

ENERGY STAR Multifamily High Rise Building Profile

Cotton Mill Square

30 Front Street
Nashua, NH 03064

Building Developer:

Cotton Mill Square, LLC

Licensed Professional*:

Dina Pinnell, GDS Associates, Inc.

Year Certified:

2014

Construction Type:

Gut Rehab

Sector:

Mixed Income

Technologies Used:

- Ductless mini split heat pumps in units
- Energy recovery ventilation in common areas
- High-performance envelope
- LED exterior lighting, low wattage CFL and T8 linear fluorescent and LED interior lighting

Building Description:

Cotton Mill Square is an eight story, 108 unit, renovation of an existing brick building, in Nashua, NH. The exterior brick walls were insulated by spraying 2" of continuous closed cell spray foam, prior to installing new framing and sheetrock. The windows were replaced with aluminum-clad wood-framed, double-pane units, with U-0.29 and SHGC-0.22. The new roof is insulated with 8" of polyisocyanurate boards, with a total R-value of 52.

With this high-performance envelope, heating and cooling loads in each apartment were greatly reduced and are met with high efficiency ductless mini split heat pumps (8.7 HSPF, SEER 15). Fresh air is heated/cooled and then supplied directly to the units, using dedicated outdoor air systems. Local exhaust ventilation for bathrooms and kitchens are provided by continuously operating variable speed rooftop exhaust fans.

The apartments have low-flow plumbing fixtures, including 1.5 gpm faucets, WaterSense certified showerheads, and 1.28 gpf WaterSense certified toilets. In-unit refrigerators and dishwashers are ENERGY STAR certified, as well as the 12 clothes washers in the common laundry rooms.

The project is modeled with projected energy cost savings of 28% over a building that meets ASHRAE 90.1-2007.

