

SHOWCASE PROJECT: RUPCO: THE LACE MILL

SOLUTION OVERVIEW

The Lace Mill is being transformed into 55 units of low income housing. Previously, it was a 68,000 square foot mill structure built in 1903, located in the blighted mid-town area of Kingston, NY. RUPCO has successfully achieved listing the property on both state and federal historic registers. The building has a varied history of industrial and warehousing uses. It has been largely underutilized over the past two decades, featuring boarded windows, limited public interface, and a forgotten structure in a warehouse stricken town.

The Lace Mill is planned to accommodate 55 units of low income housing (50-60% AMI) with a preference to those engaged in the arts as their primary source of income. The unit mix is projected to be 5 studios, 32 one-bedroom units, 17 two-bedroom units and 1 three-bedroom unit.

SECTOR TYPE

Multifamily

LOCATION

New York

PROJECT SIZE

68,000 Square Feet

FINANCIAL OVERVIEW

\$18,900,000

SOLUTIONS

The Lace Mill has been conceived as an innovative affordable housing project that will demonstrate the virtues and benefits of both green design and historic preservation. While the two objectives are not always parallel to each other, the effort has been extended to identify common ground and compromise as necessary to deliver the highest possible product, affording residents maximum comfort and efficiency, while preserving a significant building deeply rooted in the physical and historical fabric of the city of Kingston.

The following solutions were incorporated into The Lace Mill to achieve the energy savings described above:

- Slab Insulation:
 - Foam Insulation Under the Entire Slab Areas and Perimeter (R-10)

- Exterior Wall Insulation:
 - Continuous Rigid Insulation (R-9)
- Roof:
 - Rigid Foam Insulation (R-42)
- Windows:
 - ENERGY STAR® Rated Windows (U-factor 0.30)
- Building Air-Tightness:
 - < .30 CFM-50/SF
- High Efficiency HVAC:
 - Water Source Heat Pump (Water Loop) & Natural Gas HE Boiler
 - Space Heating (COP 5.5)
 - Space Cooling (16 EER)
- Ventilation:
 - Energy Recovery Ventilation (ERV)
 - Sensible Recovery Efficiency: 67%
 - Total Recovery Efficiency: 50%
- Electric Storage Water Heaters (EF 0.93)
- Energy Efficient Lighting
 - 100% of interior and exterior fixtures
- Appliances:
 - ENERGY STAR Rated
- Solar installation on the roof (160k Rated Capacity)
 - Estimated Power Generation: 182,720 kWhr/Yr

OTHER BENEFITS

The Lace Mill has been designed to embrace the concept of universal design. Two elevators in separate residential wings provide unimpeded access to every tenant's front door. Unit layouts provide an open living space for in-house studio activities. First floor units have been modeled on an artist's loft concept, providing sleeping lofts above primary living functions. 42" wide entry doors provide both handicapped access as well as the ability to move oversized art work in and out of each apartment.

In addition to 55 working artist's lofts, the Lace Mill affords an additional 20,000 square feet of shared gallery and studio space that is both fully accessible and designed to foster an interactive collaboration amongst the tenant community. The original coal fired boiler from 1903 has been preserved as an example of early 20th century industrial art. The boiler is central to a public gallery space located on the first floor of the building. Secondary gallery spaces have been provided in each of the residential wings. A collaborative studio space has been provided above the main gallery. The Lace Mill provides for an affordable, artistic community within an energy efficient, sustainable and historically sensitive restoration.

Annual Energy Use

Baseline(2013)
248 kBtu/sq.ft

Expected(2016)
106 kBtu/sq.ft

Actual()
Coming Soon

Energy Savings

43%

Annual Energy Cost

Baseline(2013)
\$172,900

Expected(2016)
\$87,740

Actual()
Coming Soon

Cost Savings

\$75,440





