Hamilton-Wentworth Catholic District School Board

New secondary school, on industrial site, St. Mary's

All structural, mechanical and electrical engineering services were the responsibility of Group Eight. The work included planning, design, specifications, contract administration and general construction review.

The new, 2-storey, 150,000 ft^2 school, in addition to traditional Classrooms, contains triple Gymnasium, Cafetorium, Industrial Arts, Computer, Music and Drama facilities. The Cafetorium, designed to accommodate theatre/arts productions, is complete with a professional stage lighting system.

The site had poor soil bearing properties and therefore required a 3-foot thick engineered fill sub grade throughout. The Gymnasia, Cafetorium and central Atrium have 40-foot high, barrel vault roofs with exposed steel as an aesthetic feature of the overall structural design.

The existing site had hazardous industrial waste that had to be removed. The removal process was incorporated in the design planning process so that the project could run smoothly and open for the new school year.

St. Mary's was the first school in this board to have a direct digital control (DDC) energy management system that controls and monitors the building's heating and air conditioning. Separate HVAC systems were designed for the Cafetorium and Gymnasium areas allowing independent operation from the rest of the school, particularly during evenings and on weekends. Two heat recovery units are located in each Mechanical Room, providing cost effective make-up air to the building's heat pump system. The 2-storey, central atrium required special fire separation and sprinkler treatment due to the large glass area.