

SHOWCASE PROJECT: CSNDC TARGETS WASHINGTON COLUMBIA #1 AND #2 FOR ENERGY-EFFICIENT UPGRADES

SOLUTION OVERVIEW

Washington Columbia (WC) #1 and #2 are adjacent sister properties constructed in 1920 to house low-income families with Section 8 vouchers. The 3-story walk-up multifamily buildings offer 1-, 2-, and 3-bedroom apartments. WC #1 includes 150 units in five buildings and WC #2 includes 175 units in seven buildings. Codman Square Neighborhood Development Corporation (CSNDC) targeted the properties for energy-efficient upgrades because the buildings were outdated, featuring old T-12 fluorescent fixtures, poorly-performing atmospheric boilers near the end of their useful life, and a roof well-suited for solar photovoltaics (PV).

Before beginning physical building upgrades of WC #1 and #2, CSNDC met internally to ensure goal alignment among its various departments. CSNDC had already committed to the Better Buildings Challenge and had contracted with WegoWise to track its portfolio-wide energy and water consumption.

SECTOR TYPE

Multifamily

LOCATION

Dorchester, Massachusetts

PROJECT SIZE

360,000 Square Feet

FINANCIAL OVERVIEW

\$1,740,000

SOLUTIONS

CSNDC implemented energy efficiency and renewable energy upgrades for WC #1 and WC #2 over several years, beginning in 2015 and continuing through 2017. Some of the improvements included:

- Replaced all common area and in-unit T-12 fluorescent fixtures with LED fixtures;
- Installed Energy Star[®] appliances in all units;
- Replaced atmospheric heat and hot water boilers with high-efficiency condensing boilers;
- Implemented boiler equipment monitoring and optimization;
- Installed white roofing, pipe and roof insulation, weather-stripping, and energy-efficient

windows; and

- Installed solar PV for community shared solar.

The lighting upgrades extended to the on-site computer learning center, which offers computer classes, employment training, and youth and adult enrichment classes. In addition to the energy-efficient building upgrades, CSNDC also installed low-flow showerheads, toilets, and faucets and replaced the washers with more efficient models.

OTHER BENEFITS

The renovation of WC #1 and #2 followed CSNDC's *Green & Healthy Building Guide* standards, such as installing recycled vinyl composition tile flooring, providing exercise programs and bicycle storage, and offering on-site recycling. Maintenance staff use green cleaning products and Low Volatile Organic Compound (VOC) paint when preparing units for resident turnover. The properties are smoke-free, reducing maintenance costs and improving indoor air quality and resident health.

Annual Energy Use

(Source EUI)

Baseline(2014)



Actual(2017)

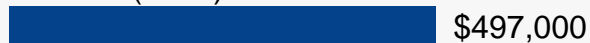


Energy Savings

19%

Annual Energy Cost

Baseline(2014)



Actual(2017)



Cost Savings

\$105,000



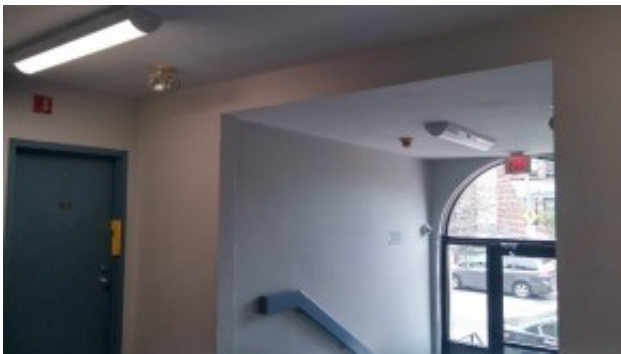
Washington Columbia's Solar PV



Washington Columbia's Playground



Washington Columbia's New Boilers



Washington Columbia's LED Lighting