

**PROJECT PROFILES**



**CORTELLUCCI VAUGHAN HOSPITAL**  
VAUGHAN, ON

**Client:** PCL Constructors Ltd.

**Size/Area:** 1.3 million square feet (120,773 square metres)

**Cost:** \$1.7 billion

The 11-storey Cortellucci Vaughan Hospital consists of inpatient medical-surgical units positioned on top of a diagnostic and treatment podium. Key clinical programs include emergency services, diagnostic imaging, surgical suites, critical care, neonatal intensive care, and an in-patient mental health unit. The 500 bed capacity hospital is Canada's first "smart hospital" with integrated technology facilitating a more streamlined and patient focused delivery of healthcare services. *Targeting LEED® Silver Certification.*

HVAC systems installed include for the following situated in a dedicated central utility plant (CUP) and throughout the main facility:

- Central heating plant (8 N+1 x 6000 MBH dual-fuel condensing boilers) serving CAV boxes, reheat coils, terminal heating units
- Central domestic hot water heating system (3 N+1 x 6000 MBH dual-fuel condensing boilers)
- Central steam plant (2 N+1 x 2940 kW and 1 x 1960 kW dual-fuel boilers) serving air handling unit humidification and hospital process requirements
- Steam plant de-aerator systems (x 2)
- Central chilled water plant (4 N+1 x 2813 kW centrifugal chillers and N+1 induced-draft cooling towers) serving AHU cooling coils and fan coil units
- Central heat recovery chillers (2 N+1 x 932 kW)
- 23 custom air handling units (mixed and 100% fresh air AHUs) with heat recovery wheels, economizers {non 100% units}, hydronic heating & cooling coils, steam humidification and fan VFDs
- In-floor heating and snow-melt heating systems
- Computer room (chilled-water) AC units
- Cooling only fan coil units serving EMRs, electrical rooms and IT rooms
- Space pressure & temperature controlled Isolation & Procedure Rooms
- Exhaust fans, ventilation fans, and stair pressurization fans
- Garage RTU with DX cooling and gas-fired heating
- Garage heat pumps serving telecom & electrical closets, and split DX system serving garage elevator control room.

**SERVICES PROVIDED BY CFMS:**

- Contract document review
- Commissioning coordination & document management
- Installation review from a commissioning perspective
- Verification of DDC system and BAS graphics interface



- 100% performance testing of all major HVAC systems
- Random performance testing of LV lighting system
- Co-ordination & video-taping of mechanical equipment and systems training
- Seasonal performance testing of HVAC systems

**REFERENCE:**

**PCL Constructors Ltd**

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