

# ENERGY STAR Multifamily High Rise Building Profile

## Temple Place Apartments

7 Temple Place

Cambridge, Massachusetts 02139



### Building Developer:

Cambridge Housing Authority

### Licensed Professional:

Henry Harvey, Conservation Services

### Year Certified:

2016

### Construction Type:

New Construction

### Sector:

Affordable Housing

### Technologies Used:

- Low-E Vinyl Windows with 0.29 U-value
- 94% efficient space heating gas boiler with indirect DHW
- In-unit ductless cooling provided by central VRF system
- Energy recovery from bathroom exhausts
- Dedicated supply of fresh air to each unit

### Building Description:

Temple Place Apartments is a 6 story, 40 unit building in Cambridge, Massachusetts with a mix of one and two bedroom apartments.

The apartments have low-E double-pane aluminum clad windows (U-value of 0.29 and SHGC of 0.29 and less), continuous R-30 rigid roof insulation, and a combination of R-8 rigid insulation and R-22 spray foam in wall cavities. The units were tested at airtightness levels of 0.16 CFM50 per square foot of enclosure, surpassing program requirements by 40%. The level of compartmentalization will reduce resident energy costs, and improve comfort and indoor air quality.

All apartments are heated via hydronic baseboards, with hot water provided by a 94% efficient gas boiler which also provides domestic hot water. The gas needed to heat the water is reduced through the use of Water Sense certified showerheads, low-flow faucets, and ENERGY STAR certified clothes washers. The central VRF systems that provide cooling to all units and common areas are rated at 12.9 EER/19.7 IEER. Central exhaust risers connected to the ERV are tightly sealed, resulting in less than 7% leakage of design CFM.

ENERGY STAR certified refrigerators and bathroom exhaust fans, as well as efficient lighting fixtures are installed to further reduce the electricity consumption in the apartments of the building. Efficient lighting and occupancy sensors contribute to electricity savings in the common areas.

The project is modeled with projected cost savings of 23% over a building that meets ASHRAE Standard 90.1-2007.

