



BLUEPRINT

SIDNEY FEDERAL CREDIT UNION SIDNEY, NEW YORK

PROJECT INFORMATION

Building Type: Office

Square Feet: 38,000 sq. ft.*

Floors: 3

Consulting Engineer:

Towne Engineering
Utica, NY

Contractor:

H.J. Brandeles Corp.
Utica, NY

Manufacturer's Representative:

Modular Comfort Systems
Syracuse, NY

* Building square footage includes a third floor tempered storage area measuring 68ft x 248ft.



Challenge:

The main challenge for the new Sidney Federal Credit Union building was matching the customer's need for a quiet system with high efficiency using geothermal technology to meet the low ambient heating requirements and then interfacing all the Daikin products together with a BACnet® control system with minimal maintenance.

The Solution:

Daikin VRV cassette indoor non-ducted fan coil units accomplish the low noise, and minimal maintenance requirements expected by the customer. The Daikin VRV system, the ERV and the Ground source loop are all controlled by a BACnet® based Building Management System for centralized control and operational efficiency.

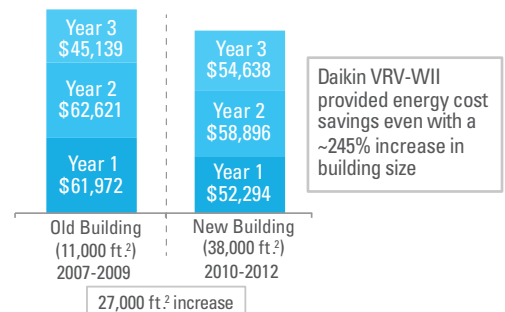
Sidney Federal Credit Union is a 38,000 square foot bank building, built in 2009, located in Sidney, NY. Prior to the construction of the new building in 2009, Sidney Federal Credit Union occupied an 11,000 square foot building adjacent to the new 38,000 square foot building.

Using Daikin's water source heat recovery VRV-WII as the basis of the new larger building's design provided Towne Engineering the opportunity to offer a very efficient heating and air conditioning system with a ground source geothermal loop. An advantage inherent to geothermal system designs is the benefit of maximizing the heat output of the geothermal loop during low ambient heating conditions, offering a consistent condensing/evaporative temperature medium. The total energy costs for the original 11,000 square foot building in years 2007, 2008 and 2009 were \$61,972, \$62,621 and \$45,139 respectively for a 3 year average of \$56,577. The average cost over the next 3 years for the new building

amounted for \$55,276; a lower average cost, almost the same cost for a building over 3 times the size of the original building. The annual heating and cooling cost per square foot for the old building was \$5.14 and \$1.51 for the new building which is a savings of \$3.63 per square foot annually or a 71% cost reduction.

The selection of the cassette non-ducted fan coil units also benefits the Sidney Federal Credit Union employees by providing a quiet environment for work and assisting customers.

Energy Cost Comparison



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DAIKIN EQUIPMENT

- 3 VRV-WII Heat Recovery RWEYQ252MTJU-HR
- 54 Branch Selector Boxes
 - BSVQ36MVJU
 - BSVQ60MVJU
- 17 3' x 3' Ceiling Mounted Cassettes
 - FXFQ18MVJU
 - FXFQ24MVJU
 - FXFQ36MVJU
- 57 2' x 2' Ceiling Mounted Cassettes
 - FXZQ07M7VJU
 - FXZQ09M7VJU
 - FXZQ12M7VJU
- 71 REFNET Branch Piping Kits
 - KHRP25A22T
 - KHRP25A33T
 - KHRP25M72TU
 - KHRP25M73TU
 - KHRP26A22T
- 1 BACnet® Gateway
 - DMS502B71
- 1 Simplified Wired Controller
 - BRC2A71
- 17 Decoration Panels (FXFQ)
 - BYC125K-W1
- 57 Decoration Panels (FXZQ)
 - BYFQ60B8W1Q
- 46 Fresh Air Intake Kits
 - KDDP55D160
 - KDDQ44XA60
- 65 Remote Sensor Kits
 - KRCS01-1B
- 3 VRV-WIII Connection Piping Kits
 - BHFP26MA84U
- 1 Strainer
 - BWU26A20



2'x2' 4-Way Ceiling-Mounted Cassette



- Quiet work environment with sound pressure levels as low as 29 dB(A).
- Simple maintenance with easy-to-clean grille and washable long-life filter.
- Space-saving depth of units requires only 11.6" of ceiling space.

FIND OUT MORE ABOUT DAIKIN VRV.
Contact your local dealer or manufacturer's representative.

Additional information

Before purchasing this appliance, read important information about its estimated annual energy consumption, yearly operating cost, or energy efficiency rating that is available from your retailer.

Actual savings and costs will vary. Cost and savings statements are applicable solely to the installation indicated. For additional information please contact the installing contractor, distributor or factory representatives.

