

The Whistler Transit Facility is a “state-of-the art” Operations and Maintenance Facility capable of fueling and servicing a combined fleet of 36 diesel and hydrogen fueled buses. The facility was needed for BC Transit to meet its commitment of providing a hydrogen fueling and a maintenance facility for the 2010 Olympic Games and to meet the needs of BC Transit in supporting the transit service requirements for the next 25 years. This is the largest hydrogen bus facility and the first of its kind in the world.

The 25,000 sq.ft. facility is comprised of a maintenance and administration building with six maintenance bays, a bus wash/dry bay, hydrogen and diesel fueling stations and covered parking for 50 buses.

The Facility is a high-performance “green” building, meaning that it has reduced the impact that its construction and occupancy have on the planet. It incorporates several sustainable design elements such as:

- Use of low VOC materials
- Water efficient plumbing fixtures
- High-efficiency lighting tied to occupancy and daylight sensors for energy savings

BC Transit required the facility to be completed in time for the 2010 Olympics in February 2010, with the client needing operation of the facility six weeks prior. Due to funding-approval realities, the contract was not let until May 2008. Traditional delivery methodology identified a completion date of April 2010. The demands of the condensed project timelines were met through the design-build process via expedited design approvals, early procurement of materials and engagement of trades, in order to achieve schedule efficiencies in the field during construction.

The site boundaries were not identified at the time of contract award. Substantive negotiations between BC Transit (The Lessee) and BC Hydro (the Lessor) needed to occur simultaneous to the design effort. The creation of a habitat channel on site was required. Design and construction challenges were complicated by the fact that the site is bisected by a 500kva transmission line and an adjacent power substation.

The available construction “window” was further shortened by the fact that heavy snowfall in Whistler limits construction activity from January through April.

Budget – The concept design identified an initial project budget of \$25.4 million; anticipated additional site development costs identified a probable project budget of \$27.0 million. The total available project budget was \$22.0 million.

Solutions – Omicron tendered the superstructure and foundations early allowing for an accelerated construction start and for the early ordering of critical path items. The winter shutdown issue was eliminated as a result. Pre-loading of the site to address geotechnical concerns was also addressed at this time. Comprehensive design detailing, constructability reviews and value-engineering audits were completed during this period. At the same time, negotiations between all jurisdictional authorities and matters related to the transfer of the land, mitigation requirements, etc. were completed.

The design-build process allowed the team to competitively bid out the trade packages against a critical-path timeline. Trade package bids were closely monitored for scope and value against design development estimates. Potential delays due to jurisdictional approvals were eliminated as these matters were resolved during the design and construction process; not beforehand.

As a result, the project was delivered to the Client in early December 2009 for a total project cost of \$20.4 million.

At the ribbon-cutting ceremony BC Transit thanked all concerned publically and noted that the project was “delivered on time against impossible odds and was nearly \$2 million under budget”.