

ENERGY STAR Multifamily High Rise Building Profile

Mattapan Heights

229A River Street
Mattapan, Massachusetts 02126

http://trinitymanagementllc.net/?page_id=370



Building Developer:

Trinity Financial

Licensed Professional:

DHK Architects

Year Certified:

2013

Construction Type:

New Construction

Sector:

Affordable Housing

Technologies Used:

- Energy Recovery Ventilation
- High-Efficiency Central Gas Boilers and Water Heaters
- ENERGY STAR certified Appliances
- Occupancy sensors in all spaces, including stairs and corridors



Building Description:

Mattapan Heights 5A is a 6-story new construction building, that provides 60 units of affordable housing and is part of Trinity Financial's larger Mattapan Heights campus, located on River Street in Mattapan, MA.

The 2x6 metal-framed building walls are insulated with blown-in cellulose (R-21) as well as 2.5" of continuous mineral wool insulation (R-10) on the exterior, to reduce thermal bridging at the metal studs and intermediate floor plank edges. Fiberglass-framed windows (U-0.29, SHGC-0.27) and 6" of rigid polyisocyanurate insulation at the roof (R-38), complete the high-performance thermal envelope. Air-sealing techniques were utilized to achieve compartmentalization results that averaged 0.22 CFM50 per square foot of enclosure.

With heating and cooling loads significantly reduced, two high-efficiency (93%) central gas boilers were installed that provide hot water to the vertical fan coil units in each apartment. A 100-ton central air-cooled chiller (10.8 EER) provides the chilled water for space cooling. Ventilation is provided in each apartment that meets ASHRAE 62.2-2007 rates for whole-house and local exhaust ventilation. Kitchens are served by range hoods ducted to central risers, and bathroom exhaust fans are part of an energy recovery system, which recovers both sensible and latent heat in the exhaust and uses it to temper fresh outdoor air that is supplied directly into the apartments.

Water consumption is greatly reduced by the use of low-flow toilets, showerheads and lavatory faucets. This also reduces the amount of hot water used in the building, which is provided by two high-efficiency (94%) central gas storage water heaters.