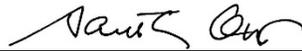


**SUBJECT** ORCHARD COMMONS BOARD 4 PROJECT CLOSE OUT REPORT

**MEETING DATE** FEBRUARY 7, 2019

Forwarded on the Recommendation of the President

**APPROVED FOR  
SUBMISSION**



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Santa J. Ono, President and Vice-Chancellor

**FOR INFORMATION**

**Report Date** January 18, 2019

**Presented By** Andrew Parr, Interim Vice-President Students  
 Andrew Szeri, Provost and Vice-President Academic  
 Peter Smailes, Vice-President Finance & Operations  
 Joanne Fox, Principal, UBC Vantage College  
 John Metras, Associate Vice-President Facilities  
 Jennifer Sanguinetti, Managing Director, Infrastructure Development  
 Michael White, Associate Vice-President Campus + Community Planning  
 Aubrey Kelly, President and CEO, UBC Properties Trust

**EXECUTIVE SUMMARY**

As part of the Board Approved project management process, Board 4 is the project close out report which is submitted following construction, occupancy and warranty period.

Orchard Commons is the second of five planned mixed-use commons identified in the Vancouver Campus Plan to provide on-campus student housing to meet growing demand as well as to create vibrant social and academic centres, bringing life to the core of campus 24 hours a day, 12 months of the year and connecting students who live on campus, commuter students, faculty and staff. Orchard Commons was specifically programmed and designed as the physical home for UBC Vantage College Program and includes academic and administration space as well as first-year student residence beds for the College and for the wider UBC student community.

Orchard Commons was completed and opened for occupancy in September 2016. The final project cost was \$131.974 million, \$4.5 million (3.5%) above the approved budget of \$127.474 million. The overage was due to construction coordination issues and overtime costs required to achieve a tight completion deadline. The Retained Risk Fund covered \$2.3 million of the overage with the balance funded by Student Housing & Hospitality Services (SHHS).

Orchard Commons includes 1,049 residence beds for first-year students, residence front desk, community dining hall, academic space for Vantage College, general use classrooms, meeting and study rooms, informal learning spaces and a child care facility. The facility is in the final process of seeking LEED Gold certification. Orchard Commons has generated vitality and social energy at the south end of the main campus. Its dining hall is particularly popular with the campus community.

**Attached:** Photographs of Orchard Commons

**STRATEGIC CORE AREAS SUPPORTED**

✓ People and Places     Research Excellence    ✓ Transformative Learning    ✓ Local / Global Engagement

**DESCRIPTION & RATIONALE**

Orchard Commons is the physical home for UBC Vantage College and includes academic and administration space as well as student residence beds for the College. Vantage College (VC) was established to enable students from a wide variety of international school systems and with diverse linguistic and cultural backgrounds to have the opportunity to transition into UBC degree programs upon successful completion. This is critical to the University's goal to expand international student enrolment and thus create a diverse campus community with enriched learning and engagement opportunities for all students.

Vantage College also contributes to the overall financial sustainability of the University through revenue growth and diversification, summer use of campus and contribution to infrastructure renewal and expansion.

Orchard Commons is located on the northeast corner of West Mall and Agronomy Road and includes 1,049 residence beds, office space for UBC Vantage College administrators and faculty; and flexible classrooms to serve Vantage College academic program requirements.

Various amenities are provided to serve both the Vantage College program and the wider campus community. These include informal learning spaces, 450-seat dining hall and food/catering production centre, event/activity space, convenience store, infant / toddler child care facility and end-of-trip facilities for cyclist commuters.

**Functional Program for the Facility**

The following is an overview of the functional program for Orchard Commons.

**Student Housing and Related Support**

- 1,039 student beds including 31 accessible units and units for residence advisors (modified traditional format with two units (one bed each) sharing a single bathroom; no in-suite kitchen facilities). This student bed count is one higher than in the program presented at Board 1 and Board 2.
- Six one-bedroom apartments for residence coordinators
- Two two-bedroom apartments for residence life managers
- Bicycle storage incorporated into all residence units
- 12 interconnected floor lounges, each connecting 3 residence floors
- Two house lounges
- A "Sky Lounge" in the south tower for Vantage College and other events
- Laundry facilities

**UBC Vantage College**

- Three 75-seat classrooms
- Two 40-seat classrooms
- Nine 26-seat classrooms
- Six 16-seat classrooms
- Writing centre including support office space
- Administration office space for 26 people
- 35 faculty offices
- 40 shared workstations for sessionals and graduate teaching assistants

**Common-Use Facilities**

- Residence support (reception, SHHS offices, fitness, games room, music practice)
- 450-seat dining hall with production kitchen, providing service to residents and the broader campus community
- Convenience store
- Activity/events space, adjacent to the dining room, for up to 200 people that can accommodate a broad range of activities for residents, College attendees and the broader campus community to meet the requirements of VCP Policy 14.
- Multi-use lobby incorporating informal learning spaces, queuing capacity for high-volume periods, and study areas
- Two inter-connected Child Care Centres with 24 under 3 year old spaces to meet requirements of VCP Policy 15.
- End of trip facilities for cyclists (showers, change rooms)
- Building support (housekeeping, waste/recycling, storage)

UBC Properties Trust managed the project. The architect was Perkins & Will. The construction manager was Stuart Olson.

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<b>BENEFITS</b> Learning, Research, Financial, Sustainability & Reputational	Orchard Commons is the second of five mixed use academic/student housing hubs (Ponderosa Commons was the first) designated in the Vancouver Campus Plan to animate the main campus at a local level by providing vibrant centres in which students can live, study, socialize and access services to meet their daily needs and thus enhance the overall student experience at UBC.
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<b>RISKS</b>	Project is complete.
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<b>COSTS</b> Capital & Lifecycle Operating	The final project cost was \$131.974 million, \$4.5 million (3.5%) above the approved budget of \$127.474 million. The overage was due to construction coordination issues and overtime costs required to achieve a tight completion deadline. The Retained Risk Fund covered \$2.3 million of the overage with the balance picked up by Student Housing & Hospitality Services (SHHS). This was reported to Board through the project completion process.
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**FINANCIAL** Student Housing & Hospitality Services (SHHS) contributed \$104 million to fund the project. Funding Sources, UBC Vantage College contributed \$24.7 million. \$1.0 million was provided from Impact on Liquidity Infrastructure Impact Charges (IICs) to fund the design and construction of the outdoor commons (main gathering space) landscape. The Retained Risk Fund provided \$2.3 million to help address the increased project cost.

The project required debt financing of \$131 million (\$132 million capital cost less \$1.0 million in IIC funding) with \$100 million sourced from the Endowment and the remaining \$31 million financed internally. Debt service is being paid from UBC Vantage College revenues, student housing rents and dining hall revenues.

**SCHEDULE** The project was completed for occupancy in September 2016.  
Implementation  
Timeline

**CONSULTATION** A stakeholder meeting of occupants, operators and the project delivery team was held on Relevant Units, November 28, 2018 to review project successes, constraints and lessons learned.  
Internal & External  
Constituencies

#### **Design**

The design of the project has been well received overall. The development has improved the legibility of the paths across campus and increased safety and security in the neighbourhood. Stakeholders remarked positively upon the quantity and quality of natural light throughout the complex. Access to windows, views and natural light has resulted in a high level of use of the stairs in the towers. Social connectivity is enhanced through the use of the stairs as well as through the use of the multi-storey lounges in the residence towers. There is good porosity between the interior and exterior thanks to the effective use of glazing.

The classroom spaces have non-traditional layouts, enhanced lighting and technology that are used to enhance the way program is delivered in these spaces. These classrooms are open to all users on campus and surveys indicate that the learning spaces are well-received. In surveys of students and instructors, 93% of respondents indicated agreement to “I am satisfied with the choice of colours used in this classroom.” and 91% of respondents indicated agreement to “The audio visual technology provided in this classroom helps me reach my teaching and/or learning objectives.” The classrooms are heavily used, including outside of classroom time as informal study space.

The residences are designed in a way to meet best practice for a first-year student residence. People love to live there and even though the usage mix changed in the design process, the project is working financially for SHHS. The dining facility has proven to be particularly popular with sales approximately 50% higher than projected.

The physical brand for Vantage College is good and the building is very welcoming.

While overall a successful project, there are some design issues that have emerged that can serve as lessons for future projects of this type.

Most of the outdoor spaces are well-used but there are some shading issues with the outdoor ping pong tables that means that they are not as well used as anticipated. The exterior stairs, however, are frequently enjoyed by users. The shadow impact of the towers on the adjacent Horticulture greenhouses has been more severe than projected. New lighting was provided to make up for the impact but further greenhouse lighting enhancements may be required.

The classrooms have experienced some significant acoustical issues due to the location of fan coils in the ceiling spaces of some of the classrooms. Some spaces are not usable for videoconferencing and other uses that are particularly sensitive to sound.

Compromises were made with the design of the event space and as a result, the space is dark and uninviting so that the program intent has not been met but the space is now being used as an extension of the dining hall and for study space.

SHHS would prefer that the building had more commissary space than was included and more space for food service delivery.

### **Project Development Process**

Overall, the project development process was collaborative and inclusive. The integrated design process used was a good one and considering the challenges faced by the team, the project was very successful.

The team worked hard to deliver this large and complex project within a compressed schedule of only 24 months. The tight schedule resulted in the finish quality suffering in some areas such as concrete. Also, occupancy was done in eight phases.

Cost overruns noted previously in this report were due to construction coordination issues and overtime costs needed to meet the compressed schedule. It was also noted by UBC Properties Trust (UBCPT) that the extreme cost escalation that has impacted the local market started in the timeframe that this project was under construction. They also noted that there were several personnel changes within the Construction Management firm that impacted the accuracy of information regarding cost, schedule and trade coordination.

When the project was first starting design, there were still many unknowns for the Vantage College Program so it was hard to design to the right program size. The program is not as big as was originally envisioned but it is working well within the space.

In some cases, the specifics of the child care needs were not well understood by the design team. Different options are being considered to ensure that facility requirements are better spelled out in the future, perhaps through the use of child care design guidelines.

### **Operations**

The project is meeting expectations operationally in many areas and is the best mixed use project completed so far.

Demarcation of building system maintenance responsibility between Building Operations and SHHS continues to be a challenge although it is an improvement on previous mixed-use projects. Day-to-day operations have been sorted out between the two operational teams but equipment replacement responsibilities are still to be defined.

There are some areas such as access to the roof and to mechanical spaces that need to be rethought to balance security requirements with ease of operation. Card swipe access could be a workable solution for these areas.

**Sustainability**

The project is still targeting LEED Gold and is in the process of getting certified. The project team worked very hard to protect and retain the large Arbutus tree on Agronomy Road. The tree is integrated into the design of the child care centre’s outdoor space. The building energy performance is almost as good as predicted at approximately 190 kwh/m<sup>2</sup>/year. Several energy efficient systems were installed and are performing as expected, including a heat recovery system for the kitchen and the precast panel construction used on the building envelope. There is also an interlock between the baseboard heating system and the operable windows in the residence rooms to reduce waste heat when windows are open.

<p><b>UBCPT COMMENTS</b> Complete for all reports that include a property component</p>	Review Date		Signed off by	

**Previous Report Date** June 2, 2014

**Decision** Board 3 Approval, Funding Release \$124,273,500

1) Board 3 approval to commence construction on the Orchard Commons project, subject to construction tenders being received at or below budget based on 80% of tenders, with a funding release of \$124,273,500 to undertake and complete construction.

Revised Capital Budget	\$127,473,500
Operating Budget	See report
Schedule	
Program	
Award construction contracts	
Funding Release	\$124,273,500
Information	
Expenses to date	\$1,390,000
Funding released to date	\$3,200,000

2) Approval for four internal loans, totalling up to \$126.5 million with debt service sourced from Vantage College revenues and student housing rents and revenues. This financing includes:

- a. A \$60 million loan to SHHS at an interest rate of 4.15% plus inflation (calculated annually), an amortization of 30 years with debt service sourced from student housing rents.
- b. A \$40 million loan to SHHS at an interest rate of 4.15% plus inflation (calculated annually), an amortization of 25 years with debt service sourced from student housing rents.
- c. Up to a \$1.8 million loan to SHHS at an interest rate of 5.75%, an amortization of 30 years with debt service provided by student housing rents.

	<p>d. Up to a \$24.7 million loan to Vantage College at an interest rate of 5.75%, an amortization of 30 years with debt service provided by Vantage College revenues.</p> <p>3) Approval to invest \$100 million of the UBC endowment in Orchard Commons. The investment will be made in two tranches (\$60m and \$40m) with an annual interest rate of 4.15% plus inflation (the overall rate is projected at 6.15%) for a period of 30 years for the \$60m tranche and 25 years for the \$40m tranche. Security for the investment will include assignment of rents and a mortgage on residential portion of the buildings.</p> <p>4) Authorization to obtain Ministerial approval pursuant to section 50(2) of the University Act to grant a lease of the residential portion of the Orchard Commons (Vantage College) building to The University of British Columbia Foundation for a period of 99 years. The lease of these facilities to the UBC Foundation will not affect the future delivery of educational programs and will in fact enhance the facilities available to UBC Vantage College international students. Execution of the lease and related agreements between UBC and the UBC Foundation will be on terms consistent with those outlined in this report.</p>
<b>Action / Follow Up</b>	Commence construction when tender conditions met.
<b>Previous Report Date</b>	January 12, 2014
<b>Decision</b>	Board 2 Approval, Funding Release \$2,500,000
<b>Action / Follow Up</b>	Commence working drawings and tender documents.
<b>Previous Report Date</b>	June 4, 2013
<b>Decision</b>	Board 1 Approval, Funding Release: \$700,000
<b>Action / Follow Up</b>	Finalize consultant selection. Commence schematic design.

Attachment 1 – Photographs of Orchard Commons



Photo 1 – Exterior View showing towers behind and the academic wing in front



Photo 2 – Interior View looking towards academic wing

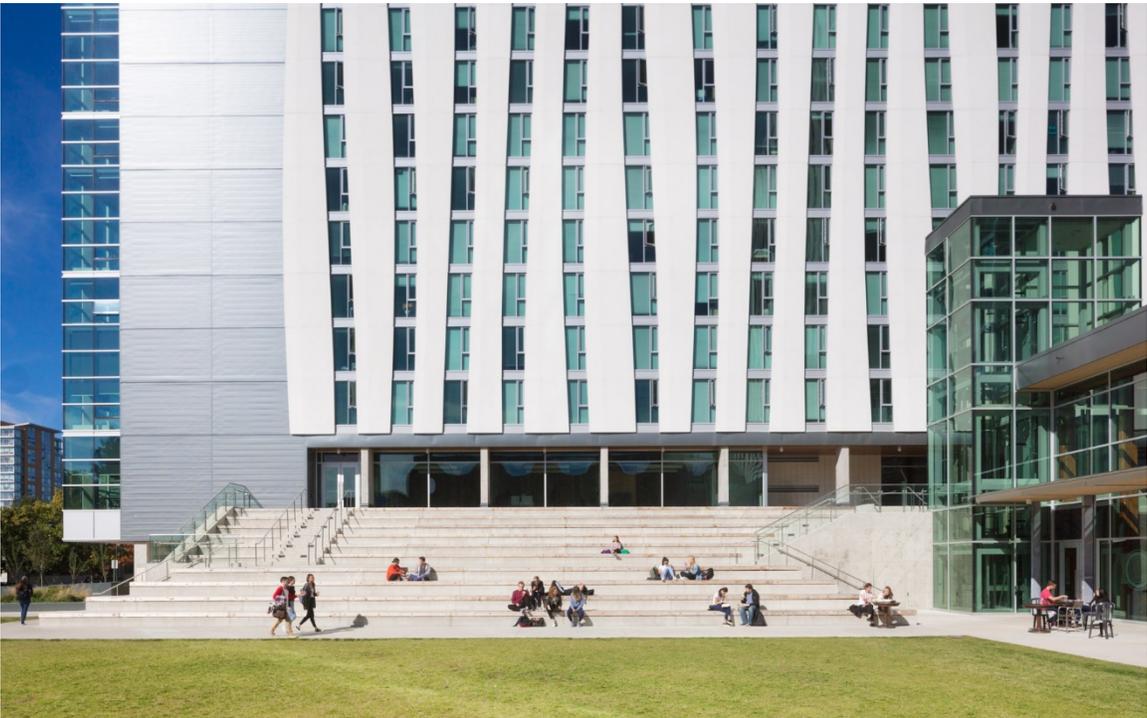


Photo 3 – Exterior stairs



Photo 4 – Open Kitchen Servery