

MAKE ENERGY SOLUTIONS EASY

MAIN STREET STATION

HISTORIC BUILDING, MODERN TECHNOLOGY

THE HISTORY

The Main Street Station was one of the most architecturally beautiful hotels in Canada. The fire-proof building, made of concrete and masonry work operated as a hotel from 1930 until 1973.

Between 1930 and 1973, the Main Street Station was known for many social events, and as a Canadian Pacific hotel it represented the glory days of railway travel in Canada. Today, it houses businesses and apartments, but still retains most of the structural dignity of when it was first built.

THE SOLUTION

The 16 Tonne Daikin Variable Refrigerant Volume (VRV) Heat Recovery System, includes:

- A heating and cooling system.
- Two linked Heat Recovery Outdoor Units (one 10 tonne unit and one 6 tonne unit).
- 980 feet of total refrigerant piping split between a 3-parallel pipe configuration (pipe diameters ranging between 1/4" to 1 1/8").
- 4 indoor fan coil units and a branch with 5 wall-mounted heads serving 5,500 sq.ft of commercial space.
- 120 feet of ducting to accommodate the zoning kit and 5 wall-mounted heads.
- A simple payback period of 4 years against comparable rooftop solution.

Annapolis Valley Air Management, Daikin North America LLC, and Nova Scotia Power Business Solutions worked closely to uncover a modern, cost effective, and high performing solution designed especially to meet the needs of the West Wing at the Historic Main Street Station. VRV systems are ideal in retrofit applications.

For a copy of the complete case study or to learn more, contact one of our business solutions experts at: businesssolutions@nspower.ca

THE CUSTOMER

The West Wing of the Main Street Station hosts approximately 5500 sq.ft of commercial office space. The existing boiler that provided space heating to the West Wing was inefficient, unreliable, and was not sized to meet additional demand from new tenants.

The owner of the Main Street Station (HarbourEdge MIC) and SafeGuard Property Management Services were tasked with a complete retrofit of the West Wing heating system. With a plan to increase its property value, they had to ensure that the new heating and cooling solution would be cost effective throughout its lifecycle.

THE BENEFITS AND FEATURES

MINIMAL IMPACT TO BUILDINGS:

- The refrigerant can carry more heat per unit volume than air or water, therefore refrigerant lines can be smaller than the alternatives, making lines easier to route within existing structures.
- VRV can be very discrete. VRV condensing units can be hidden to protect the integrity of historic buildings.

FLEXIBLE CONTROL CAPABILITIES:

- At the West Wing, 4 independent heating and cooling zones with 10 separate temperature set points.
- The ability to monitor and control the VRV system centrally through a web application.
- The ability to manage and maintain the VRV system remotely through Daikin to ensure ongoing performance.

DECREASED ENERGY COSTS:

- Condensing unit inverter compressors allow the VRV system to operate efficiently at partial heating and cooling loads.
- Heat is transferred from zone to zone within the space to minimize electrical heating and cooling demands.
- Daikin's Variable Refrigerant Temperature (VRT) acts to target appropriate refrigerant temperatures based on heating and cooling demands also reducing compressor work.