
Energy-Efficient Measures Cost:	
Baseline Cost	\$174,601
As-Built Cost	\$328,845
Total Incremental Costs	\$154,244

Observed Energy Savings:

Annual Gas Savings	327 MMBtu
Annual Electricity Savings	51,066 kWh
Demand Savings	10.9 kW
Total Annual Savings	\$12,631
Gross Lifetime Savings*	\$187,917
Simple Payback:	12 years
Savings to Investment Ratio:	1.22

*Gross Lifetime Savings represents the net present value of the utility cost savings, inclusive of the total incremental costs.



"We are pleased to have the opportunity to participate in the ENERGY STAR Multifamily Program. The energy efficiency elements we incorporated at 1212 MLK Apartments will directly result in lower utility bills for the residents and for the building, and because they are easily replicable, will help contribute to the long-term viability of affordable housing in New York City."

Martin Dunn, President
Dunn Development Corp



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GATEWAY APARTMENTS - Creating Value for Community Residents

277 Gates Avenue, Brooklyn, NY

Background

Gateway Apartments is an affordable housing complex at 277 Gates Avenue in the Bedford-Stuyvesant neighborhood of Brooklyn, NY. Once foreclosed and nearly vacant, the 85-year-old terra cotta adorned residence was in need of extensive renovation. As part of an arrangement to purchase the property from the U.S. Department of Housing and Urban Development, Pratt Area Community Council (PACC) agreed to undertake significant rehabilitation to improve living conditions in the residence. The building now serves as a home to low- and moderate-income families.

Solution

With help from the New York State Energy Research and Development Authority (NYSERDA), several cost-effective energy upgrades were identified, helping PACC to ensure that its investment in the rehabilitation could recognize a return in the form of greater energy savings. NYSERDA's Multifamily Performance Program provided direct grant support to the construction, covering 25% of the total energy efficiency upgrade costs.

Energy efficiency upgrades included the replacement of 290 apartment windows with thermal break, argon-filled, low-e windows—among the most energy-efficient available. Common areas now feature bi-level lighting with motion sensors and highly efficient compact fluorescent bulbs. The roof cavity received 16 inches of blown-in cellulose, doubling its insulation value. The building's new sealed-combustion gas boiler exceeds Energy Code requirements by more than 10%. An energy management system installed in the boiler room will use temperature sensors placed in apartments to monitor and ensure consistent heating across the apartment units. Further savings of energy and water will come from low-flow showerheads and ENERGY STAR® lighting and refrigerators installed in every apartment. Hardwired smoke/carbon monoxide detectors will increase the safety of tenants and ensure compliance with the new code requirement.

Benefits

With implementation of the recommended enhancements complete, Gateway is now setting new standards for energy efficiency in smaller-scale affordable apartment buildings. Collectively, tenants are expected to see a reduction in their energy bills of about \$3,000 annually. An additional \$18,900 annual savings will improve the operating budget and durability of the underlying financing.

Gateway Apartments will now be able to offer its residents an improved quality of life and significant savings on their monthly utility expenditures. "When I first came into the building, everything was really run down," said resident Sandra Gallman, who lives at the property with her daughter and grandson. "Now everything seems to work better."

Management Company:

Pratt Area Community Council

Managing Agent: Deb Howard

Number of Units: 35

Actual Financing:

NYSERDA Contribution \$54,767

Owner Contribution \$161,753

Total Project Costs \$216,520

Projected Energy Savings:

Annual Gas Savings 1,200 MMBtu

Annual Electricity Savings 74,000 kWh

Demand Reduction 16.1 kW

Total Annual Savings \$18,900

Gross Lifetime Savings* \$248,000

Simple Payback: 11.1 years

Savings to Investment Ratio: 1.15

*Gross Lifetime Savings represents the net present value of the utility cost savings, inclusive of the total project costs.



"Affordable housing is critical to our community. The creation of an energy efficient building is essential to PACC's ability to maintain the affordability of this property. We are grateful for NYSERDA's financial and technical assistance in this

effort, and recognize the lasting value these energy investments will have for our residents."

Deb Howard, Executive Director
Pratt Area Community Council

