Date: Wednesday 18 May 2022
Time: 1:00-3:00 p.m.
Place: via MS Teams

*material attached
**material to be distributed

OPEN SESSION

1. Declaration of Conflicts of Interest Declaration


3. Business Arising from the Minutes Information

4. Capital Financing Commitments and Construction Status [Huber] Information
   (a) Building & Properties Finance Summary – May 2022*
   (b) Construction Status Report – May 2022*
   (c) Capital Financing Commitments – April 30, 2021*

5. Maintenance Program and Energy Conservation Efforts [Huber] Information


7. Orientation/tour of campus [Murray/Huber] Information

8. Execution Against the Work Plan [Murray] Information

9. Other Business Information

10. Proceed into Confidential Session Information

Next Meeting: Wednesday 5 October 2022, 1:00-3:00 p.m., via MS Teams

11 May 2022

Alice Raynard
Associate University Secretary
University of Waterloo
Board of Governors
BUILDING & PROPERTIES COMMITTEE
Minutes of the 12 January 2022 Meeting
[in agenda order]

Attendees: Peter Barr, Anne Bordeleau, Martha George (chair), Tony Giovinazzo, Alice Raynard (secretary), James Schlegel, Matthew Schwarze

Administration: Stepanka Elias, Vivek Goel, Dennis Huber, Rob Hunsperger

Guests: Murray Gamble

Regrets: Naima Samuel, James W. E. Rush

Organization of Meeting: Martha George took the chair and Alice Raynard acted as secretary. The chair welcomed members to the meeting. The agenda was approved by consensus as circulated. The secretary advised that quorum was present.

OPEN SESSION

1. DECLARATION OF CONFLICTS OF INTEREST
No conflicts of interest were declared.

2. MINUTES OF THE 29 SEPTEMBER 2021 MEETING
A motion was heard to approve the minutes of the meeting as distributed. Schlegel and Bordeleau. Carried.

3. BUSINESS ARISING FROM THE MINUTES
There was no business arising.

4. CAPITAL FINANCING COMMITMENTS AND CONSTRUCTION STATUS

b. Construction Status Report – January 2022. Hunsperger provided an overview of the projects listed, noting: the 3rd hydro feed is close to completion; challenges in market conditions for the Health Innovation Area and budget; Math 4 schematics underway; challenges with cost estimates on WEI project.

Members discussed: supply chain issues; meaningfulness of decisions when approval by Board of Governors and changes of scope happen; approval thresholds indicated in Committee’s terms of reference; development of projects in phases and role of B&P and PACOD; general cost increase above pre-pandemic levels; funding model of WEI project being revisited due to change in funding; involvement of PACOD in those broader projects; PACOD to be examined in the coming months; request for the Health Innovation complex arena project to be brought back to the B&P Committee.

i. Project Listing of Original Budget vs Post-Tender Budget Since 2016. Huber spoke to the document, requested by the Committee, providing a brief overview of major capital projects tendered since 2016.

c. Capital Financing Commitments – 30 April 2021. Huber spoke to the document, noting the University was well within its capital debt guideline.

5. University of Waterloo Real Estate Holdings
Huber indicated that the record was the same as last year’s, with only minor changes, such as the rental on Glasgow Street. The Cambridge parking lot is being lease from GRCA, through the City of Cambridge.

6. WORK PLAN FOR NEXT FISCAL YEAR; ORIENTATION/BRIEFING REQUIREMENTS
George referred the Committee to the document. There were no questions.

7. EXECUTION AGAINST THE WORK PLAN
George referred the Committee to the document. The annual Statutory Compliance is being deferred to March. There were no questions.
8. OTHER BUSINESS
There was no other business.

9. PROCEED INTO CONFIDENTIAL SESSION
The Committee convened in confidential session.

The Committee is scheduled to meet on Wednesday 9 March January 2022, 1:00-3:00 p.m. via Teams.

26 February 2022

Alice Raynard
Associate University Secretary
Report to the Building & Properties Committee
Capital Financing Commitments
May 2022

The Building & Properties Committee (B&P) reviews the summary of Capital Financing Commitments at each meeting.

Summary:

- Contributions to capital projects made fiscal year to date total $42.8M
- The University remains well within its approved policy limits and below the 4.0% of annual gross revenue maximum for principal and interest payments
- The financing position for each project as of April 30, 2021, is attached

Highlights during 2021/22:

New in 2021/22:

- The Faculty of Math has contributed an additional $10M from operating funds towards the future construction of Math 4 (total $57.5M contributed to date)
- Scheduled principal and interest payments of approved student fees for the PAC/SLC addition and for the Health Services addition continued and the University continued to receive donations for capital projects

Earlier in 2021/22:

- The Faculty of Engineering has repaid $2M from operating funds to the DWE C Wing Renovation
- The Faculty of Health has repaid $0.66M from operating funds to the addition to BMH
- The Faculty of Math has contributed $17.5M from operating funds to the future construction of Math 4 (total $47.5M contributed to date)
- The Faculty of Science has contributed $0.40M from operating funds to the Waterloo Eye Institute project
- The University has allocated $9.7M to capital projects as follows:
  - East Campus 5 - $2.5M
  - Engineering 7 - $1.2M
  - Health Addition to BMH - $2.3M
  - PAC/SLC - $2.7M
  - Fieldhouse $1M
- Scheduled principal and interest payments were made by applying approved student fees for the PAC/SLC addition ($1.09M fiscal YTD) and for the Health Services addition ($0.72M fiscal YTD)
- The University has received $0.74M in donations for capital projects since May 2021
- Repayments by ancillary enterprises (Housing, Food Services and Parking) on internal loans were deferred for 2 years (2020/2021 and 2021/2022) due to the impact of the pandemic on ancillary unit operations and their revenue-generating activity

Dennis Huber
### Earth Science Chemistry (ESC)

**Third Floor Renovations**

- **Projects:** In-Progress
- **Original Budget:** $17,500
- **Current Budget:** $22,140
- **Method:** TBA
- **Contact:** TBA
- **percent complete:** 12%
- **Original Schedule:** 2022
- **Completion:** 2024

**Design Development phase approximately 60% complete**

**Pre-requisite project required to relocate researchers off the 3rd floor.**

**Pre-requisite project scheduled for bid June 2022, with construction complete Jan 2023**

**Third floor renovations dependent upon completion of pre-requisite project.**

**Estimated Construction: February 2023 - July 2024**

### Health Innovation Arena

**380 Joseph Street Kitchener**

- **Projects:** In-Progress
- **Original Budget:** $30,000
- **Current Budget:** $34,400
- **Method:** TBA
- **Contact:** TBA
- **percent complete:** 18%
- **Original Schedule:** 2023
- **Completion:** 2024

**Site Plan Approval application submitted to the City of Kitchener**

**Substantial Value Engineering effort completed. Clerestorey glazing is now an optional price, removed windows to future ground floor suite, removed stair access to roof.**

**Air source heat pump system deleted. Gas fired boilers added to project.**

**Net Neutral Carbon strategy relies on future City of Kitchener District Energy Loop.**

**Contractor prequalification advertisement currently being drafted**

**Schedule anticipates bidding project in order to have bids ready for recommendation at October 2022 B&P meeting.**

**Market conditions continue to place budgetary challenges on all projects.**

**Substantial Completion anticipated for October 2023**

### Math 4

- **Projects:** In-Progress
- **Original Budget:** $90,000
- **Current Budget:** $90,000
- **Method:** TBA
- **Contact:** TBA
- **percent complete:** 9%
- **Original Schedule:** 2024
- **Completion:** 2024

**35% design development (DD) report complete**

**Interim cost estimate complete based on 35% DD milestone progress set**

**Cost estimate over established budget and options are being explored**

**Design review ongoing with goal of presenting at October 2022 Building & Properties meeting.**

**Presidents Advisory Committee on Design (PACOD) to be convened at end of Design Development once budget is confirmed.**

### Optometry - Waterloo Eye Institute

- **Projects:** In-Progress
- **Original Budget:** $45,250
- **Current Budget:** $45,250
- **Method:** TBA
- **Contact:** TBA
- **percent complete:** 15%
- **Original Schedule:** 2023
- **Completion:** 2024

**100% Design Development milestone achieved**

**Design Development estimate completed, and being evaluated**

**Class C Construction Estimate = $42.1M up $7.23M from Class D Estimate of $35.2M**

**$2.5M attributable to market conditions with remainder due to design development**

**Contract Documents tentatively scheduled to commence in May. Budget still under review. Value Engineering to be undertaken.**

### Biology 1/Biology 2 Lab Renovation

- **Projects:** In-Progress
- **Original Budget:** $6,800
- **Current Budget:** $6,800
- **Method:** Stipulated Sum
- **Contractor:** Herbridge & Cross
- **percent complete:** 100% Design
- **Original Schedule:** Jun-22
- **Completion:** 2022

**Interferences & relocation of services completed. Painting completed**

**Epoxy floor throughout completed by mid May.**

**Ductwork in labs and hallway complete. Work ongoing in impacted rooms.**

**Vertical shaft removal and replacement complete.**

**Roof work/install of exterior duct shafts and enclosure to be completed by end of June 2022.**

**Chilled Beams delayed 3 months. Expected delivery-end June.**

**DOA units delivery delayed 1 month. Expected delivery end of May.**

**Carpenters Union Strike has delayed progress to finishing millwork, ceilings and stairwell drywall ceiling.**

**Change Orders to date in the order of $280K**

**Construction +/- 70% complete**

**Supply chain and labour related issues continue to burden the schedule. 3-4 month delay anticipated.**

---

*Building & Properties Committee (open agenda package), 18 May 2022, Page 5 of 9*
## University of Waterloo

### Capital Financing Commitments

April 30, 2021

($000s)

<table>
<thead>
<tr>
<th>Capital Project</th>
<th>Currently Internally Financed</th>
<th>Estimated Amortization Period</th>
<th>Comments</th>
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<tr>
<td>Construction Completed</td>
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<tr>
<td>Residence - UWP and MKV</td>
<td>12,687</td>
<td>8 years*</td>
<td>Recovery through student residence fees</td>
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<tr>
<td>Engineering 7</td>
<td>21,641</td>
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<td>Pledges of approximately $33 million against these Engineering buildings. Engineering has committed to funding any unrealized pledges</td>
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<td>Other Engineering (including 5, 6, and DWE)</td>
<td>10,337</td>
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<td>Health Services Addition/Renovations</td>
<td>2,403</td>
<td>4 years</td>
<td>Compulsory undergrad and grad student fees; donations</td>
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<td>Blackberry Buildings (5)</td>
<td>2,899</td>
<td>4 years</td>
<td>Operating funds, ($400k from Parking ($100K/year)*</td>
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<td>Applied Health Sciences Addition</td>
<td>9,199</td>
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<td>Faculty, operating funds; donations</td>
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<td>Student Residence - Claudette Millar Hall</td>
<td>26,243</td>
<td>&lt; 15 years*</td>
<td>Residence fees and Food Services revenues</td>
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<td>North Campus Field House</td>
<td>16,880</td>
<td>10 years</td>
<td>$16.9M from operating funds</td>
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<td>Completed Total</td>
<td>102,289</td>
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<th>Expenses to Date</th>
<th>Total Budget</th>
<th>Funding On-hand</th>
<th>Committed Future Funding</th>
<th>Currently Unfunded</th>
<th>Currently Internally Financed</th>
<th>Project Completion Date</th>
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<td>Student Life Centre and PAC Addition</td>
<td>46,530</td>
<td>46,530</td>
<td>3,098</td>
<td>43,432</td>
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<td>2021</td>
<td>$24 million compulsory undergrad and grad student fees; $19.4 million operating funds</td>
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<td>Health Innovation Arena</td>
<td>180</td>
<td>30,000</td>
<td>300</td>
<td>17,200</td>
<td>12,500</td>
<td>-</td>
<td>$8.5m commitment from City of Kitchener, $7.5m commitment from University operating funds, $1.2m pledge</td>
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<td>Math</td>
<td>113</td>
<td>90,000</td>
<td>30,000</td>
<td>15,000</td>
<td>45,000</td>
<td>-</td>
<td>$30m contributed from Math and $15m commitment from University operating funds</td>
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<td>Earth Sciences &amp; Chemistry</td>
<td>121</td>
<td>22,700</td>
<td>-</td>
<td>22,700</td>
<td>121</td>
<td>-</td>
<td>50% to be funded from Science and 50% from University operating funds</td>
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<td>Optometry Eye Institute</td>
<td>395</td>
<td>45,250</td>
<td>1,364</td>
<td>15,000</td>
<td>28,886</td>
<td>969</td>
<td>$8.8m in donations, a $2.2m UW contribution plus a further $4 million University commitment to match a potential major donation</td>
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<td>Total Internal Financing Commitments</td>
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<td>144,873</td>
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### Debt Policy:

Annual Principle & Interest Payments must be < 4% of annual gross revenue (currently approximately $48 million)

### Conclusion:

Required annual P&I payments to service this debt are < 4% of annual gross revenue

Notes:

- There is a $22 million lease-back financing commitment until 2053 for Columbia Lake Village Townhouses, with minimum $7 million lease commitments being recovered through student residence fees.

- Repayments have been suspended for 2 years due to the impact of covid on operations in the ancillary units.

* Repayments have been suspended for 2 years due to the impact of covid on operations in the ancillary units.
Summary:

- Annual total electricity expense approx. $16.4m (~1.5% of total annual expenses)
- In the Province of Ontario, electricity costs remain a controversial issue with historic costs moving between the tariff rates and the general tax base.
- Annual total natural gas expense approx. $3.8m (~0.4% of total annual expenses)
- Natural gas originates from Alberta and is selling at substantially higher prices in 2022. It is forecasted to trade in the same range as experienced during the 2003-2008 period (with the advice of our energy consultant, the University’s has hedged 50% of the commodity price at $3.20/GJ. Over the mid-term, future commodity prices are forecasted to stabilize at $5.40/GJ.) The commodity price is approx. 50% of the total cost delivered at the burner tip. The balance of the cost relates to delivery charges, inventory charges (injection/withdrawal), and taxes.
- Based on the standard greenhouse gas emissions reporting under Ontario Regulation 397-11 (2011-2016) by the U6 (research intensive universities in Ontario), the University of Waterloo is below the U6 average and third lowest.
- A 2020 energy audit undertaken on 64 individual university buildings identified:
  - $1m of energy conservation projects with <5-year simple payback
    - i.e., Steam traps; fan optimization; HVAC upgrades
  - $3m of energy conservation projects with a 5–10-year simple payback
    - i.e., controls optimization; HVAC controls
- Multi-year $875k LED lighting retrofit currently underway; 65% complete; work continues in 2022/23 and will focus on remaining fixtures with hazardous ballasts.
- Multi-year steam trap retrofit program currently underway.
- Multi-year upgrade to Building Automation System continues with completion scheduled for 2025/26.
- Pursuing external funding opportunities for a $2.5m heat recovery project related to the Graham Data Centre located in the Math & Computer Building. If UW’s application for funding is not successful, a business case to allocated operating funds is likely to be approved.
- During the pandemic period, increased ventilation rates have reduced opportunities for implementing some traditional energy conservation measures.

Vice-President,
Administration & Finance
FOR INFORMATION

Statutory Compliance
Terms of reference provide for the Building & Properties Committee “To ensure that the university complies with all building codes, fire codes, safety regulations and statutory and regulatory provisions, as appropriate, in its building and properties program, and to review compliance annually.”

The following provincial statutes and municipal bylaws have been identified by the Secretariat as those which would pose the greatest potential risk for the university in the event of non-compliance.

- Assessment Act
- Building Code Act
- Commercial Tenancies Act
- Construction Act
- Environmental Protection Act
- Fire Protection and Prevention Act
- Green Energy Act
- Occupational Health and Safety Act
- Ontario Water Resources Act
- Residential Tenancies Act

Bylaws in force in the various municipalities in which the university owns real property

Staff responsible for institutional compliance have reviewed these statutes, bylaws and regulations, and each has signed a declaration indicating that there are no issues of material non-compliance related to their areas of responsibility as at the date of their signature. Copies of the declarations of staff are kept in the Secretariat and are available for inspection upon request.

Managers sign off statutory compliance declarations to the extent of their responsibility and to the best of their knowledge.

It was noted that in two areas Plant Operations has only partial authority and that others should be added to accurately reflect the accountability and compliance:
- Environmental Protection Act, R.S.O. 1990, c. E.19 - the use and discharge of contaminants used in teaching and research are controlled by academic divisions;

Management will follow up on the implementation of those suggestions.

Alice Raynard
Associate University Secretary
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University of Waterloo Board of Governors BUILDING & PROPERTIES COMMITTEE Work Plan Execution