

MECHANICAL CONTRACTOR • AWARD OF EXCELLENCE

Alpha Mechanical Contracting – YVR Solar Installation

Rooftop Achievement

The installation of a solar heating system at YVR's domestic terminal was one of the most challenging jobs ever undertaken by Alpha Mechanical Contracting. In recognition of a job well-done, the contractor received this year's VRCA Mechanical Contractor Award.

BY JEAN SORENSEN

Vancouver International Airport Authority's (VIAA) adoption of an advanced energy conservation program at its Richmond-based domestic terminal has led to the installation of the largest solar heating project in B.C. and won Port Coquitlam-based Alpha Mechanical Contracting (Alpha) Limited this year's VRCA Award of Excellence in the mechanical contractor division. The rooftop installation challenged the company in a number of ways. The deadline was tight, technical requirements were demanding, special techniques and innovations had to be employed, adverse weather affected work, and sensitive work areas all combined to make this one of the most challenging undertakings the company has successfully completed in its 30-year history.

The VIAA requested project completion in three to four months in order to accommodate heavy volumes of summer 2003 traffic into the domestic terminal. Alpha's Jeff Lang, senior estimator and business development, says: "Our experience had shown us that projects of this size usually take five months." Two new, energy-efficient, hot-water tanks and an 800-gallon per hour solar-powered heating system were required to meet the authority's energy-saving goals.

Lang says Alpha decided the challenge could best be met by serving as the "prime" contractor on the project, which meant undertaking all coordination, supervision of 13 different subtrades in addition to undertaking the mechanical work using its own workforce. Lang says using "our own forces gave us flexibility and control over the project" required for the tight deadline. It would



Two new energy-efficient hot water tanks supplying domestic hot water to the existing 820,000-square-foot Domestic Terminal Building at YVR.

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Alpha
MECHANICAL

A VRCA accredited contractor winner
2004 Mechanical Contractor VRCA Award of Excellence

*Extremely proud to have won the 2004
Mechanical Contractor VRCA Award of
Excellence for the Vancouver International
Airport Authority Domestic Terminal Building
Solar & Hot Water Systems Upgrade.*

*Thank you to all our sub-trades and suppliers
for your dedication and support on this project.*

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PHOTO COURTESY OF ALPHA MECHANICAL CONTRACTING LTD.

The YVR Domestic Terminal Building (DTB) Domestic Hot Water System Upgrade project in Richmond consisted of installing 100 solar panels, two new energy-efficient hot water tanks and an 800-gallon-per-hour solar-powered heating system.

Quick Facts

OWNER: Vancouver International Airport Authority

LOCATION: YVR Domestic Terminal Building, 3880 Grant McConachie Way, Richmond, B.C.

SQUARE FOOTAGE: Supply of domestic hot water for 820,000 sq.ft.

CONTRACT VALUE: \$750,000

PRIME CONTRACTOR: Alpha Mechanical Contracting Ltd.

PRIME CONSULTANT: Keen Engineering Co. Ltd.

also provide greater control over the work site and better meet the overall high standards expected by the VIAA (For example, all welding and roofing could be coordinated around a two-week window while administration employees on the upper level were on holiday).

Alpha was also better able to deal with the inevitable change orders that result for varying reasons on a job site. Lang says “we accommodated them” and “managed this without delaying the schedule.”

Andrew Wong, Alpha’s vice-president and construction manager, adds: “We have to acknowledge the commitment to excellence of our subtrades and suppliers, who all moved quickly to lend their support so that the project came in on time. Without their support, it would not have happened.”

On the domestic terminal’s roof Alpha met with some formidable limitations.



ESC Automation, formerly known as Energrated Systems

Congratulations

Alpha Mechanical Contracting

Congratulations **Alpha Mechanical** for winning this year’s *VRCA Award of Excellence Mechanical Contracting Division.*

ESC was a member of Alpha’s team for the Domestic Terminal Building – Solar and Domestic Hot Water System Upgrade Project and has proudly served YVR with all their building automation needs for the past 16 years

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Congratulations Alpha Mechanical on your VRCA Award of Excellence



Thanks for helping make YVR energy smarter



Vancouver International Airport Authority
Administration de l'aéroport international de Vancouver

www.yvr.ca



PHOTO COURTESY OF ALPHA MECHANICAL CONTRACTING LTD.

Over 500 feet of heating pipe, 1,600 feet of natural gas piping and over 1,000 feet of domestic water piping were required to complete the hot water system upgrade.

A fall protection plan had to be devised and implemented in conjunction with the strict rules set out by the authority. While the support beams were being fabricated off-site, Alpha crews still had to place 50 support legs. Yet the authority would only allow Alpha to access the roof to place one hole which determined the position of the first I-beam and the precise T-point that was needed to start the structural layout. Lang says a template was then used to locate the position of the other I-beams and map out the position of the support legs. The authority and Keen Engineering approved the plan and work began. But welding had to be confined to the daytime as lights interfered with the control tower. There was a constant need to guard against fire. All work had to be done above the T-bar ceiling and as each support leg was welded in place and inspected, a roofing contractor moved in to close the gap. The support legs were cut to length and support frames moved onto the roof. Plywood was placed around the work area and special dollies (using wide tires to distribute load) were brought roof side to handle the movement and placement of the heavy support frames onto the support legs.

"There was really no room for error," says Lang.

The VRCA award acknowledges the effort that Alpha and its workforce made in reaching the authority's target objectives. "We are proud of this project," says Lang. The award will join others on the wall of Alpha's office including one that the company is especially proud of. "We received the first award (1997 in this category) that was presented, for the company's contribution to the Catamaran Ferries Assembly Building in North Vancouver." **CB**

Congratulations to Alpha Mechanical Contracting Ltd. on receiving the 2004 VRCA Mechanical Contractor's Award of Excellence for the YVR Upgrade Project. All Steel proudly supplied and installed the structural steel for this award-winning project.

ALL STEEL
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"We Congratulate ALPHA MECHANICAL CONTRACTING LTD and are proud to be part of this successful team."

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MECHANICAL CONTRACTOR • AWARD OF MERIT

Keith Plumbing and Heating Co. Ltd. – QLT Pilot Manufacturing Facility

NAME OF PROJECT: QLT Pilot Manufacturing Facility

OWNER: QLT Inc.

LOCATION: 887 Great Northern Way, Vancouver

SQUARE FOOTAGE: approximately 3,000

CONTRACT VALUE: \$1 million

GENERAL CONTRACTOR: Lewis Builds

ARCHITECT: Chernoff Thompson Architects

MECHANICAL CONSULTANTS: Stantec Consulting Ltd.,
Desmond Patrick.

ELECTRICAL CONSULTANT: Stantec Consulting Ltd.

Keith Plumbing & Heating Co. Ltd. was selected for the mechanical scope of work involved in the renovation of over 3,000 square feet for QLT Inc.'s new Pilot Manufacturing Facility. QLT is a global biopharmaceutical company dedicated to the discovery, development and commercialization of innovative therapies to treat eye diseases, cancer and dermatology related conditions. This project required Keith Plumbing to construct a facility that adheres to the Food and Drug Administration standards and to work in and over operational research areas. Keith Plumbing was able to build the project to the highest of standards while conforming to the client's needs. The result is the first pharmaceutical manufacturing facility in B.C. and one of the most interesting and unique laboratory projects in recent history.



PHOTO COURTESY OF KEITH PLUMBING AND HEATING CO. LTD.



- Contract Bonds
- Commercial Liability
- Course of Construction
- Wrap Up Liability
- Equipment Coverage

Congratulations Alpha Mechanical

We are proud to have provided the bonding on this Award winning project.

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Congratulations Alpha Mechanical on winning the 2004 VRCA Mechanical Contractor Award of Excellence. We are proud to be the electrical contractor for this YVR upgrade project.

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