



<b>SUBJECT</b>	<b>UBC OKANAGAN SKEENA RESIDENCE</b>
<b>MEETING DATE</b>	<b>APRIL 19, 2018</b>

Forwarded to the Board of Governors on the Recommendation of the President

**APPROVED FOR  
SUBMISSION**

\_\_\_\_\_  
Santa J. Ono, President and Vice-Chancellor

<b>DECISION REQUESTED</b>	<p><b>IT IS HEREBY REQUESTED that the UBC Board of Governors grant BOARD 2 approval for the UBC Okanagan Skeena Residence project, with authorization to issue the development permit and a funding release of \$500,000 to complete working drawings and tender documents.</b></p> <p>Revised Capital Budget \$22,812,200                  Revised Operating Budget see report                  Schedule                  Program                  Authorization to Issue Development Permit                  Proceed to Working Drawings &amp; Tender  <b>Funding Release \$500,000</b></p> <p><b>Information</b>                  Expenses to date \$47,583                  Funding released to date \$500,000</p>
---------------------------	--

<b>Report Date</b>	<b>March 21, 2018</b>
--------------------	-----------------------

Presented By Deborah Buszard, Deputy Vice-Chancellor & Principal, UBC Okanagan  
 Peter Smailes, Interim Vice-President Finance & Operations  
 Rob Einarson, Associate Vice-President Finance & Operations, UBC Okanagan  
 Andrew Parr, Managing Director, Student Housing & Hospitality Services  
 John Metras, Acting Associate Vice-President, Facilities  
 Michael White, Associate Vice-President Campus & Community Planning  
 Aubrey Kelly, President & CEO, UBC Properties Trust

**EXECUTIVE SUMMARY**

There is an institutional need to develop additional on-campus student housing at the Okanagan campus to meet current demand and to help realize enrolment targets and anticipated growth. The waitlist for student housing has grown by 200 students per year for the past three years reaching 920 in July 2017.

The rental vacancy rate in Kelowna has dropped from 4% in 2012 to 0.2 in 2017. Kelowna has also experienced the largest increase in rental rates in the country between 2016 and 2017 at 8.6%.

Given that 72% of the campus population comes from outside the Okanagan region and the vast majority of first year students from outside the Okanagan (both domestic and international) live in residence in first year, the availability of on-campus housing is an important requirement for recruitment.

To address this need, the concurrent development of two new student residences – Housing Commons and Skeena Residence – with a total of approximately 440 beds for first-year students is proposed. Implementation of both projects would bring UBC Okanagan student housing capacity from 1,680 beds to 2,120 beds, or 28% of student FTE. Board 1 approval for these projects was received in June 2017 in a combined submission. Separate Board 2 approval requests are now being made for each project given timing differences in the design schedule between the projects

The Skeena Residence with 220 beds is targeting Passive House certification. Compared to standard buildings, Passive House buildings require more time for the design development and preparing the construction drawings, with constant revision of the energy model. To ensure that Certification criteria are met the design schedule for the Skeena Residence has been revised to accommodate this process.

The Skeena Residence will be located on Site 4 adjacent to the existing Purcell. Standard housing amenities will be provided including house lounges, informal study space and laundry facilities. Two cityhomes (2 bedroom townhouses) will be included in the project, offering accommodation for visiting faculty or staff.

The total capital cost for the project is now estimated at \$22.81 million based on a 7,107 gsm (76,499 gsf), Passive House certified facility. This is an increase of \$3.35 million from the \$19.46 million preliminary budget estimate at Board 1. The increase is due in part to the premium for the higher quality Passive House standard which was noted as a possibility at Board 1 but not included in the Board 1 budget. The budget also includes a significant allowance for construction cost escalation. The premium for achieving Passive House certification will be partially compensated by operating cost savings over the life of the building. The Skeena Residence represents the best opportunity to demonstrate use of this progressive sustainable technology at UBC and will provide a reference for future low energy buildings.

The full \$22.81 million capital cost is proposed to be internally financed with debt service paid from student housing rental revenue. Annual debt service cost is \$1.64 million assuming 6.0% interest and 30 year amortization. The proforma becomes cash flow positive in Year 22 using the standard internal interest rate of 6.0%. This is substantially longer than typical new student residence projects. The negative cash flow until Year 22 can be covered within the overall system-wide Student Housing & Hospitality Services (SHHS) operating budget as is standard practice for all new Student Housing developments. Despite the lengthy period of negative cash flow for this project, the SHHS annual dividend to the University would remain at current levels plus 2% annual growth. If external financing options currently being considered for student housing projects are approved by government, this would result in a lower interest rate and substantially reduce the period until the project becomes cash flow positive (8 years at 3.5% interest).

The Skeena Residence project is being managed by UBC Properties Trust. The design consultant is Public Architecture & Communications. The project received Board 1 approval on June 14, 2017.

The development review process has been completed and the project is ready for issuance of the Development Permit following Board 2 approval. The project is targeted for completion in August 2020 to meet the need for student housing at UBC Okanagan.

---

**INSTITUTIONAL STRATEGIC PRIORITIES SUPPORTED**

✓ Learning

 Research Innovation✓ Engagement  
(Internal / External)

✓ International

or ✓ Operational

---

**DESCRIPTION & RATIONALE**
**Facility Need**

Student Housing is an important factor in recruitment for the Okanagan campus. With 72% of the campus population coming from outside the Okanagan Valley, the ability to offer residence accommodation is a key factor in successfully recruiting students. In addition to recruitment, Student Housing is also a driver in student retention and matriculation. Institutional research on the value of Student Housing at the Okanagan campus demonstrated that students living on campus in their first year had higher retention rates and higher graduation rates than those who lived off campus. This positive relationship was even greater for international students.

The room inventory on the Okanagan campus currently consists of 1,058 first-year student beds and 622 upper-year student beds (self-contained suites and apartments). With an annual incoming class of more than 2,400 students, many first-year students have had to live in upper year accommodation. The wait list for Student Housing for new students in July 2017 reached 920, an increase of 200 students per year over recent years, while the demand for returning students has remained constant. Housing offer acceptance rates have also increased from 50% in 2014 to 72% in 2015 to 79% in 2016 and 80% in 2017. The growing neighbourhood community to the south of campus is helping to support upper year students seeking accommodation, but this inventory has little impact on the demand of first year students. The rental accommodation vacancy rate in Kelowna has dropped steadily from a ten year high of 4% in 2012 to 0.2% in 2017 the lowest rate in Canada and the third consecutive rate below 1%.

Development of the proposed Housing Commons and Skeena Residence projects, with planned completion in August 2020, will increase on-campus student housing capacity from 1,680 beds to 2,120 beds.

**Community Impact and Broader Context**

Increasing the number of students living on campus further enhances the goals of the institution by reducing the demand on parking, increasing the food service offerings to support the entire campus population, as well as enhancing campus vibrancy, particularly in evenings and on weekends, and increasing student leadership opportunities.

An assessment of Kelowna residential rental housing undertaken by Coriolis Consulting provides the following high level findings regarding the local market:

- Current rental market conditions are tight (very low <1% vacancy, rising rents).
- Total rental housing demand, from UBCO students and general population growth, will rise significantly over the next 10 years.
- While there is a surprisingly large number of market rental units in the proposal stage, overall rental market conditions are expected to remain tight.
- There is not likely to be a market situation that would create risk for UBCO of low vacancy or falling rent in existing or new student housing.

### Site

The Skeena Residence is recommended to be located on Site 4 in the UBC Okanagan Campus Plan (2015), formerly Site N in the UBC Okanagan Master Plan (2009 Update). The Campus Plan identifies this site for a future residence with an estimated area of 7,908 gsm (85,121 gsf). The current program for the Skeena Residence is 7,107 gsm (76,499 gsf). Services are available (with confirmation for gravity systems) in close proximity on International Mews.

The UBC Okanagan Site Selection Committee supported approval of the expanded Site N for the Skeena Residence on August 18, 2014. Construction on this site will extend the building wall definition along the westerly side of International Mews northwards, and complete the built frame at the north end of The Commons. In addition to benefiting from co-location opportunities, the project is consistent and compatible with the adjacent residence use and buildings, and would contribute to the enclosure and animation of the open Commons field.

### Functional Program

The Skeena Residence will be a 6 story, 7,107 gsm (76,499gsf) facility housing approximately 220 students in modified traditional bedrooms with standard housing amenities including house lounges, informal study space, activity room and laundry facilities. Two cityhomes (two-bedroom self-contained apartments) will provide short term (1 week to 1 term) accommodation for visiting faculty or staff. The gross program area increased by 148 gsm (1,592 gsf) from Board 1 due primarily to the inclusion of a third stairway for building code compliance.

Skeena Residence Program		NSM	GSM	NSF	GSF
1	Student Housing Units	3,598	5,697	38,731	61,322
2	Housing Support Areas	534	845	5,750	9,095
3	Residence Support Facilities	222	373	2,390	4,015
4	Building Support	134	192	1,442	2,067
<b>Total Area</b>		<b>4,488</b>	<b>7,107</b>	<b>48,313</b>	<b>76,499</b>

NSM – net square metres      GSM – gross square metres  
 NSF – net square feet        GSF – gross square feet

**BENEFITS**

Learning, Research,  
Financial, Sustainability  
& Reputational

The Skeena Residence will provide the following benefits:

- New residence beds to address growing demand for on-campus student housing and to support student recruitment and retention.
- Enhanced campus life environment and services which will help students succeed academically and socially.
- Consolidation of business service units which will free building space for other beneficial uses. For example, the residence cityhome currently occupied by Parking Services can be returned to the rental pool.
- Reduced commuter traffic to and from campus.

**Sustainability Benefits**

- The Skeena Residence is targeting Passive House (PassivHaus) certification. Passive House is an international recognized energy standard developed in Germany. The most significant characteristics are the airtight, high efficiency building envelope (free of thermal bridging) and the Heat Recovery Ventilation. In order to certify a building as a Passive House, the energy consumption shall not be higher than 15 kilowatt hours per square meter per year (kWh/m<sup>2</sup>/yr), a highly efficient thermal energy standard.
- Compared to standard buildings, Passive House buildings require more time for the design development and preparation of construction drawings, with constant revision of the energy model. To ensure that certification criteria are met the schedule for the Skeena Residence has been revised and is now accommodating this process. As a result, the Housing Commons and Skeena Residences are separated in two different reports.
- If Skeena achieves the very ambitious Passive House certification, it would be a first for UBC and considerably advance UBC's reputation in the community as a leader in sustainability. While there would be a capital cost premium, this would be partially offset over the life of the building with expected lower energy cost as well as lower mechanical/electrical operating and replacement costs. The requirement of LEED Gold certification would also be waived by the Provincial Government.
- The learning gained from developing and operating a Passive House project is expected to benefit UBC system-wide (e.g. with a better understanding of very high performance buildings, informing energy system planning and future UBC projects).
- If it is not possible to achieve the Passive House, this project will revert to UBC's typical LEED Gold standard, with less stringent energy (EUI) targets plus an extension along International Mews to connect to the campus District Energy System (at Housing Commons). In that case, the District Energy System (LDES) would provide a substantial portion of the heating and cooling from an aquifer exchange.
- Skeena Residence will also address on-site rainwater management measures in accordance with the UBCO Integrated Rainwater Management Plan (IRMP).

---

**RISKS**  
Financial,  
Operational &  
Reputational

Potential project risks and risk mitigation strategies include:

- Capital Cost – Construction cost risks will be managed through provision of contingency and cost allowances as well as coverage under the Retained Risk policy, though current market conditions still contain risk until contracts are fixed. Contingencies have been set to reflect the risks associated with delivering a Passive House certified building. A substantial allowance has also been included in the revised capital budget to address the current escalating construction market in Kelowna.
  - Rental Occupancy – Occupancy risks associated with this project are limited as demand for student housing is in excess of current supply. The wait list for UBCO student housing in July 2017 was 920. An independent assessment of the local residential rental market (by Coriolis Consulting) indicates that the overall rental market, with current <1% vacancy rate, is expected to remain tight and there is not likely to be a market situation that would create risk for UBCO of low vacancy or falling rent in existing or new student housing.
  - Financing Capacity – Treasury has confirmed that there is sufficient liquidity to provide internal financing for both projects from the Student Housing Financing Endowment (SHFE).
-

**COSTS Revised Capital Budget**

Capital &  
Lifecycle  
Operating

The total capital cost for the Skeena Residence is now estimated at \$22.81 million. The increase from the \$19.46m Board 1 budget is due in part to the premium for the higher quality Passive House standard which was noted but not included in the Board 1 budget. A building code requirement for a 3<sup>rd</sup> stairway increased building area and also added to overall cost. The budget also includes a significant allowance for construction cost escalation. The premium for achieving Passive House certification will be partially compensated by operating cost savings over the life of the building. The estimated net present value of these savings over 20 years is \$433,000.

<b>Project Capital Cost Breakdown</b>	<b>Cost \$ Board 1</b>	<b>Cost \$ Board 2</b>
<b>Construction Costs</b>		
Construction	\$13,857,795	\$13,857,800
Passive House		1,125,000
Area Increase (3 <sup>rd</sup> stairway, code requirement)		475,000
Contingency	675,000	975,000
<b>Cash Allowances</b>		
Public Realm	500,000	500,000
Site Servicing	250,000	250,000
Kitchen/Convenience Equipment		
FF+E	550,000	550,000
Audio Visual	50,000	50,000
<b>Soft Costs</b>		
Consultant Budget	1,275,000	1,400,000
Project Management	875,000	900,000
Preconstruction/Permits/Insurance	525,000	550,000
<b>Building Subtotal</b>	<b>18,557,795</b>	<b>20,632,800</b>
GST	295,000	344,600
<b>Building Total</b>	<b>18,852,795</b>	<b>20,977,400</b>
Extraordinary escalation 2017 / 2018 above 2.5%		1,200,000
Construction Period Financing	425,000	425,000
Retained Risk	185,600	209,800
<b>Project Total</b>	<b>\$19,463,395</b>	<b>\$22,812,200</b>
Cost of residence component	\$19,463,395	\$22,812,200
Cost of commons component		
Number of Residence Beds	220	220
Gross building area (sf)	74,907	76,499
Cost/bed	\$88,470	\$103,692
Cost/sf	\$260	\$298

**Revised Operating Budget**

Operating and maintenance costs for the building will be covered by SHHS through student housing rental revenue and meal plan revenue. The SHHS operating budget for the Skeena Residence, including debt servicing, is provided in Attachment 5.

**FINANCIAL Funding & Financing**

Funding Sources,  
Impact on Liquidity

The capital cost is proposed to be internally financed over 30 years with debt service paid from student housing rental revenue. The loan amount and annual debt servicing cost is shown in the table below. Sufficient liquidity has been allocated for internal financing for the project.

Project Component	Capital Cost	UBCO Capital Reserve Funding	Financing	Annual Debt Service (6%, 30 yrs)
Skeena Student Housing	\$22,812,200	\$0	\$22,812,200	\$1,641,241
<b>Total</b>	<b>\$22,812,200</b>	<b>\$0</b>	<b>\$22,812,200</b>	<b>\$1,641,241</b>

The Skeena Residence proforma becomes cash flow positive in Year 22 using the standard internal interest rate of 6.0%. This is substantially longer than typical new student residence projects. The negative cash flow until Year 22 can be covered within the overall system-wide Student Housing & Hospitality Services (SHHS) operating budget as is standard practice for all new Student Housing developments. Despite the lengthy period of negative cash flow for this project, the SHHS annual dividend to the University would remain at current levels plus 2% annual growth. If external financing options currently being considered for student housing projects are approved by government, this would result in a lower interest rate and substantially reduce the period until the project becomes cash flow positive (8 years at 3.5% interest).

**SCHEDULE Schedule**

Implementation  
Timeline

Project Milestone	Board 1	Board 2
UBCO DVC Direct Reports Team Exec 1	Mar 11, 2013	Mar 11, 2013
Executive 1	Mar 25, 2013	Mar 25, 2013
UBCO DVC Direct Reports Team Exec 2	Oct 28, 2014	Oct 28, 2014
Executive 2	Nov 7, 2014	Nov 7, 2014
UBCO DVC Direct Reports Team Exec 3	Feb 20, 2017	Feb 20, 2017
Executive 3	Mar 7, 2017	Mar 7, 2017
Architect Shortlisting	Mar – Apr 2017	Mar – Apr 2017
Board 1	Jun 2017	Jun 14, 2017
Board 2	Dec 2017	Apr 2018
Board 3	Apr 2018	Dec 2018
Construction Start	Apr 2018	Jan 2019
Occupancy	Aug 2020	Aug 2020
Board 4	Sep 2022	Sep 2022

**CONSULTATION Campus Planning & Development Review**

Relevant Units,  
Internal & External  
Constituencies

As part of the Board of Governors’ Board 2 Approval process, Skeena Residence required Development Approval from Campus Planning & Development (CP&D) at the Okanagan campus, including review by the DVC DRT (Direct Report Team). CP&D has assessed the project conformance with the UBC Okanagan Campus Plan (2015) and the accompanying Design Guidelines (2008, currently being updated), other campus plans and policies, and municipal zoning for the campus, and for providing the campus community with the opportunity to review and comment on the schematic design. As part of the Development Approval process, CP&D coordinates an Development Review Meeting (DRM) of the project that includes a panel of staff, faculty and industry representatives to review urban design and technical issues.

The UBCO Campus Community is generally supportive of this project and CP&D Preliminary Development Approval has been granted on March 12, 2018. Key building and site design issues to be developed further are focused on the building’s proposed exterior design, detailing and colour expression in context with the adjacent buildings; animation and strengthening of the interior/exterior interface along International Mews and facing the Commons Field with possible reallocation of limited glazing towards the southeast, Commons Field facing corner of the building

**Prior Approvals**

Executive 1 approval was granted for the original Skeena Residence concept on March 11, 2013. Executive 2 approval was granted on November 7, 2014 and Executive 3 approval was received on March 7, 2017. Board 1 approval was received on June 14, 2017. Board 1 approval was received in June 2017. The schematic design has been completed.

**Project Team**

The project is being managed by UBC Properties Trust. The design consultant is Public Architecture & Communications.

<b>Previous Report Date</b>	June 14, 2017
<b>Decision</b>	Board 1 approval Housing Commons Skeena Residence with a funding release of \$1,500,000 to commence schematic design.
	Preliminary Capital Budget: \$61,343,000
	Preliminary Operating Budget: See report
	Schedule
	Project in Principle
	Location
	Consultant Selection
	Program
	Proceed to Schematic Design
	Funding Release: \$1,500,000

**Information:**

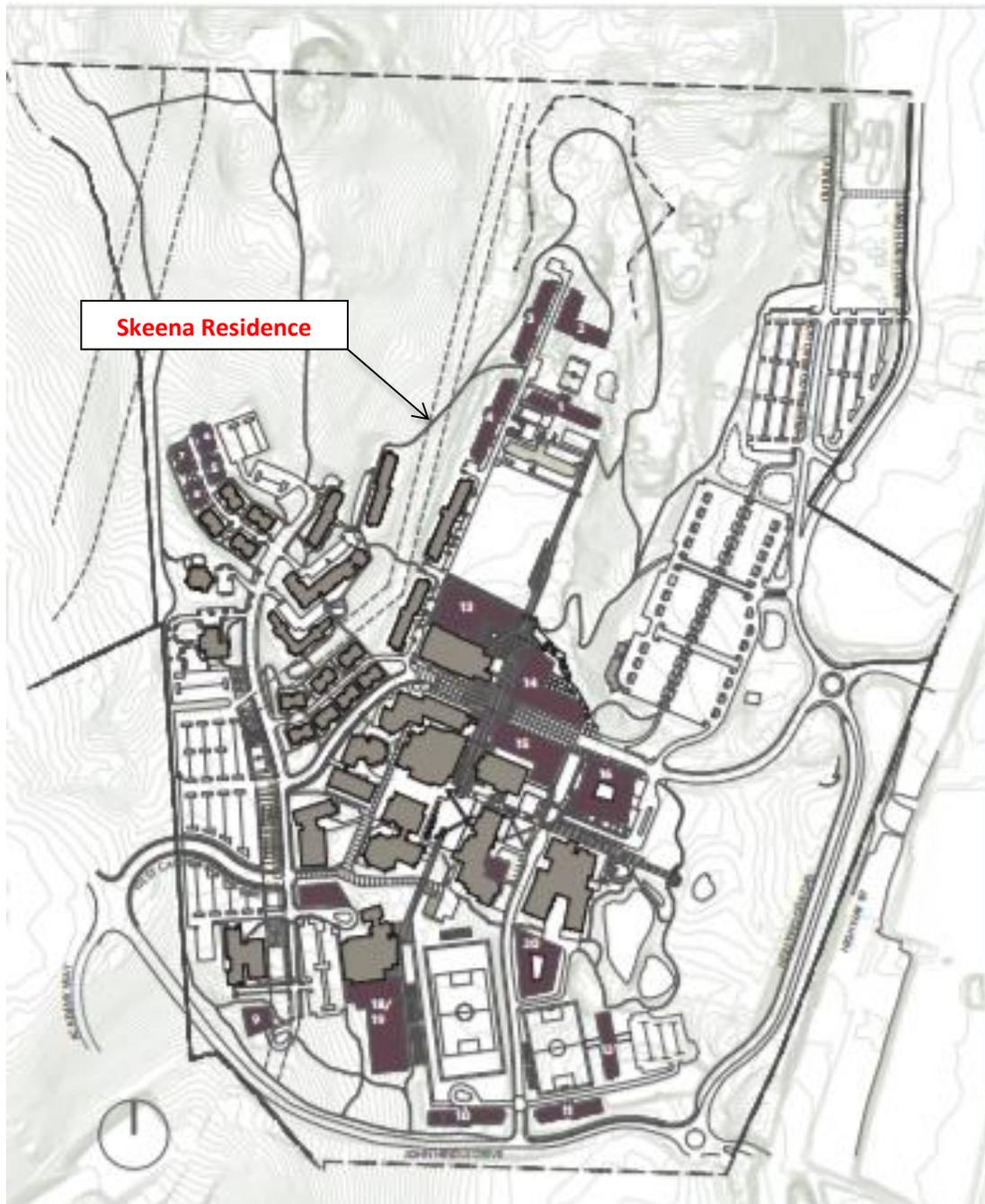
Expenses to Date:	\$0
Funding Released to Date:	\$0

<b>Action / Follow Up</b>	Initiate schematic design.
---------------------------	----------------------------

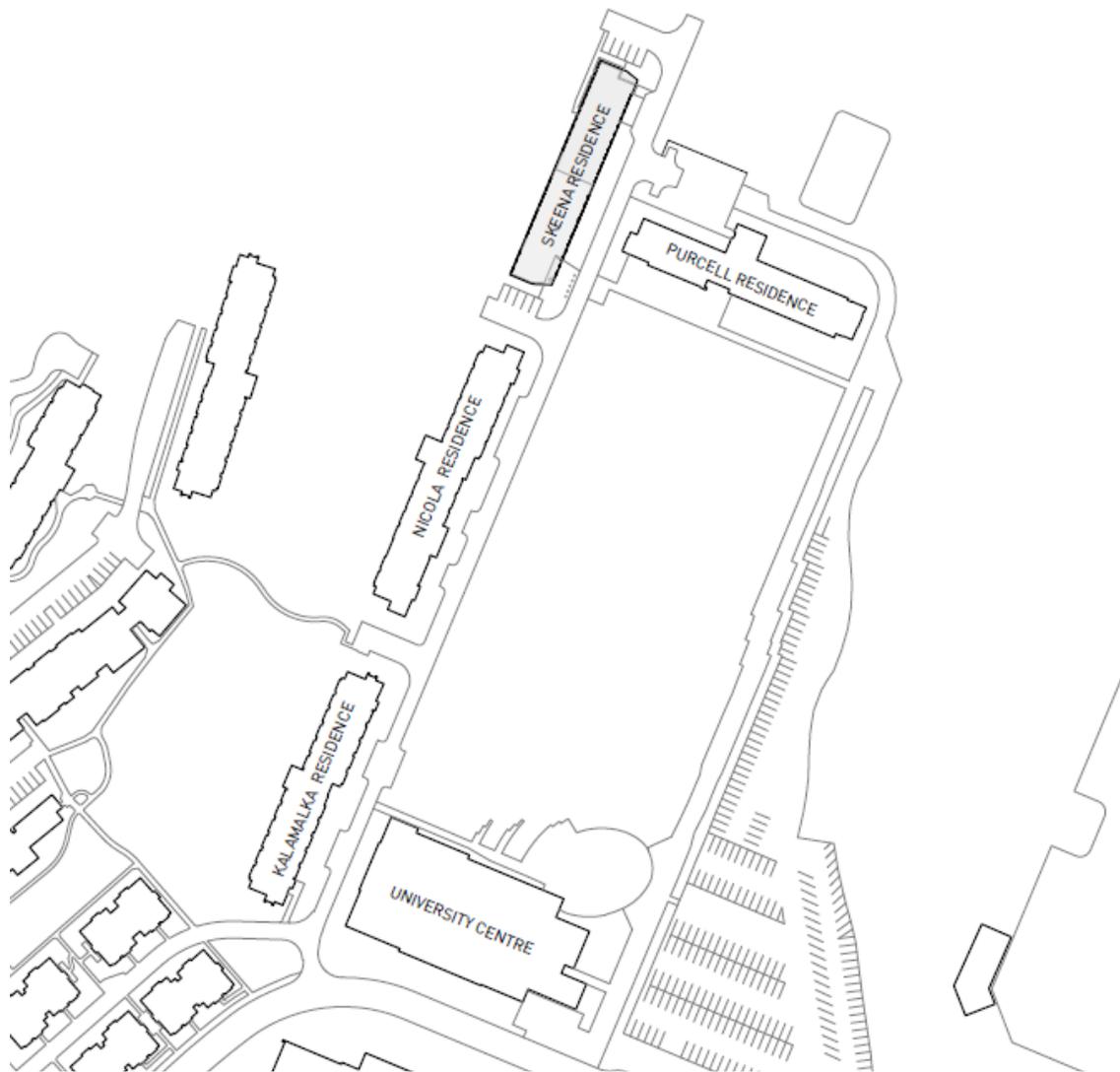
**Attachments**

- 1) Skeena Residence Site – Campus Context
- 2) Skeena Residence Site – Precinct View
- 3) Building Floorplan
- 4) Schematic Design Renderings
- 5) Operating Budget Summary

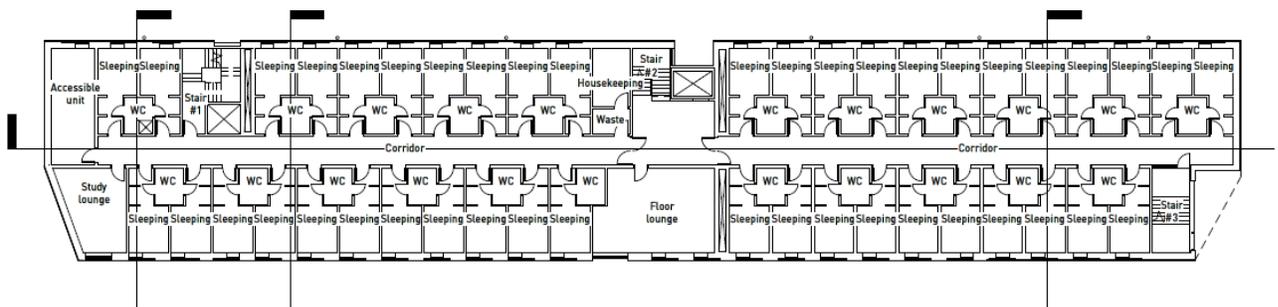
Attachment 1 – Skeena Residence Site – Campus Context



### Attachment 2 – Skeena Residence Site – Precinct View



### Attachment 3 – Skeena Residence - Building Floorplan



**Attachment 4 – Skeena Residence – Schematic Design Renderings**  
(colours, materials and façade details to be refined)



(looking NW across Commons Field, Nicola to the left, Purcell to the right)



(looking south along International Mews with Purcell Residence to the left)

## Attachment 5 – Operating Budget Summary

UBC Student Housing & Hospitality Services - UBCO Skeena Residence  
(Contracted Food Model & 8 month rental)

	2020	2021	2040	2041
<b>Revenue</b>				
Rental Income <sup>1</sup>	\$ 1,584,000	\$ 1,615,680	\$ 2,353,741	\$ 2,400,815
Conferences Income <sup>2</sup>	\$ -	\$ -	\$ -	\$ -
Rental Vacancy @ 1%	\$ (15,840)	\$ (16,157)	\$ (23,537)	\$ (24,008)
<b>Total Revenue</b>	<b>\$ 1,568,160</b>	<b>\$ 1,599,523</b>	<b>\$ 2,330,203</b>	<b>\$ 2,376,807</b>
<b>Expenses</b>				
Operating Costs - new units @ 22%	\$ 348,480	\$ 355,450	\$ 517,823	\$ 528,179
Housing Utilities - new units @ 5.5%	\$ 87,120	\$ 88,862	\$ 129,456	\$ 132,045
Cable & Resnet - new units @ 3%	\$ 47,520	\$ 48,470	\$ 70,612	\$ 72,024
<b>Total Direct Expenses</b>	<b>\$ 483,120</b>	<b>\$ 492,782</b>	<b>\$ 717,891</b>	<b>\$ 732,249</b>
<b>Direct Cash Flow</b>	<b>\$ 1,085,040</b>	<b>\$ 1,106,741</b>	<b>\$ 1,612,312</b>	<b>\$ 1,644,559</b>
<b>Debt Service - Housing <sup>3</sup></b>	<b>\$ 478,695</b>	<b>1,641,240</b>	<b>1,641,240</b>	<b>1,641,240</b>
	<b>\$ 478,695</b>	<b>\$ 1,641,240</b>	<b>\$ 1,641,240</b>	<b>\$ 1,641,240</b>
<b>Total Cash Flow</b>	<b>\$ 606,345</b>	<b>\$ (534,499)</b>	<b>\$ (28,928)</b>	<b>\$ 3,319</b>

1 - The 8-month academic rental period rate for 220 new Modified-Traditional beds within the Skeena Residences is anticipated to be \$900 for September 2020. Rental increase is 2% per annum thereafter.

2 - Assumes no marginal summer conference occupancy as a result of current Summertime availability.

3 - Assumes financing at a net effective rate of 6.0% amortization over 30 years.