

TREASURY BOARD SUBMISSION

"CONFIDENTIAL - CABINET DOCUMENT"

Ministry Document Number: 03-09

MINISTER:

Honourable Bill Bennett, Minister of Tourism, Culture and the Arts

TITLE:

Approval for the BC Pavilion Corporation (PavCo) to spend work related to the goof replacement at BC Place Stadium (BC Place),

for the engineering $\sqrt[\infty]{}$

s12, s

ISSUE:

s12, s17

This initiative relates to the first Goal of the 2007/08 Service Plan for the Ministry of Tourism, Sport and the Arts:

- A tourism sector that delivers lasting provincial economic and social benefits
- Objective Tourism revenue doubles by 2015.

It relates to the 2008 Shareholder's Letter of Expectations:

• Implement the Shareholder's direction for the retention and refurbishing of BC Place.

And, it helps to maximize the economic benefits to the province from exposure brought by the 2010 Olympic and Paralympic Winter Games.

RECOMMENDATION:

BACKGROUND:

The Shareholder's Letter of Expectations dated April 30, 2008 describes the mandate of PavCo, and by extension BC Place, *To generate economic and community benefit for the people of British Columbia through the prudent management of public facilities.* The Letter also directs PavCo to *Implement the Shareholder's direction for the retention and refurbishing of BC Place.*

The air-supported roof fabric at BC Place is at the end of its useful life. Installed in 1983, the fabric had an expected life of 25 years and has performed to design specifications. Given the lead time required to evaluate, organise and install a new roof system, evaluation of the structure and confirmation of costs and scheduling must begin now.

On May 16, 2008, Premier Gordon Campbell announced the refurbishment of BC Place, including the replacement of the air-supported fabric roof after 2010 pending the design completion of business case and cost-benefit analysis, and government approval.

The engineering work underway will allow for a full costing of this system and enable best prices to be obtained (Appendix 1). A deferral of the replacement until after the 2010 Olympic and Paralympic Winter Games will ensure that construction will take place at a time when there is less demand in the marketplace for labour and steel, and therefore a lower premium on these resources than is currently being paid.

BC Place will undertake extensive refurbishments and deferred maintenance projects commencing late summer 2008, and is scheduled to replace its air-supported fabric roof in 2010.

FISCAL MANAGEMENT CONSIDERATIONS:

The Cabinet minute of May 2, 2008 stated:

OPTIONS:

s12, s17

SIGNIFICANT IMPLICATIONS:

LEGISLATION REQUIRED:

There are no legislative impacts.

There are no legal or constitutional implications.

There are no material First Nations implications.

CONSULTATIONS:

Public consultation as part of the City's Official Development Plan revision process will take place in Fall 2008.

Discussion with prospective residential and commercial developers indicates strong interest in the development of the North False Creek lands. These discussions will be on-going.

Positive discussions have occurred with City staff and City Council to gauge support. A commitment has been secured from the City to hold the public hearing on the necessary rezoning application in October 2008. PavCo and their agents will be working closely with the City as the project moves forward. Completion of the rezoning will provide greater certainty regarding the anticipated proceeds from future development rights.

No other agencies are materially affected by the recommended option.

The recommended action has no impact on regulatory reform.

COMMUNICATIONS ISSUES:

The public is largely aware of the proposal to upgrade BC Place through significant media coverage in spring and early summer 2008, and from the Premier's May 16, 2008 announcement of the refurbishment of the facility.

While the public will need to be kept informed, no substantive communications issues are anticipated.

This request will have no impact on the regulatory reform initiative.

RECOMMENDED DECISION:

s12, s17

SIGNATURE:

HONOURABLE BILL BENNETT MINISTER OF TOURISM, CULTURE

AND THE ARTS

DATE:

KEY CONTACT:

Warren Buckley CEO, BC Pavilion Corp. 604 484-5218

APPENDICES TO SUBMISSIONS:

Appendix 1 – Due Diligence, Planning and Engineering Costs

Appendix 1

DUE DILIGENCE, PLANNING AND ENGINEERING COSTS FOR THE REPLACEMENT OF THE BC PLACE ROOF
(\$ millions)



TREASURY BOARD SUBMISSION

"CONFIDENTIAL - CABINET DOCUMENT"

Ministry Document Number: 04-09

MINISTER:

Honourable Bill Bennett, Minister of Tourism, Culture and the Arts

TITLE:

Funding for upgrades

s12, s17

at BC Place Stadium (BC Place)

ISSUE:

BC Place will undertake extensive refurbishment projects commencing in the summer of 2008, and is scheduled to replace its air-supported fabric roof in 2010.

MTCA requests Treasury Board approval to expend:

s12, s17

This request is in keeping with the Premier's May 16, 2008 public announcement, and relates to the first Goal of Ministry of Tourism, Sport and the Arts 2007/08 Service Plan:

- A tourism sector that delivers lasting provincial economic and social benefits
- Objective Tourism revenue doubles by 2015

It also relates to the 2008 Shareholder's Letter of Expectations:

• Implement the Shareholder's direction for the retention and refurbishing of BC Place.

In addition, it enables PavCo to contribute to the maximization of the economic benefits to the Province from positive exposure to the world through the televising of the opening and closing ceremonies of the 2010 Olympic and Paralympic Winter Games.

RECOMMENDATION:

BACKGROUND:

The Shareholder's Letter of Expectations dated April 30, 2008 describes the mandate of PavCo, which is To generate economic and community benefit for the people of British Columbia through the prudent management of public facilities. The Letter also directs PavCo to Implement the Shareholder's direction for the retention and refurbishing of BC Place.

On May 16, 2008, Premier Gordon Campbell announced the refurbishment of BC Place, including the replacement of the air-supported fabric roof.

PavCo needs to commence its requested extensive refurbishment projects immediately in order to complete them prior to the 2010 Games.

BC Place will remain fully operational during the renovation period leading up to the VANOC "Exclusive Use Period" which begins November 1, 2009, or after the conclusion of the 2009 BC Lions CFL football season. Given this constraint, the General Contractor has determined that a 13 month construction period is the absolute minimum amount of time required to engage in these works. With two months required for the RFP period and awarding of contracts to the start of work, approval is required now in order for the improvements to be completed in time for the handover for the 2010 Games.

PavCo is scheduled to replace the air supported fabric roof in 2010 following the Games.

FISCAL MANAGEMENT CONSIDERATIONS:

On May 2, 2008 the Province directed PavCo to submit a request for a funding decision regarding the proposed maintenance and upgrades for BC Place, including those planned in the short term.

Page 8 redacted for the following reason:

SIGNIFICANT IMPLICATIONS:

LEGISLATION REQUIRED:

There are no legislative impacts.

There are no legal or constitutional implications.

There are no material First Nations implications.

CONSULTATIONS:

Positive discussions have occurred with City staff and City Council to gauge support. A commitment has been secured from the City to hold public hearing(s) on the necessary rezoning application in October 2008. PavCo and its consultants will continue to work closely with the City as the project moves forward.

Discussion with prospective residential and commercial developers and with adjacent land owners indicates strong interest in the development of the North False Creek lands. These discussions will be on-going.

PavCo has also consulted with its existing and prospective BC Place clients.

No other agencies are materially affected by the recommended option.

The recommended action has no impact on regulatory reform.

COMMUNICATIONS ISSUES:

The public is largely aware of the proposal to upgrade BC Place through significant media coverage in spring and early summer 2008, and from the Premier's May 16, 2008 announcement of the refurbishment of the facility.

PavCo will continue to keep the public and stakeholders informed throughout the upgrade project and no substantive communications issues are anticipated.

This request will have no impact on the regulatory reform initiative.

RECOMMENDED DECISION:

SIGNATURE:

HONOURABLE BILL BENNETT MINISTER OF TOURISM, CULTURE

AND THE ARTS

DATE:

July 0 (and

KEY CONTACT:

Warren Buckley CEO, BC Pavilion Corp Phone: 604-484-5218

APPENDICES TO SUBMISSIONS:

• Appendix 1: BC Place Interior Renovations and Furniture Fixtures and Equipment Costs

• Appendix 2: BC Place Interior Renovations and Furniture Fixtures and Equipment Costs

Appendix 1

BC PLACE INTERIOR RENOVATIONS AND FURNITURE FIXTURES AND EQUIPMENT COSTS

Appendix 2

BC PLACE INTERIOR RENOVATIONS AND FURNITURE FIXTURES AND EQUIPMENT COSTS

Descriptions

Pages 13 through 14 redacted for the following reasons:



TREASURY BOARD SUBMISSION

"CONFIDENTIAL - CABINET DOCUMENT"

Ministry Document Number: 08-09

MINISTER:

Honourable Bill Bennett, Minister of Tourism, Culture and the Arts

TITLE:

Funding for temporary works and structural upgrades s12, s17 to prepare for installation of the replacement roof at BC Place Stadium (BC Place)

ISSUE:

BC Place is scheduled to replace its air-supported fabric roof in 2010.

The Ministry of Tourism, Culture and the Arts (MTCA) requests Treasury Board approval to expend s12, s17 to carry out temporary works, and structural upgrades to BC Place, to ready it for the roof replacement post-2010.

In order to replace the roof of BC Place in 2010, certain preparatory works need to be carried out in the current and next fiscal year to strengthen the structure of the facility and surrounding plaza and lands, so that the stadium can bear the new infrastructure, and the plaza carry the full load of construction equipment. Once complete, the strengthened Plaza will also be able to host additional new events that may involve the use of heavy equipment.

This request is in keeping with the Premier's May 16, 2008 public announcement, and relates to the first Goal of Ministry of Tourism, Sport and the Arts 2007/08 Service Plan:

- A tourism sector that delivers lasting provincial economic and social benefits
- Objective Tourism revenue doubles by 2015

It also relates to the 2008 Shareholder's Letter of Expectations:

• Implement the Shareholder's direction for the retention and refurbishing of BC Place.

In addition, it enables PavCo to contribute to the maximization of the economic benefits to the Province from positive exposure to the world through the televising of the opening and closing ceremonies of the 2010 Olympic and Paralympic Winter Games.

RECOMMENDATION:

BACKGROUND:

The Shareholder's Letter of Expectations dated April 30, 2008 describes the mandate of PavCo, which is to generate economic and community benefit for the people of British Columbia through the prudent management of public facilities. The Letter also directs PavCo to Implement the Shareholder's direction for the retention and refurbishing of BC Place.

On May 16, 2008, Premier Gordon Campbell announced the refurbishment of BC Place, including the replacement of the air-supported fabric roof.

Design, engineering, and preparation of the physical structure to accommodate the retractable roof and seismic upgrading of shear walls and columns in the structure is not impacted by the Olympic program and is required to proceed immediately to permit installation of the retractable roof in 2010, immediately following the Olympic and Paralympic Winter Games.

With two months required for the RFP period and awarding of contracts to the start of work, approval is required now in order for the improvements to be completed in time for the handover for the 2010 Games. A deferment of this program will therefore delay the start to post Olympics, and result in up to a 2 year delay on completion. It will therefore jeopardize the potential for the Whitecaps to bring a Major League soccer franchise to the Province and BC Place.

A shutdown period of about eight months to install the new roof will be required at BC Place following the 2010 Olympic and Paralympic Winter Games.

FISCAL MANAGEMENT CONSIDERATIONS:

s12, s17

SIGNIFICANT IMPLICATIONS:

LEGISLATION REQUIRED:

There are no legislative impacts.

There are no legal or constitutional implications.

There are no material First Nations implications.

CONSULTATIONS:

Positive discussions have occurred with City staff and City Council to gauge support. A commitment has been secured from the City to hold public hearing(s) on the necessary rezoning application in October 2008. PavCo and its consultants will continue to work closely with the City as the project moves forward.

Discussion with prospective residential and commercial developers and with adjacent land owners indicates strong interest in the development of the North False Creek lands. These discussions will be on-going.

PavCo has also consulted with its existing and prospective BC Place clients.

No other agencies are materially affected by the recommended option.

The recommended action has no impact on regulatory reform.

COMMUNICATIONS ISSUES:

The public is largely aware of the proposal to upgrade BC Place through significant media coverage in spring and early summer 2008, and from the Premier's May 16, 2008 announcement of the refurbishment of the facility.

PavCo will continue to keep the public and stakeholders informed throughout the upgrade project and no substantive communications issues are anticipated.

This request will have no impact on the regulatory reform initiative.

RECOMMENDED DECISION:

s12, s17

SIGNATURE:

HONOURABLE BILL BENNETT MINISTER OF TOURISM, CULTURE

AND THE ARTS

DATE:

July 9, 2008

AND THE ARTS

KEY CONTACT:

Warren Buckley CEO, BC Pavilion Corp Phone: 604-484-5218

APPENDICES TO SUBMISSIONS:

- Appendix 1: BC Place Temporary Works and Structural Upgrades for the Replacement Roof -Summary
- Appendix 2: BC Place Temporary Works and Structural Upgrades for the Replacement Roof -Descriptions

Appendix 1

BC PLACE TEMPORARY WORKS AND STRUCTURAL UPGRADES FOR THE REPLACEMENT ROOF¹ (\$ millions)

¹ See Appendix 2 for Retractable Roof Upgrade descriptions.

Appendix 2

BC PLACE RETRACTABLE ROOF UPGRADE DESCRIPTIONS



TREASURY BOARD SUBMISSION

"CONFIDENTIAL - CABINET DOCUMENT"

Ministry Document Number: 14-09

MINISTER:

Honourable Bill Bennett, Minister of Tourism, Culture and the Arts

TITLE:

BC Pavilion Corporation – Business Case for the BC Place Refurbishment and Roof Replacement

ISSUE:

BACKGROUND:

Following Treasury Board submissions 04-09; 06/09; and 08/09, presented to Treasury Board on July 16, 2008, concerning deferred maintenance, refurbishment and structural upgrades for the replacement roof at BC Place Stadium, PavCo was directed to return to the Chair of Treasury Board with a detailed business case on the roof replacement and a revenue generation plan.

The Business Case for Replacement of the Roof at BC Place, including a revenue generation plan and a cost-benefit analysis of the roof alternatives is attached to this submission as Schedule 1.

In preparation of the Business Case, PavCo has worked with Provincial Treasury staff in modeling the benefits and costs of the two roof alternatives and in modeling the free cash flow projected to be available to PavCo over the life of the roof to finance the construction. These models are an integral part of the Business Case.

RE-ROOFING OPTIONS:

s12, s17

FISCAL MANAGEMENT CONSIDERATIONS:

Fiscal Impacts:

Pages 25 through 32 redacted for the following reasons:

SIGNIFICANT IMPLICATIONS: LEGISLATION

There are no legislative impacts.

There are no legal or constitutional implications.

There are no significant First Nations implications.

CONSULTATIONS:

No public consultation is required on replacement of the roof, per se.

Positive consultations have taken place to gauge interest in the potential residential and commercial opportunities on the BC Place lands. These discussions will be on-going.

City Council has approved the Official Development Plan for BC Place within the North East False Creek Lands. In addition to confirming BC Place as a vital component of the lands in the district, the Plan also confirms that BC Place is allowed 1.4 million sq ft of development rights on the adjacent lands. PavCo and their agents will be working closely with the City as the project moves forward.

The Ministry of Tourism, Culture and the Arts, and Tourism BC will incidentally benefit from implementation of the recommended option as increase marketing success at BC Place will materially contribute to the goal of the Tourism Action Plan.

No other agencies are materially affected by the recommended option.

The recommended action has no impact on regulatory reform.

COMMUNICATIONS ISSUES:

The public is largely aware of the proposal to replace the roof, through front page coverage in the press, particularly the Vancouver Sun on Thursday, March 6, 2008.

The Premier's press release of March 16, 2008, and press announcement of May 16, 2008, provided further public information on the plan to replace the current roof with a retractable roof.

While the public will need to be kept informed, no substantive communications issues are anticipated.

RECOMMENDED DECISION:

s12, s17

SIGNATURE:

DATE:

Nav 12,2008

HONOURABLE BILL BENNETT
MINISTER OF TOURISM, CULTURE

AND THE ARTS

KEY CONTACT: KEY CONTACT: Warren Buckley CEO, BC Pavilion Corp. 604 484-5218

APPENDICES TO SUBMISSIONS:

• Schedule 1: BC Place Roof Replacement Business Case

SCHEDULE 1

BC Place Roof Replacement Business Case

For Decision by Chair, Treasury Board

November 2008

Executive Summary	. 1
Stakeholders	
Goals and Objectives of PavCo for BC Place	. 3
BC Place - Overview	
Roof Replacement Options	. 5
Overview	

Appendix $A - 1$ Appendix $A - 2$ Appendix $A - 3$	Current Lines of Business and Gross Margin by Event Type BC Place Occupancy Profile BC Place Operating Results 2004 – 2010		
	s12, s17		

 $\begin{array}{ll} \mbox{Appendix } F-2 & \mbox{Geiger Engineers Credentials} \\ \mbox{Appendix } F-3 & \mbox{Schlaich Bergerman Credentials} \end{array}$

Appendix F - 4 Genivar Credentials

s12, s17

Appendix G – 4 High, Low, Median Estimates of Costs and Incremental Revenues

Executive Summary

Built in 1983 at a cost of \$174 million, BC Place is a strategic government asset in downtown Vancouver. BC Place serves, in part, as a catalyst for regional and Provincial economic development through business-focused events, in part as a stage for world attention grabbing Provincial events like the 2010 Games ceremonies, and in part as a venue for drawing communities together through amateur sports, festivals, multicultural events and other community-based activities.

BC Place is the only facility in British Columbia capable of hosting landmark events such as Expo 86, the Queens visit, the APEC conference, the Pope's visit or the opening and closing ceremonies in 2010 for Olympic and Paralympic Winter Games.

Page 39 redacted for the following reason:

Stakeholders

There are four categories of stakeholders in BC Place:

STAKEHOLDER	Interest	BENEFITS
Provincial Government	Owner	Ability to host landmark, world-stage events such as 2010 ceremonies; to draw diverse communities together through multi-cultural events, sports and entertainment.
Industry	Conducts events	Product and service sales at events; marketing through trade shows
Hospitality Sector	Event suppliers	Sales of services, food and beverage and accommodation to event attendees
General Public	Participants	Venue for major events; community gatherings

Goals and Objectives of PavCo for BC Place

The goals and objectives of PavCo for BC Place are driven fundamentally by the the *Shareholder's Letter of Expectations*, April 2008. Specifically, PavCo aims to:

- minimise the carbon footprint of BC Place by converting the roof to a much less energy-intensive structure than the current sir-supported dome;
- generate much greater economic and community benefits for British Columbia by prudent pursuit of the revitalisation initiatives to maximise repeat business and new revenue opportunities;
- to maximise energy saving opportunities through the revitalisation programming and traffic management initiatives;

BC Place - Overview

Since opening in 1983, BC Place has welcomed over 25 million guests. As the largest covered gathering place in British Columbia, it has hosted, and will continue to host, pivotal events in the history of the Province, such as Expo 86 and the pending 2010 Olympic and Paralympic Winter Games. Trade and consumer shows comprise the largest portion of building revenues, while sports and spectator events are the driving factors for sponsorship and food service revenues. Also host to a variety of special events, major rock concerts, amateur athletics, community events and large banquets, BC Place has also garnered a good reputation as a venue for movie shoots.

As Appendix A - 1 illustrates, BC Place has a broad spectrum of revenue-generating lines of business. Appendix A - 1 also illustrates the wide range of profitability of the main business lines to the corporation.

Appendix A - 2 illustrates the low utilization rate of BC Place during the summer months. During these months, solar gain through the roof fabric generates temperatures under the dome that are uncomfortable for most types of events that might otherwise be revenue producers for BC Place.

Appendix A - 3 provides a comparison of actual and projected operating results for BC Place for the period 2004 through 2010.

Greater use of BC Place for the more profitable lines of business, particularly international entertainment and international sports events, is precluded by the characteristics of an air-supported roof. The poor acoustics, the thermal qualities of the closed, fabric roof, the very limited ability to reconfigure space under the air-supported dome and the difficult operational accessibility issues inherent in the necessary air-lock system all militate against BC Place as a viable venue for such events.

The improved acoustic and temperature control capabilities inherent in other roof designs and the flexibility to reconfigure internal space would dramatically enhance the facility's role and business opportunity as a venue for higher margin arts, culture and sports events, particularly international "friendlies" and other competitions sanctioned by international sports federations.

BC Place benefits the business sector directly through trade shows and other business-focused events, through its purchase of goods and services for events and through the impact of considerable visitor and tourism spending created by BC Place activities.

According to analysis by the *Economic Planning Group*, in fiscal 2008, BC Place generated an estimated \$61.3 million in economic output to the Province and contributed an estimated \$5.5 million in tax revenue to government treasuries. During fiscal 2009, an estimated \$59 million in economic benefit and \$5.3 million in tax revenues will be generated. Approximately one third of this impact, or \$22.3 million, is created by non-resident spending at BC Place events. In addition to the full time work contingency at BC Place, the facility sustains about 982 full time equivalent jobs.

BC Place's contribution to British Columbia is a true mix of social, cultural and economic values, with a significant annual contribution of new incremental tax revenue to the provincial treasury.

Entering its 26^{th} year of operations, BC Place is undergoing a major internal refurbishment to restore the interior fit and finish to the contemporary market standards necessary to retain its customer base. The refurbishment program is described in Appendix C – 1. As the air-supported fabric dome has reached the end of its economic life, it is proposed to be replaced with a retractable fabric roof. With the internal refurbishment, the retractable roof would reposition the facility in the market place, essentially as a brand new, contemporary, architecturally iconic facility for British Columbia.

Roof Replacement Options

Overview

The Teflon-coated, air-supported roof fabric of BC Place remained intact and virtually trouble free, until a substantive tear occurred in 2007. This event highlighted the fact the roof fabric has reached the end of its 25 year design life. Following the deflation, a detailed technical inspection was commissioned and carried out by Hightex, a firm expert in maintenance and installation of such fabric roofs. The report recommended replacement in the near future.

In 1983, the air-supported roof structure was a leading edge technology which allowed the designers to span the 10-acre roof space of BC Place without an expensive internal steel bridging structure. There are now newer, proven, reliable roof systems that offer greater flexibility in the use of stadium space, much greater potential for business development, a more attractive appearance and *greener*, much more energy efficient technology.

Pages 43 through 49 redacted for the following reasons:

There are five major categories of events that presently utilize BC Place

- Anchor Sports Team Tenants (CFL) league sports spectator events such as BC Lion's games. The secondary market is one-time sports events such as international soccer *friendlies*;
- Concerts/Special Events Concerts are primarily musical performances. Special events include motor sports, family shows, film shoots and other unique events;
- Trade and Consumer Shows Trade shows are exhibit-based business generators aimed at specific industry or professional groups, e.g. Food Expo. Consumer shows are exhibit-based business generators open to the general public, e.g. the Pacific International Auto Show;
- Community Events Non-commercial, community oriented events produced by non-profit groups, e.g. Vancouver Sun Run, High School Football Championships;
- Convention Ancillary Support and Banquets Opening and closing ceremonies for conventions and food and beverage based events, usually associated with a convention or other significantly sized group.

Pages 51 through 62 redacted for the following reasons:

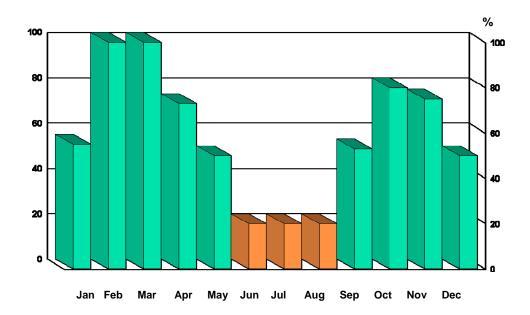
s12, s17

$\label{eq:APPENDIX} \textbf{A-1 Current Lines of Business and Margin by Event Type}$

APPENDIX A – 2 - BC Place Occupancy Profile

BC Place Occupancy Profile

% of Days Occupied In a Typical Year



Appendix A – 3

BC Place Actual and Projected Operating Results 2004 - 2010

	2004/05 Actual	2005/06 Actual	2006/07 Actual	2007/08 Actual	2008 /09 Forecast	2009/10 Forecast
Revenue	9,414	12,713	13,054	13,298		
Direct Costs	5,270	6,903	7,139	7,027		
Gross Margin	4,144	5,810	5,915	6,271		
Facility Expenses						
Staffing	2,858	3,215	3,209	3,776		
Fees	238	322	448	386		
General and administration	944	962	1,065	1,115		
BC Place development costs				2,074		
Business Development	233	282	203	210		s12 , s17
Operating	1,718	2,350	2,432	2,665		312,317
	5,991	7,131	7,357	10,226		
Income (Loss) before other		4		4		
expenses	(1,847)	(1,321)	(1,442)	(3,955)		
Major repairs and capital						
expenditures	(1,361)	(2,840)	(2,735)	(1,486)		
-	(3,208)	(4,161)	(4,177)	(5,441)	=	

s12, s17

Pages 66 through 105 redacted for the following reasons:

s12, s17

CHRISTOPHER K. BEATON

An effective diligent and Construction Manager with a record consistent accomplishment in managing the design, construction and closeout phases of medium and large scale construction projects totalling in excess of \$600 million. A high energy individual with proven leadership and team building skills who excels in developing processes, communicating high expectations and attaining results through positive actions.

Supportive strengths are in organizing, planning, leading, cost control and interpersonal skills.

RANGE OF EXPERIENCE

Mr. Beaton has thirty years of commercial construction experience with major corporations such as: Ivanhoe The Bay, Cambridge, Concert Properties, Morguard Investments Ltd. Markborough Properties, BCE Development, Northern Construction and The Foundation Co. of Canada. His principal focus has been on office and retail construction.

His direct involvement and experience with architects, engineers and contractors in the design and construction of projects provides him with a broad range of knowledge and expertise in facilitating the day-to-day planning and operation of major construction projects.

SPECIFIC EXPERIENCE

Mr. Beaton has managed the construction and/or renovation of more than ten shopping centres which have included all aspects from design through to operational start-up. In addition, he has acted as, Project Manager or Superintendent in the construction of five office towers, two recreation centres, three warehouses and one regional hospital.

Some notable construction projects that he has completed are as follows:

Metropolis at Metrotown, (1.7 Million SF), Burnaby, BC, Project Budget \$80, million. Chris acted as the owner's Construction Manager overseeing the complex amalgamation and renovation of the 2 Shopping Centres, Metropolis and Metrotown Centre building them into the 2nd largest shopping centre in Western Canada.

Coquitlam Centre Expansion, (350,000 SF), Coquitlam, BC, Project Budget \$75 million, Mr. Beaton managed the design and construction of this expansion as The Manager of Construction & Tenant Coordination overseeing a staff of 3 tenant co-ordinators. This project was phased to allow sequential openings. Additional phases valued at over \$10M were added.

Vancouver Trade & Convention Centre, Project Budget \$100 million +. Chris acted as the Project Manager for Concert Properties Ltd. on the Canada Place portion of the Portside proposal completing the demolition and reconstruction of the first phase of the Canada Place expansion.

Electronic Arts Production Studio (356,000 SF). Project budget of \$55 million. Chris acted as the owner's representative. He was involved in the design, preparation of contract documents and on site co-ordination of consultants and contractors.

Richmond Centre (250,000 SF). Richmond, BC. Project budget was \$15 million. He managed the construction of both the 1990 and 1996/97 renovation and expansion of Richmond Centre (N).

HBC Logistics Distribution Centre, (420,000 SF) Richmond BC. Construction value \$20M. Largest computerised warehouse / DC in Western Canada.

The Medical Services Association Building (90,000 SF). Vancouver, BC. Project was \$10 million. He managed the design and construction phases bringing in the project on time and \$400,000 under budget.

Construction Management

The BC Rail Head Office Building, (80,000 SF). Project budget was \$13 million. He supervised the construction of this mixed use, concrete office building.

The First Canadian Land Building (140,000 SF) Vancouver, BC. The project budget was \$14 million. Chris supervised the construction and subtrade coordination of this 14 story structural steel office building and theatre complex.

Pan Canadian Plaza (300,000 SF) Calgary, Alberta. Project budget was \$10 million. He supervised the tenant improvements to this 30 story Head Office tower for the Pan Canadian Oil Company on budget and ahead of schedule.

Child Health Centre (1.4 million SF) Calgary, Alberta. Project budget \$24 million. He supervised the day-to-day activities of men and materials on this major Alberta hospital.

As Project Manager he lead the successful design and construction of BC's first wave pool, the WC Blair Recreation Centre. The project's construction budget was \$3.85 million and included research into wave generating equipment, which took him to England and Wales to obtain state of the art technology.

Mr. Beaton is thoroughly familiar with the tenant co-ordination process. He has reviewed, approved and managed the construction of over \$30 million in tenant improvements over the last 5 years. He has negotiated successful retail designs with tenants such as The Gap, Banana Republic, Athletes World, Sony, Suzy Shier, McDonalds, A&W, Boston Pizza, Carlton Cards, Coles, Fairweather, La Senza, Off The Wall, Purdy's Chocolates, Sam The Record Man, Birks, Cotton Ginny, Radio Shack, Buffalo Jeans and many others.

Chris has successfully and continuously demonstrated that he can be parachuted into a project in crisis and achieve conflict resolution by putting the project back on track and getting all parties to work together.

BCS Consulting Ltd.

BCSRES#7.doc Feb28.05

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> Page 106 JTI-2013-00171

Fax: (604) 469 - 1209

Pages 107 through 110 redacted for the following reasons: s22

GEIGERENGINEERS

Geiger Gossen Hamilton Campbell Engineers P.C.

New York / Bellingham

Background and Qualifications

Geiger Engineers' practice is dedicated to providing engineering services for public assembly, sports and entertainment venues and events. Working together for more than thirty years, principals of the firm have been directly involved in the construction of well over one hundred major sports facilities, representing a total aggregate seating capacity in excess of a million seats. We have successfully completed significant projects across the United States as well as in Taiwan, Japan, Canada, Germany, Korea, England, Malaysia, Australia, and Saudi Arabia. Innovative engineering combined with intimate knowledge of the building type has made many of our projects renowned benchmarks of economical construction.

Notable Projects Include:

2002 World Cup Stadium, Seoul, Korea
Great American Ballpark, Cincinnati, OH
USTA Stadia Renovations, Flushing-Queens, NY
King Fahd International Stadium, Riyadh, Saudi Arabia

Xcel Energy Center Arena, St. Paul, MN
Littlejohn Arena Roof Replacement, Clemson, SC
BC Place Stadium, Vancouver, BC
Lindsay Park Sports Centre, Calgary, Alberta





We are frequently called upon to begin from first principles in engineering assignments that are without precedent. Our depth of experience and specialized expertise allows us to focus quickly on appropriate technologies to economically realize the architectural and programmatic goals any project.

Pages 112 through 114 redacted for the following reasons: s22



Rowan Williams Davies & Irwin Inc.

Overview

A TRUSTED REPUTATION FOR DELIVERING USEFUL RESULTS

The experts at Rowan Williams Davies & Irwin Inc. (RWDI) work with designers and developers to meet the world's most complex structural and architectural challenges with experience, knowledge and superior service. RWDI uses advanced engineering tools and expertise in service areas including wind engineering, air quality, acoustics, noise and vibration, ventilation, snow and ice, sun/shade effects, and glare to optimize building and structural performance, human comfort and safety. When involved in the early planning stages of a project, RWDI's results have been proven to save our clients time and money while minimizing risk.

SOPHISTICATED RELIABLE TECHNOLOGY

Our facilities include four boundary layer wind tunnels, an open channel water flume and advanced computer modeling capabilities including Computational Fluid Dynamics (CFD). RWDI also has an in-house model shop that uses stereolithography technology, integrated data acquisition, storage and processing systems, computer-aided drafting and a broad base of specialized instrumentation.

DEEP KNOWLEDGE

With over 400 employees, RWDI is a comprehensive, unique blend of senior scientists, engineers, specialists, meteorologists, engineering technologists, modelers, technicians and support staff. The firm's key clients include leading architectural, mechanical and structural engineering firms, plus private and public facility owners, who have come to rely on our expertise gained from our broad experience, our reputation for attention to detail, and our trusted results.

FIELDS OF SPECIALIZATION

Wind Engineering
Air Quality
Snow Loading & Drifting
Acoustics, Noise & Vibration
Sun/Shade/Glare

Computational Fluid Dynamics Thermal Comfort Exhaust Stack & Air Intakes Ventilation Pedestrian Comfort Snow & Ice Impacts Wind-Induced Vibrations Master Planning Sustainable Design

NOTABLE PROJECTS INCLUDE:

Manchester Stadium, Manchester, United Kingdom, Seoul 2002 World Cup Stadium, Seoul, Korea, Guangdong Stadium, Guangzhuo, China, Eagles Stadium, Philadelphia, Reliant Stadium, Houston, Texas, Inchon Munhak Stadium, Inchon, Korea



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www.rwdi.com



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Appendix - F-3 Schlaich Bergermann Credentials

Company Profile

Schlaich Bergermann and Partner LP are independent consulting civil and structural engineers. Our New York office opened in 2004.

The capability and capacity of our consulting firm is based on the experience of our highly qualified staff, which successfully cooperated for many years and since 1980 acts first under the name Schlaich + Parnter, since 1989 under the name of Schlaich Bergermann und Partner (SBP) since July 1, 2002 as a limited company.

This consultancy strives to design sophisticated engineering structures ranging from wide-span lightweight roofs, a diversity of bridges and slender towers to innovative solar energy power plants

Our ambitions are efficiency, beauty and ecology. For the sake of holistic solutions we seek the collarboration with architects and engineers from all fields of expertise who share our goals.

Offices:

Stuttgart

Hohenzollernstrasse 1, 70178 Stuttgart Telephone +49 (711) 6 48 71-0, stuttgart@sbp.de

Berlin

Gutav-Meyer-Allee 25, 13355 Berlin Telephone +49 (30) 4 63 07-360, berlin@sbp.de

New York

Schlacih Bergermann and Partner LP 555 8th Avenue, Suite #2402, New York, NY 10018 Telephone + 1 (212) 255-3682, newyork@sbp.de Eight managing directors jointly head the company:

Jörg Schlaich, Prof. Dr.-Ing., Drs. Ing. h. c., Professor Emeritus, University of Stuttgart

Rudolf Bergermann, Dr.-Ing. E.h.

Hans Schober, Dr.-Ing.

Wolfgang Schiel, Dipl.-Phys.

Knut Göppert, Dipl.-Ing.

Andreas Keil, Dipl.-Ing.

Staff 2008

Sven Plieninger, Dipl.-Ing.

Mike Schlaich, Prof. Dr. sc. techn.

3ta11 2000	Stuttgart	Dellill	INGW IOIK
Managing Directors	6	1	1
Engineers DrIng.	6	1	
Engineers DiplIng.	28	4	6
Draftsmen DiplIng	10		2
Draftsmen	6		
Administrative	8	1	1
Total	64	7	10
Staff 2007	2004	2005	2006
Managing Directors	8	8	8
Engineers DrIng.	5	6	6
Engineers DiplIng.	18	19	24
Draftsmen DiplIng	6	8	9
Draftsmen	6	5	6
Administrative	7	8	10
Total	50	54	63

Stuttgart Berlin New York



Schlaich Bergermann and Partner I P

Structural Consulting

Schlaich Bergermann and Partner LP are engaged in several fields of civil and structural engineering:

Bridges

Road Bridges Railroad Bridges Pedestrian Bridges

Buildings for

Administration Residence Universities Hospitals

Tower, Silos

Telecommunication Towers

Water Towers

Cement Silos

Sports Facilities Stadiums

Athletic and Swimming Arenas

Special Structures like

Cable-net Structures Shell Structures Cooling Towers Aircraft Hangers

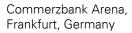
Industrial Plants

Use of new Energy Sources

Solar Updraft Towers Solar Collectors

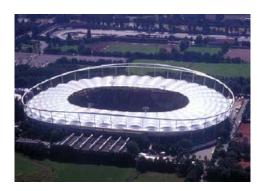
The scope of work includes all planning phases and ranges from feasibility studies, conceptual design through detailed structural design to the supervision of workshop and site construction. Our close contact to teaching and research work at Universities places readily at our disposal the latest "state of the art" as well as the know-how of new construction methods and materials. This easily enables us to include any type of experimental work (such as material testing, structural testing, wind-tunnel tests) in our project studies.

Structural Consulting Engineers





Gottlieb Daimler Stadium, Stuttgart, Germany



Olympic Stadium, Berlin, Germany



Busan Dome, Busan, South Korea



AOL Arena, Hamburg, Germany

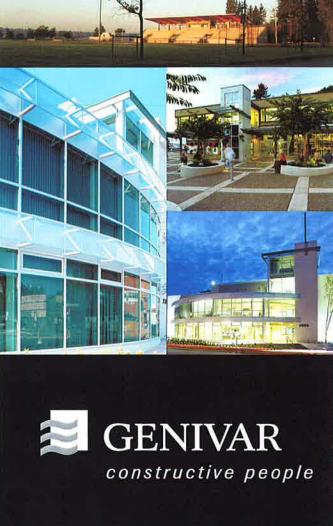


Fushan Stadiums, Fushan, China



Statement of Qualifications





Introduction to GENIVAR







GENIVAR is a Canadian leader in engineering delivering global solutions based on global approach to projects. With more than 1,800 employees, we provide services through GENIVAR Income Fund, including:

- Studies
- Engineering
- Architecture
- Environmental
- Organizational development
- We also meet clients' integrated needs (design-build, EPCM, fixed-price) through GENIVAR Construction, a privately held company.

Our activities include the design and construction of the full range of institutional, industrial plants, land development, commercial recreation and entertainment facilities, buildings, transportation and energy systems, water and wastewater treatment plants, irrigation systems, and waste management systems. Our clients are domestic and international, private and public sector, and First Nations peoples.

GENIVAR has worked within all methods of project delivery: conventional design-tender-construct, construction management, fast track, design-build, and build-own-transfer. We have filled most roles from owner representative to specialist advisor, as equity partner and as project developer, project manager to construction manager, as prime consultant and as subconsultant. We are team players committed to the success of each project to which we dedicate our intelligence and skills, time and effort.

Fast facts:

- More than 35 offices (Canada, Africa, Caribbean)
- Projects in more than 30 countries
- GENIVAR Income Fund, listed on the Toronto Stock Exchange (GNV.UN)
- ISO 9001:2000 certified

Values:

Teamwork: listening to our colleagues, communicating with each other and maximizing the contribution of all employees to ensure project success.

Respect: earning the trust of our colleagues and clients through a participatory approach.

Integrity: conducting ourselves in accordance with the principles of ethics, equity and justice.

Professionalism: setting high performance standards while encouraging autonomy and innovation.

Empowerment: taking on challenges in a stimulating work environment where employee performance is rewarded.

Quality: delivering on our service commitments without compromising performance.

Health and safety: implementing project procedures designed to protect the well-being of our employees and of all those who retain our services.



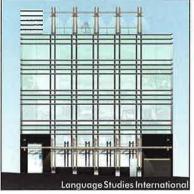
www.genivar.com

www.pbkarchitectsinc.com



Firm Experience And Capability









GENIVAR is a multi-discipline engineering consulting firm with over 1,800 employees across Canada. They have a proven record of performance and has established a solid reputation across Canada. We offer an experienced team of professionals with expertise in the following areas:

Civil Engineering:

We offer a wide range of engineering services for water and wastewater treatment plants; storm water and sewage lagoons, sewage systems, water supply, pump stations and distribution pipelines, dams and reservoirs, small and large irrigation systems, highways and rural grid roads, as well as bridges, including major restorations. Our personnel have been involved in hydroelectric plant design, dam safety evaluation and flood damage assessment.

Structural Engineering:

We have provided structural consulting services for many major and prestigious projects including office and commercial buildings, industrial buildings, multi-family residences, churches, as well as recreational, educational and institutional facilities. The structural department also acts as prime consultant for parkades, warehouses and light industrial buildings. Our specialists have extensive experience investigating structures subject to distress, failure and fire damage.

Mechanical Engineering:

We offer consulting services in heating, ventilation, air conditioning, refrigeration, plumbing and fire protection systems for all types of buildings. Our engineers perform computer-assisted energy analysis, cost analysis and life-cycle costing, as well as building system evaluations and feasibility studies. GENIVAR also has expertise in mechanical design and operation of systems for irrigation and drainage, water supply and distribution, water and sewer treatment plants and industrial plants.

Industrial Process Engineering and Facility Layout:

We have considerable experience in process engineering from initial concept through to fully developed P&IDs. Based on our process design input, we develop efficient plant layouts that handle material and personnel flows through processing to final product storage and shipping.

Firm Experience And Capability









Electrical and Instrumentation Engineering:

We draw from a wide range of commercial and industrial experience to provide engineering design, site services and contract management in all facets of electrical work. Work on past projects has included electrical power supply and distribution for industrial and commercial buildings, utility substations, indoor and outdoor lighting, protective relaying, alarm and communications systems, cost estimates, as well as specifications for supply and installation of electrical equipment and systems. We provide instrumentation and PLC design for industrial projects, gas compressor stations and irrigation systems.

Building Science:

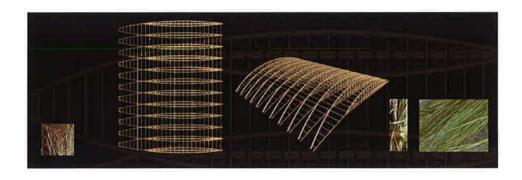
Our Building Sciences Group is a multi-disciplinary division of GENIVAR that provides professional technical and project management services in building sciences. Our services include life cycle analysis and reserve fund studies, technical audits and building condition assessments, building envelope design, inspection and evaluation, building component failure investigations and forensic engineering, as well as repair and restoration consulting and project management.

Power Engineering:

Our focus on energy-related engineering projects has allowed us to recruit the very best people in the industry. Our Vancouver office has a staff complement of over 150 persons with expertise in all engineering disciplines, and our senior engineers have over 26 years of power generation plant experience. We have successfully exported services throughout North and South America, with over 1,000 MW of simple cycle and combined cycle power plant projects within the last two years.

Project Management:

GENIVAR provides project management services on behalf of our clients and for our own projects. Services include project co-ordination and direction of multi-discipline engineering activities, design and construction co-ordination, scheduling, cost control and staffing. Types of projects have included industrial plants, commercial office buildings, parkades, hospitals, underground facilities, as well as irrigation and water resources.



Firm Experience And Capability











PBK Architects Inc., Is a member of GENIVAR. As one of the largest architectural firms in Vancouver, we have designed projects across the country from Vancouver Island to Newfoundland. In recent years our expertise has expanded into the United States, where we have executed many successful large-scale facilities. Our projects range in size from less than \$1 million, to over \$100 million in capital costs.

Areas of specialization include:

- Sports, Recreational and Spectator Facilities
- Industrial
- Institutional
- Parkade and Transportation
- Laboratory and Healthcare
- Commercial Facilities

PBK provides a full range of design services including:

- Programming, Planning and Feasibility Studies
- Architecture and Interior Design
- Sustainable Design
- Contract Administration and Construction Related Services
- Building Evaluations and Condition Assessments
- Project Management
- Specialist Consulting Services in Sports & Recreation Design

Kev Individuals:

The group is headed by Elisa Brandts as Managing Principal, Ian McKay as Senior Associate and Production Manager, Mark Koropecky as Associate responsible for design and Magda McKay, Healthcare and Laboratory Specialist.

Notable Projects:

Notable projects by PBK within the Greater Vancouver area include BC Place Stadium, BC Centre for Disease Control, Horseshoe Bay Ferry Terminal and the RAV Line (Richmond / Airport / Vancouver Light Rapid Transit) Proposal. Projects in university settings include the MDS Nordion Cyclotron Expansion and the TRIUMF ISAC II Research Facility at the University of British Columbia, the University of Ottawa Sports Complex, and a recent feasibility study for a new ice arena at the University of Saskatchewan.

Sustainable Design:

PBK are members of the US Green Buildings Council and have a number of LEED™ Accredited professionals on staff. Recent experience in sustainable design includes the Vancouver Transit Centre, Prince George City Yards and the Terrace Sportsplex.

Awards

Over the years our firm has been recognized many times for our design and management skills. A sampling of our awards received are listed below:

American Institute of Architecture – Tennessee Chapter, Award of Honour, 2004

Budweiser Events Center

Washington Aggregate and Concrete Association, Technical Merit Award for Special Application, 2004

Everett Regional Special Events Center

Masonry Institute of Washington, Excellence in Masonry Design - Citation Award, 2004

Everett Regional Special Events Center

Associated General Contractors of Washington, 2004, First Place in the Category of New Building over \$50 Million Everett Regional Special Events Center

International Parking Institute, 2003,
Honorable Mention in the Architectural Design Category
Royal Jubilee Hospital Parkade & Security Building

American Concrete Institute, Rocky Mountain Chapter, 2003, Award of Merit for Public Building over \$10 Million Budweiser Events Centre

Award of Excellence City of Saanich, 2001
Royal Jubilee Hospital Parkade & Security Building

BC Hydro Power Smart Excellence Award for New Commercial Building, 1995
Neptune Foods Building

AIBC Lieutenant Governor's Awards, Honourable Mention, 1992

Coquitlam Town Centre Grandstand & Fieldhouse

Canadian Parks & Recreation Association Excellence Award, 1984 BC Place Stadium

City of Vancouver Amenity Awards Award for Barrier Free Design BC Place Stadium

Canadian Consulting Engineering Award of Excellence, 1983 BC Place Stadium

Project Management Institute, Project of the Year BC Place Stadium

Project Management Institute, Project of the Year VIA Rail Maintenance Facility

Project Management Institute, Project of the Year Bullmoose Mines, Tech Corporation











Green Buildings / Sustainable Design

The notion of "green buildings" and sustainable architecture is central to our design process. Sustainable design stretches the knowledge boundaries of the individual disciplines and requires multi-disciplinary design integration.

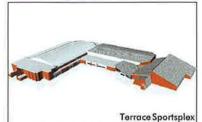
We maintain a strong advocacy for the development of innovative design solutions. Inter-disciplinary factors that range from energy and indoor environmental quality to site design and material selection require ongoing research. Implementation of such strategies offers direct benefits to the project that include capital cost reduction and life cycle cost effectiveness. It is often assumed that high performance and/or sustainable buildings automatically incur a capital cost premium, but we have unequivocally demonstrated that sustainable buildings often result in capital cost reductions.

PBK have been involved in sustainable design for many years. Some examples where we have incorporated sustainable design are:

- TRIUMF ISAC II Research Facility: The design of this new research facility at the University of British Columbia incorporates interdisciplinary strategies that focus on providing a variety of sustainable solutions. These include consideration of site and habitat conservation, efficient energy performance and the selection of sustainable building materials.
- Terrace Sportsplex: This project is being designed to LEED Silver level and incorporates a geothermal system to store waste heat from the ice plant and transfer it to the adjacent pool. Projected energy savings are in the order of \$140,000 annually. All of our ice rinks/spectator facilities utilize heat recovery of the free hot refrigerant gas purposes such as rink under-slab heating, snow melt pit, domestic hot water heating and building heating.
- Neptune Foods: This office/warehouse project won first place in the 1995 BC Hydro Power Smart Excellence Award in the New Commercial Building category. The facility incorporated energy efficiency techniques such as heat recovery of refrigeration compressor hot gas and condenser variable speed motors.
- Vancouver Transit Centre: PBK are currently involved in a sustainable design initiative for the Vancouver Transit Centre. An energy modeling exercise has been completed under the Commercial Building Incentives Program (CBIP) where energy usage was reduced by 25% while reducing the capital cost of the building by \$100,000. Several LEED workshops were held with the client and consultant team to establish green options and cost implications for the project to become LEED registered. This project is being designed to achieve a LEED Certified Level.
- Prince George City Yards: This project is currently in the detailed design stage and is being designed to achieve a LEED Silver Level. An energy modelling exercise has been completed under CBIP where energy use was reduced by over 35%.









Urban Planning





Milton Urban Expansion Area
Town of Milton



Calgary Raceport
Raceport Development Corporation



Guelph Eatons Centre
Redevelopment Options
City of Guelph



University of Saskatchewan Land Use & Urban Design Study

University of Saskatchewan

Vancouver Civic Spaces





Concord Pacific Place
Concord Pacific Development Corp.



False Creek Seawall Concord Pacific Development Corp.



Andy Livingston Park
City of Vancouver



David Lam Park
Concord Pacific Development Corp.

Sports & Recreation



Wichita Sports Center

P.C. Developments Inc.

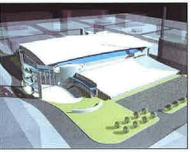


Westside Recreation Complex
City of Calgary



Sarnia Sports and Entertainment Centre

City of Sarnia



Windsor Sports & Entertainment Centre

City of Windsor

Spectator Facilities





Everett Regional Special Events Center City of Everett - Washington



Budweiser Events Center
Larimer County - Colorado



Sovereign Center City of Reading - Pennsylvania



BC Place Stadium Vancouver, BC

Industrial Facilities



<u>Deltaport Container Terminal</u> Vancouver Port Authority



Prince George City Yards
City of Prince George



#1 Combat Engineering Regiment Defence Construction Canada



Granville Pump Station

Transportation Facilities



Horseshoe Bay Ferry Terminal Overhead Walkway

BC Ferry Corporation



Sheppard West Subway Station
Toronto Transit Commission



Horseshoe Bay Foot Passenger Terminal

BC Ferry Corporation



Number Two Road Bridge
City of Richmond

Parkades





Vancouver International Airport Parkade Vancouver Airport Authority

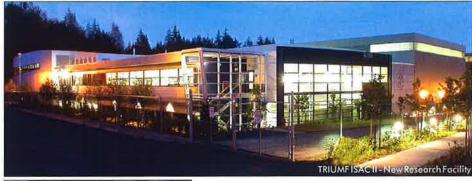


Hastings Parkade
Bentall Developments Ltd.



Royal Jubilee Parkade
Capital Health Region

Advanced Technology Research Facilities





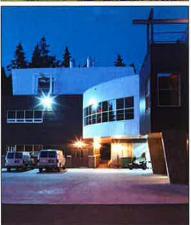
New Media Innovation Centre
Immersive Design Simulation Lab
Simon Fraser University



Lithium Battery Manufacturing Plant



Moli Energy



Vancouver Cyclotron Expansion at University of British Columbia MDS Nordion

Healthcare / Biotechnology





Peace Arch 150 Bed
Extended Care Unit
Peace Arch District Hospital



Royal Columbian Hospital Nursing Tower Addition Stage III

Fraser Health Region



BC Centre for Disease Control

British Columbia Buildings Corporation

Pages 142 through 154 redacted for the following reasons:

s12, s17