AIRON™ Group of Companies

Innovative building smarts.™

Niagara College Canada

Architects: **Architects Tillman Ruth Mocellin Inc**
Consultants: **VRM - Vanderwesten Rutherford Mantecon**

New Athletic Wing & Applied Health Centre:

More than 90 Post-secondary and 15 post graduate programs in the schools of Academic and General Studies, Business and Entrepreneurship, Information and Media Studies, Environment, Horticulture and Agribusiness, Health and Community Studies, Hospitality and Tourism and Technology.

7,500 full-time in post-secondary, apprenticeship and post-graduate programs, including 270 International students from more than 50 different countries.

The New Athletic Wing has seating for 1,000 spectators. The $40-million Applied Health Institute is a two-storey, 100,000 sq. ft. building for the college's practical health-care programs. The building will feature two wings joined by a 350-seat auditorium.

Project Highlights:

- Six air handling units (AHUs) with combinations of constant and variable supply tactics. All variable systems are equipped with variable volume systems (VAVs)
- Each VAV has a reheat coil for more effective temperature control
- Dental programs on the ground floor, including an expanded community clinic. The top floor will be a health clinic, "essentially emulating a hospital."

Project Details:

Applied Health Centre:
- Glycol system
- Exhaust and outside air (OA) are controlled by humidity and CO_2 sensors
- Zone occupancy is determined by the CO_2 levels and therefore controls the supply VAV of fresh air.
  - Zones in unoccupied mode receive more efficient temperatures.

New Athletic Wing:
- Cooling supplied by chilled water from the main campus chiller
- Hot water is supplied from the main campus boilers
- Five air handling units (AHUs). Some serve VAVs with VFDs. Economizer is controlled base on humidity and CO levels.
- Seven VAVs are located within the entire wing. Space sensors measure CO_2 levels and space temperature. VAVs adjust air volume to maintain set point.

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Project Sheet 2012.