



## Multi-Residential

# Toronto Community Housing Authority



*Toronto's twin SolarWall heaters installed at 40 Teesdale Place*



*Duct connects to back of SolarWall panels (above).  
Duct passes over stairwell to connect to fan on north side of roof (below).*



## Background

The City of Toronto has taken a leadership role in environmental and energy issues. The Green Development Standard was approved in the summer of 2006 and reflects the city's objectives of reducing greenhouse gas emissions and improving energy efficiency.

The City of Toronto has a history of using renewable energy; In 2001, recognizing that buildings account for 30% of energy usage, the Toronto Community Housing Authority evaluated solar heating options and selected an all-metal solar air heating system to heat the ventilation air in one of their apartment buildings. By utilizing renewable energy as part of their overall energy mix, the city has been able to lower their annual heating costs, and reduce CO<sub>2</sub> emissions

## Solution

Two SolarWall<sup>®</sup> heaters, for a total of 310 m<sup>2</sup> (3,334 ft<sup>2</sup>) were installed on the upper 12 stories of the masonry wall, at two corners of the building. The metal panels heat up in the daytime, and the ventilation fans draw the warmed air on the surface of the wall through the perforations in the panels and into the air cavity. The system is tied into existing roof mounted air make-up units to provide heated ventilation air throughout the corridors and common areas.

Ensuring proper corridor ventilation requires a tremendous amount of fresh air, and it is expensive to heat these large volumes of air. This "natural" pre-heating of fresh air means that substantially less natural gas is needed to maintain a high level of indoor air quality.

This was the first SolarWall project for the City of Toronto. The installation was projected to save \$8,500 annually at 2001 natural gas prices, and will result in a reduction of 53 tons of CO<sub>2</sub> each and every year.

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