

FACULTY OF PHARMACEUTICAL SCIENCES / CENTRE FOR DRUG RESEARCH AND DEVELOPMENT /

UNIVERSITY OF BRITISH COLUMBIA _VANCOUVER

Brief Project Description

LOCATION

The building is sited on the corner of Wesbrook Mall and Agronomy Road, in the Heart of UBC’s campus. The site consists of a 20 240sm parcel, immediately north of Thunderbird Parkade. The site maximum buildable above grade height is 5 to 6 stories, plus basement.

CONTEXT

The Faculty of Pharmaceutical Science and Centre for Drug Research and Development project site is located at the intersection of Wesbrook Mall and Agronomy Road, north of the Thunderbird Parkade and south of the Health Sciences Precinct. Located at an important university entry point, the site is currently occupied by a surface parking lot.

Nearby developments include University Endowment Lands/ UBC residential communities on the East of Wesbrook, the Life Sciences Building to the North of Agronomy Road and “Agronomy knoll” open space to the west. This open space terminates the mid-block greenway that connects the southern part of campus, through UBC athletic facilities, to the Health Science Precinct. A large future development site, currently occupied by an ambulance station, is located directly north of the project site.

Future Agronomy Road improvements are anticipated that would realign the carriageway with the alignment of Agronomy Road on the east side of Wesbrook Mall.

WORLD-CLASS ARCHITECTURE FOR A WORLD-CLASS INSTITUTION

The design must reflect Pharmaceutical Science’s world-class researchers, faculty, and the University’s status as an internationally recognized institution in scientific endeavors. Since architecture can, perhaps more than ever, give an international presence to particular schools and departments within universities, the design itself can play a significant role in attracting and retaining the best in the scientific community from around the world. While the architecture can in fact be striking, the design will go beyond that to promote enjoyable, livable spaces for research and learning.

For the Saucier+Perrotte/Hughes Condon Marler Architects team, the new building must be made to measure for the Pharmaceutical Sciences + Drug Research and Development Building, working hand in hand with its program in representing the academic and scientific excellence for which UBC has become renowned.

PROJECT STATISTICS

SITE AREA

TOTAL: 5,730M²

BLDG AREA

- LEVEL -1: 3,854M²
- LEVEL 1: 3,077M²
- LEVEL 2: 1,416M³
- LEVEL 3: 3,564M²
- LEVEL 4: 4,044M²
- LEVEL 5: 3,485M²
- LEVEL 6: 4,054M²

TOTAL:23,500M²

LEED

LEED®

The LEED® Rating System awards points for sustainable aspects in each of five major categories; the total number of properly documented points determines the level of certification (Certified, Silver, Gold, or Platinum). LEED® certified buildings benefit from healthy indoor environments, higher building valuation, and reduced operating costs.

UBC is targeting a LEED® Gold rating for the Pharmacy building, and the status of the rating at this point remains on target with an estimated 39 points. A current scorecard is included for reference. Many additional credits are still under consideration and are labeled as ‘maybes’ on the scorecard. Meeting the requirements of these credits may depend on budget considerations, technical design development or factors that will be defined as the project is further developed. The scorecard will be updated periodically as the construction documents phase of the project proceeds.

The following is a brief summary of the strategies in place in each of the five Categories of Concern of the LEED® Rating System.

Sustainable Sites:

The building is carefully sited within the University fabric. Storm water management, light pollution control and reduction of heat island effect will minimize the site disturbance related to the building construction and operation. The building will support goals already in place on campus for alternative transportation by providing shower and change end of trip facilities.

Water Efficiency:

The building is achieving significant water conservation. Water use reduction features include landscaping with native plants as well as interior water efficient plumbing fixtures.

Energy and Atmosphere:

While projects of this nature (laboratory use) are naturally energy intensive, the Pharmacy building will be employing several strategies to reduce the energy load on the campus grid. Three atriums found in the building will be used to naturally ventilate the open public spaces as well as the offices using stack effect. A double skin system will be employed on the south elevation of the building to harvest heat and provide a thermal buffer for the occupants. Geothermal strategies are being investigated as well as an earth-tube system. The Pharmacy building will also be participating in BC Hydro’s High Incentive Building Program.

Conservation of Materials and Resources:

Reduction of construction waste and material usage are prime goals of the project, as are the implementation of regionally sourced materials and FSC certified products. Prompted in part by BC’s “Wood First” policy, and supported by the overall architectural concept, this building will be pursuing innovative uses of wood technology.

Indoor Environmental Quality:

The Pharmacy building will benefit from exceptional indoor environment for building users. The careful positioning of offices on the perimeter of the building will ensure that fresh air (operable windows) and abundant natural light are available to the majority of occupants. The positioning of laboratories adjacent to large atriums ensures that light of an appropriate quality will be available to lab users without placing unnecessary cooling load on the energy system. Building products with low VOC levels will be selected to ensure a healthy indoor environment. The building construction will protect the workers, the environment and the community by reducing the amount of contaminant entering the building as well as reducing the pollutants related to typical construction processes.

Innovation in Design:

The project will innovate in a few different ways by promoting local materials, educating the building visitors and staff and by promoting low impact maintenance programs. Energy monitoring systems will allow Facilities Management the benefit of direct feedback on energy consumption, contributing to an overall awareness and education of how buildings on campus are functioning in terms of energy performance.

LEED GOLD CHECKLIST

LEED Credits Status: UBC Pharmacy

39	15	16	Total Project Score				Project:				Possible Points		70						
			Certified	26 to 32 points	Silver	33 to 38 points	Gold	39 to 51 points	Platinum	52 to 70 points									
8	3	3	Sustainable Sites				Possible Points		14	5	3	6	Materials & Resources		Possible Points		14		
Yes	Possible	No	R							Yes	Possible	No	R						
Y			C + CM	Prereq 1	Erosion & Sedimentation Control					Y			A	Prereq 1	Storage & Collection of Recyclables				
1			A + O	Credit 1	Site Selection				1				A + O	Credit 1.1	Building Reuse, Maintain 75% of Existing Shell			1	
	1		A	Credit 2	Development Density				1				A + O	Credit 1.2	Building Reuse, Maintain 100% of Existing Shell			1	
		1	C + A + O	Credit 3	Redevelopment of contaminated Site				1				A + O	Credit 1.3	Building Reuse, Maintain 100% Shell & 50% Non-Shell			1	
1			A + O	Credit 4.1	Alternative Transportation, Public Transportation Access				1	1			CM	Credit 2.1	Construction Waste Management, Divert 50%			1	
1			A	Credit 4.2	Alternative Transportation, Bicycle Storage & Changing Rooms				1	1			CM	Credit 2.2	Construction Waste Management, Divert 75%			1	
		1	O	Credit 4.3	Alternative Transportation, Alternative Fuel Refueling Stations				1			1	A	Credit 3.1	Resource Reuse, Specify 5%			1	
1			A + O	Credit 4.4	Alternative Transportation, Parking Capacity				1			1	A	Credit 3.2	Resource Reuse, Specify 10%			1	
	1		L + CM + A	Credit 5.1	Reduced Site Disturbance, Protect or Restore Open Space				1	1			CM + A	Credit 4.1	Recycled Content, 7.5% (post-consumer + 1/2 post-industrial)			1	
		1	O + A	Credit 5.2	Reduced Site Disturbance, Development Footprint				1		1		CM + A	Credit 4.2	Recycled Content, 15% (post-consumer + 1/2 post-industrial)			1	
1			C	Credit 6.1	Stormwater Management, Rate and Quantity				1	1			CM + A	Credit 5.1	Regional Materials, 10% Extracted / Manufactured Regionally			1	
		1	C	Credit 6.2	Stormwater Management, Treatment				1		1		CM + A	Credit 5.2	Regional Materials, 20% Extracted / Manufactured Regionally			1	
1			A + L	Credit 7.1	Heat Island Effect, Non-Roof				1			1	CM + A	Credit 6	Rapidly Renewable Materials			1	
1			A + CM	Credit 7.2	Heat Island Effect, Roof				1	1			CM + A	Credit 7	Certified Wood			1	
1			E	Credit 8	Light Pollution Reduction				1		1		BE	Credit 8	Durable Building			1	
			Water Efficiency				Possible Points		5	11	4		Indoor Environmental Quality				Possible Points		15
Yes	Possible	No	R							Yes	Possible	No	R						
1			L	Credit 1.1	Water Efficient Landscaping, Reduce by 50%				1	Y			M	Prereq 1	Minimum IAQ Performance				
1			L	Credit 1.2	Water Efficient Landscaping, No Potable Use or No Irrigation				1	Y			O	Prereq 2	Environmental Tobacco Smoke (ETS) Control				
	1		M	Credit 2	Innovative Wastewater Technologies				1	1			M	Credit 1	Carbon Dioxide (CO ₂) Monitoring			1	
1			M	Credit 3.1	Water Use Reduction, 20% Reduction				1		1		M	Credit 2	Increase Ventilation Effectiveness			1	
	1		M	Credit 3.2	Water Use Reduction, 30% Reduction				1	1			CM	Credit 3.1	Construction IAQ Management Plan, During Construction			1	
			Energy & Atmosphere				Possible Points		17	1			CM + O + CA	Credit 3.2	Construction IAQ Management Plan, Before Occupancy			1	
Yes	Possible	No	R							1			CM + A	Credit 4.1	Low-Emitting Materials, Adhesives & Sealants			1	
Y			CA	Prereq 1	Fundamental Building Systems Commissioning				2	1			CM + A	Credit 4.2	Low-Emitting Materials, Paints			1	
Y			EM	Prereq 2	Minimum Energy Performance				2	1			CM + A	Credit 4.3	Low-Emitting Materials, Carpet			1	
Y			M	Prereq 3	CFC Reduction in HVAC&R Equipment				2	1			CM + A	Credit 4.4	Low-Emitting Materials, Composite Wood			1	
2			EM + M + E	Credit 1.1	Optimize Energy Performance, 20% ASHRAE / 29% MNECB				2		1		A + M + CM	Credit 5	Indoor Chemical & Pollutant Source Control			1	
2			EM + M + E	Credit 1.2	Optimize Energy Performance, 30% ASHRAE / 38% MNECB				2	1			A + E	Credit 6.1	Controllability of Systems, Perimeter			1	
	2		EM + M + E	Credit 1.3	Optimize Energy Performance, 40% ASHRAE / 47% MNECB				2		1		M + E	Credit 6.2	Controllability of Systems, Non-Perimeter			1	
		2	EM + M + E	Credit 1.4	Optimize Energy Performance, 50% ASHRAE / 55% MNECB				2		1		M	Credit 7.1	Thermal Comfort, Comply with ASHRAE 55-2004			1	
		2	EM + M + E	Credit 1.5	Optimize Energy Performance, 60% ASHRAE / 64% MNECB				2		1		M	Credit 7.2	Thermal Comfort, Permanent Monitoring System			1	
		1	M + E	Credit 2.1	Renewable Energy, 5%				1				A	Credit 8.1	Daylight & Views, Daylight 75% of Spaces			1	
		1	M + E	Credit 2.2	Renewable Energy, 10%				1				A	Credit 8.2	Daylight & Views, Views for 90% of Spaces			1	
		1	M + E	Credit 2.3	Renewable Energy, 20%				1				Innovation & Design Process				Possible Points		5
1			CA	Credit 3	Best Practice Commissioning				1	5			R						
1			M	Credit 4	Elimination of HCFCs and Halons				1	Yes	Possible	No	v	Credit 1.1	Innovation in Design: e.g. Green Housekeeping			1	
1			E + M	Credit 5	Measurement & Verification				1	1			v	Credit 1.2	Innovation in Design: e.g. Education Program			1	
1	1		O	Credit 6	Green Power				1	1			v	Credit 1.3	Innovation in Design: Exemplary Performance			1	
										1			v	Credit 1.4	Innovation in Design: Credit from Other LEED Rating Systems			1	
										1			A	Credit 2	LEED® Accredited Professional			1	
R : Responsibility			CM : Construction Manager			A : Architect: HCMA			CA : Commissioning Agent			C : Civil							
			M : Mechanical			E : Electrical			BE : Building Envelope			EM : Energy Modeling Specialist							
			L : Landscape Architect			O : Owner			AC : Acoustics			v: Varies							