UBC Social Ecological Economic Development Studies (SEEDS) Sustainability Program

Student Research Report

# SOCIO-TECHNICAL POST-OCCUPANCY EVALUATION

## [Pilot Study at Robert H Lee Alumni Centre]

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**APPP 506**

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# SOCIO-TECHNICAL POST-OCCUPANCY EVALUATION

## PILOT STUDY AT ROBERT H LEE ALUMNI CENTRE

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## Executive Summary

The University of British Columbia (UBC) is developing a Green Building Plan to manage future academic and residential building projects on campus. Numerous tasks are underway to support the Green Building Plan's development and deliver improved building projects. Currently, campus building projects often have significant performance gaps between design and operation. UBC however, does not have a rigorous process to define these gaps and to disseminate lessons learned for future building projects. Post occupancy evaluation (POE) has been suggested as a potential tool that can provide a systematic and rigorous way to understand building performance and communicate project successes and failures.

POE is a building performance assessment process completed after the building has been occupied for a period. It combines typical performance indices (ex. energy consumption) with occupant indoor environmental quality (IEQ) satisfaction levels to form a holistic building performance evaluation. POE results can help identify current problems and inform solutions within the building studied. POE can also provide valuable information to improve future design projects.

This project examined if POE was a suitable tool for UBC to support the Green Building Plan's objective to communicate lessons learned between building projects. A potential POE process for use in UBC Core buildings was created based on best practices. The POE process was then piloted in the Robert H Lee Alumni Centre (Alumni Centre).

The pilot study indicated that the POE process is relatively simple to implement and requires minimal resources. The Occupant IEQ Survey was easy for respondents to use and required minimal effort, while still providing data on a diverse range of topics. Even with somewhat limited survey respondents (N=41), the POE summary report provided a comprehensive building performance summary.

The pilot study results indicate that POE is a suitable tool for understanding actual building performance. Additionally, with widespread use POE will become a useful tool for capturing project lessons and informing future campus building projects. POE is recommended for implementation at UBC. Moving forward work should focus on adjusting and improving the POE template and execution process, as well as confirming program logistics and ownership.

# 1 Introduction

## 1.1 Project Background

The University of British Columbia (UBC) is developing a Green Building Plan in support of the campus' 20 year sustainability strategy (Campus + Community Planning, n.d. a). The plan will guide all future academic and residential building projects on campus towards a net positive design focused on human and ecological wellbeing (Campus + Community Planning, n.d. a). Stakeholder workshops held in January 2017 helped develop a task list to support the Green Building Plan (Campus + Community Planning, n.d. a). One workshop sub action was to investigate using Post Occupancy Evaluation (POE) to help disseminate lessons learned from campus building projects.

The University of British Columbia's (UBC's) core buildings generated 71% of UBC Vancouver's total greenhouse gas (GHG) emissions in 2016 (White & Einarson, 2017). UBC core buildings undergo LEED certification, but are insufficiently studied after occupancy. A high level POE is included in the Board 4 report delivered to UBC's board of governors, but this report does not provide sufficient information to understand the actual building performance.

## 1.2 Project Purpose

Post occupancy evaluation (POE) is a method for evaluating building performance after construction is completed and the building is occupied (Tookaloo & Smith, 2015). POE focuses not only on operating resource consumption, but also on occupant satisfaction (Tookaloo & Smith, 2015). Additionally, POE offers a way to compare design with actual performance and in doing so help better inform future building design work (Gocer, Hua, & Gocer, 2015). Despite the myriad benefits, POEs are infrequently conducted by building stakeholders (Newsham, Mancini, & Birt, 2009).

Leadership in Energy and Environmental Design (LEED) is a North American green building program that targets improving building sustainability (Newsham, Mancini, & Birt, 2009). POEs offer a method for LEED certified building owners and operators to gauge actual building performance versus the predicted performance. This information can be used to help assess how effective LEED certification is at lowering resource consumption and improving occupant satisfaction (Newsham, Mancini, & Birt, 2009).

LEED Gold certification is mandatory at UBC for all new or heavily renovated core buildings (UBC Sustainability, n.d.). LEED certified buildings are delivering energy savings over conventional designs (Turner & Frankel, 2008). However, for more than 50% of LEED buildings, the energy savings vary more than 25% from the predicted design values (Turner & Frankel, 2008). UBC has noted similar variability between actual and predicted energy consumption in campus buildings. Often this discrepancy is caused by a poor accounting of socio technical

factors within the energy model (Summerfield, Oreszczyn, Pathan, & Hong, 2009). Socio technical factors are the interactions between the occupants and the building and its services (Summerfield, Oreszczyn, Pathan, & Hong, 2009).

This project aims to use POE to understand performance gaps between actual and predicted metrics, as well as to assess the building holistically and understand how the space is appreciated. The POE can then be used as a communication tool to help disseminate lessons learned and to improve future building design.

### 1.3 Project Objectives

This project will create a systematic method for POEs in core campus buildings to support the Green Building Plan. This will include developing a POE template for core buildings based on best practices. The POE template will then be piloted at the Robert H Lee Alumni Centre (Alumni Centre) at UBC's Vancouver campus. The project is focussed on answering the following questions:

1. Is Post Occupancy Evaluation a suitable tool for disseminating actual building performance?
2. What are current best practices for POEs?
3. What might a POE process look like at UBC?

## 2 Post-Occupancy Evaluation Overview

POEs systematically assess building performance against various criteria (Preiser, Rabinowitz, & White, 2015). In practice, POE is typically used to support one of the following goals:

- Benchmarking
- Evaluating building design approach
- Problem investigation (Palmer, 2009)

POE results also provide various benefits over the short, medium, and long term, which are denoted in Figure 2 1 below.

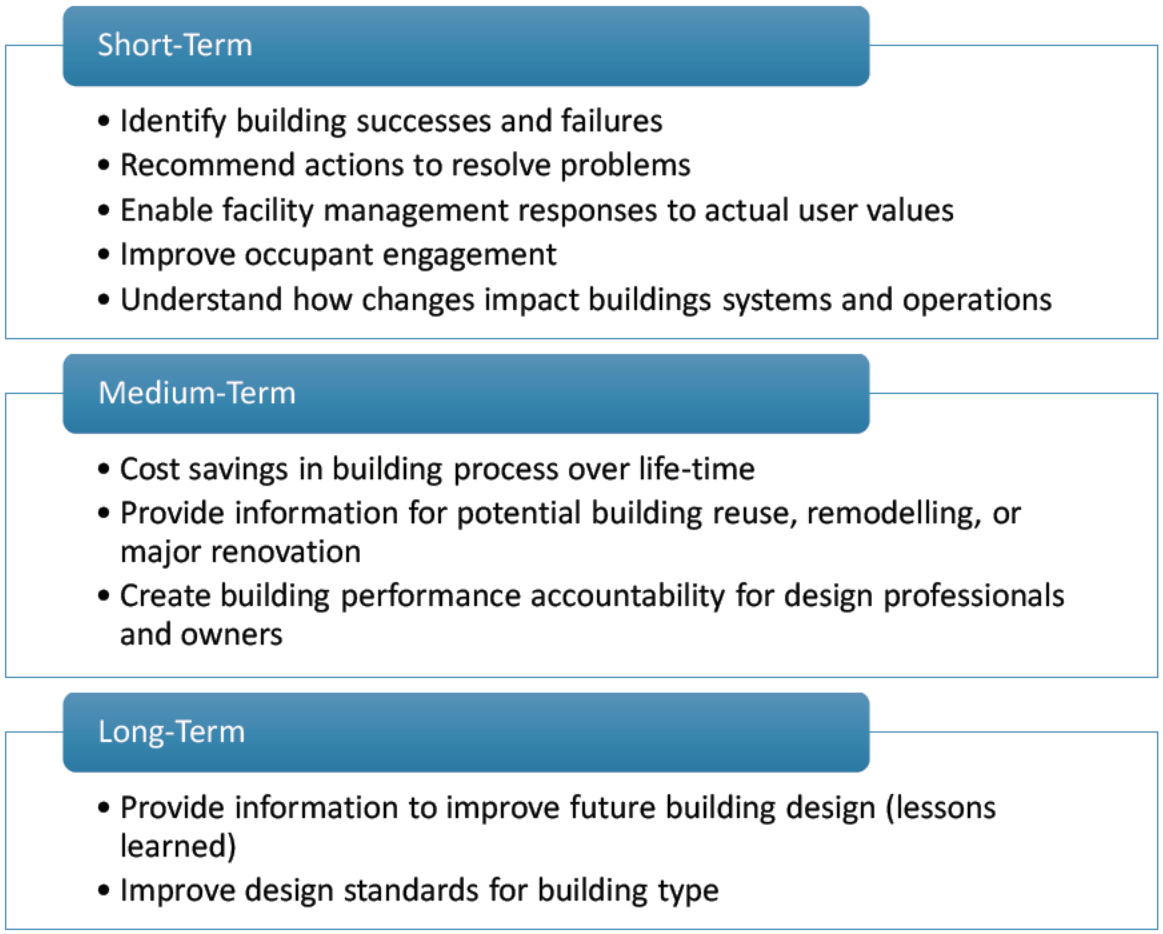


*Figure 2 1: Post Occupancy Evaluation Benefits (Preiser, Rabinowitz, & White, 2015)*

POE can be performed with varying levels of effort in accordance with the evaluation goals, budget, and timeline (Preiser, Rabinowitz, & White, 2015). There are three main levels: indicative, investigative and diagnostic, which are compared in Table 2 1 below.

*Table 2 1: Post Occupancy Evaluation Levels (Preiser, Rabinowitz, & White, 2015)*

| | Indicative | Investigative | Diagnostic |
|---|---|---|---|
| **Time Span** | 2 hours – 2 days | 160 – 240 hours + support services | Several months – 1 year+ |
| **Purpose** | Identify major success and failures | Understand cause and effect of building performance issues | Create new building performance information (improve predictions) |

| | Indicative | Investigative | Diagnostic |
|---|---|---|---|
| **Notes** | Requires experienced team to achieve short time span (with POE and building type) | Often conducted if Indicative Level identifies issues for further study | Equivalent to scientific research |

All POEs, regardless of level, comprise the stages and sub steps described in Figure 2 2 below.

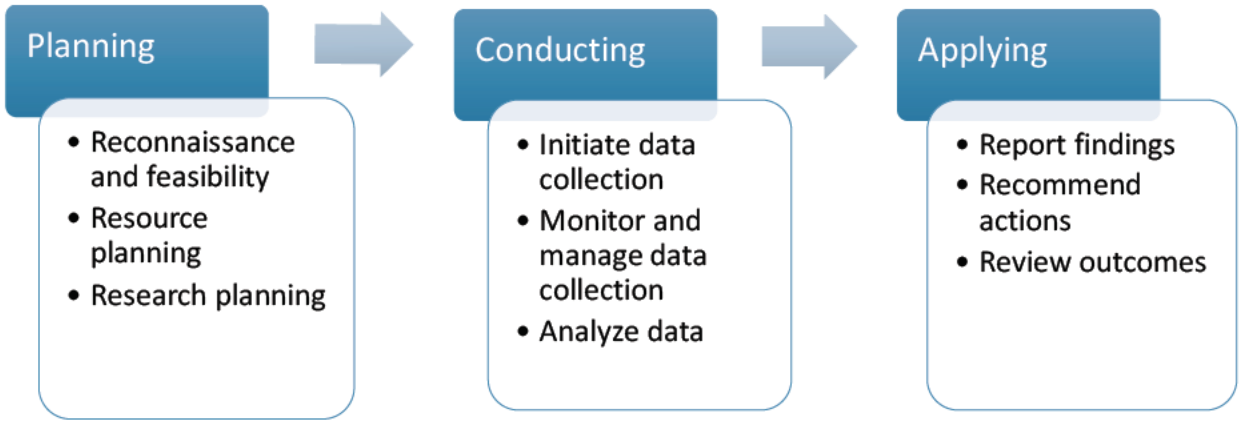


*Figure 2 2: Post Occupancy Evaluation Stages (Preiser, Rabinowitz, & White, 2015)*

Occupant behaviour and building performance are linked and therefore a POE must analyze both aspects (Palmer, 2009). Occupants are typically an underutilized information source (American Society of Heating, Refrigerating and Air Conditioning Engineers [ASHRAE], 2006). An occupant satisfaction survey however, taps into this underutilized source and provides a broader view on building performance than what service request logs or consumption data alone will show (ASHRAE, 2006).

# 3 Methodology

## 3.1 POE Template Preparation

The POE template was prepared with the following priorities:

1. POE should be applicable to all Core buildings with minimal changes
2. POE should require minimal resources to implement to facilitate widespread adoption for all new building projects
3. POE Occupant Survey should prioritize high completion rate and low completion time by minimizing questions with text based answers.

Background research was conducted before preparing the POE template. This included an interview with Ghazal Ebrahimi, a PhD candidate at UBC's Institute for Resources, Environment and Sustainability. Additionally, existing POEs were referenced to understand typical process and reporting structure. This included the iiSBE 2014 study of UBC's CIRS Building (Chu, et al., 2014) and the UBC Social Ecological Economic Development Studies (SEEDS) Student Report POE of UBC's Aquatic Ecosystem Research Laboratory (Tan, Lei, & Winardi, 2012). Other key references are the Post Occupancy Evaluation for Multi Unit Residential Buildings Guide for Administrators (Open Green Building Society, 2016) and the Centre for the Built Environment, specifically David Lehrer's LEED Post Occupancy Evaluation: Taking Responsibility for the Occupants presentation slides (2006).

The POE template was prepared based on the background research. This included a summary report template, a building performance index table template, and a building occupant survey. The survey covers ten different indoor environmental quality (IEQ) topics, which are listed below.

1. Overall Satisfaction
2. Social Environment
3. Layout
4. Thermal Comfort
5. Air Quality
6. Lighting
7. Acoustics
8. Cleanliness and Maintenance
9. Furniture
10. Technology

These topics, and the questions supporting them, represent a compilation of best practice IEQ topics (ex. thermal comfort, lighting, acoustics), as well as items from UBC Infrastructure Development's Informal Learning Spaces studies and social environment considerations.

The social environment topic is an important inclusion to ensure the POE aligns with UBC's Green Building Plan's holistic themes, which are concerned with more than technical building performance (Campus + Community Planning, n.d. b). The social environment questions are however, a novel inclusion within a building occupant survey. This topic was developed through collaboration with project mentors and Fiona Jones, a Special Projects Researcher at HCMA Architecture + Design. Additionally, this topic was informed by reviewing the WELL Community Standard Pilot (International WELL Building Institute, 2017a), Gehl Studio's Public Life Diversity Toolkit (Gehl Studio SF, 2015), and Colantonio and Dixon's report on Measuring Socially Sustainable Urban Regeneration in Europe (2009). Interestingly, both the WELL Community Standard (International WELL Building Institute, 2017a) and WELL Building Standard require

post occupancy surveys, but only require the Centre for the Built Environment's IEQ survey, which does not include any social environment or community design elements (International WELL Building Institute, 2017b).

The occupant survey follows a similar structure to the one used by the Centre for the Built Environment (Lehrer, 2006). The survey is modular in design. For each topic, there is a question asking the user's overall satisfaction. The user selects their satisfaction from a seven point scale. If the user selects neutral through very satisfied they progress to the next topic. If the user selects one of the unsatisfied ratings, they are directed to a follow up page featuring a comprehensive list of potential reasons for their dissatisfaction. Likert scale ratings (five or seven point) were used throughout the survey questions wherever possible.

The building occupant IEQ survey is attached in Appendix A.

## 3.2 POE Pilot Study

The POE pilot study work can be divided into the three phases mentioned in Figure 2 2 above: planning, conducting, and applying. There are many specific sub tasks in each phase. The specific tasks for each POE phase along with approximate time requirements are given in Appendix B.

Information used to complete the POE was collected from various resources. The key sources are summarized in Table 3 1 below.

*Table 3 1: Robert H Lee Alumni Centre POE Key Information Sources*

| Resource | Description |
|---|---|
| SkySpark | Provided actual energy and water consumption for the building, as well as Heating and Cooling Degree Days.<br><br>Data sourced from the day the system came online – August 17, 2015. Energy and water utilization index calculations done for the period between September 1, 2015 and Aug 31, 2016 and the period between September 1, 2016 and August 31, 2017.<br><br>District energy system came online September 20, 2017 and was not included in calculations. |

| Resource | Description |
|---|---|
| LEED Submission Documentation | Provided building design information, including:<br>• Floor area (3885 $m^2$)<br>• Energy model results (predicted and reference values)<br>• Predicted water consumption<br>• Overall design features<br>• Project team members<br>• Project timeline<br>• Predicted occupancy information |
| Building Drawings | Provided general building information on layout and location of major HVAC equipment. |
| Interviews | Provided building insights and information.<br>Interview with Operations Manager helped define building spaces and users, as well as building operating hours.<br>Interview and tour with Facilities Manager provided specific information on HVAC and other building systems, as well as HVAC operating hours. Additionally, interview provided insights on overall building operation and functionality. |
| Service Request Log | Provided high level overview of building service requests, which enabled analysis into most frequent request types. |
| Occupancy Survey | Provided insights into occupant relationship with building, and satisfaction levels. Defined building IEQ satisfaction. |
| Observation | Provided general building information. |

# 4 Robert H Lee Alumni Centre POE

The POE template and process was piloted in the Robert H Lee Alumni Centre (Alumni Centre). The occupant survey indicated high occupant satisfaction over a wide range of metrics. The energy and water usage however, were both significantly different from the predicted design. The POE summary report for this pilot study including full results and recommendations is attached in Appendix C.

# 5 POE Pilot Results

The Alumni Centre POE occupant IEQ survey was open for 19 days from November 14th 2017 and December 2nd 2017. The survey officially opened with an email to Alumni Centre staff, which was sent on the Tuesday after a holiday Monday. From November 20th through 24th, the Alumni Centre staff were particularly busy hosting graduation week. There was one in person survey collection session held on November 30th. This session, combined with a reminder staff email, led to a response spike equal to 44% of the total completed responses. This indicates the importance of in person survey collection. The survey response distribution is given in Figure 5 1 below. Forty one completed responses were received.

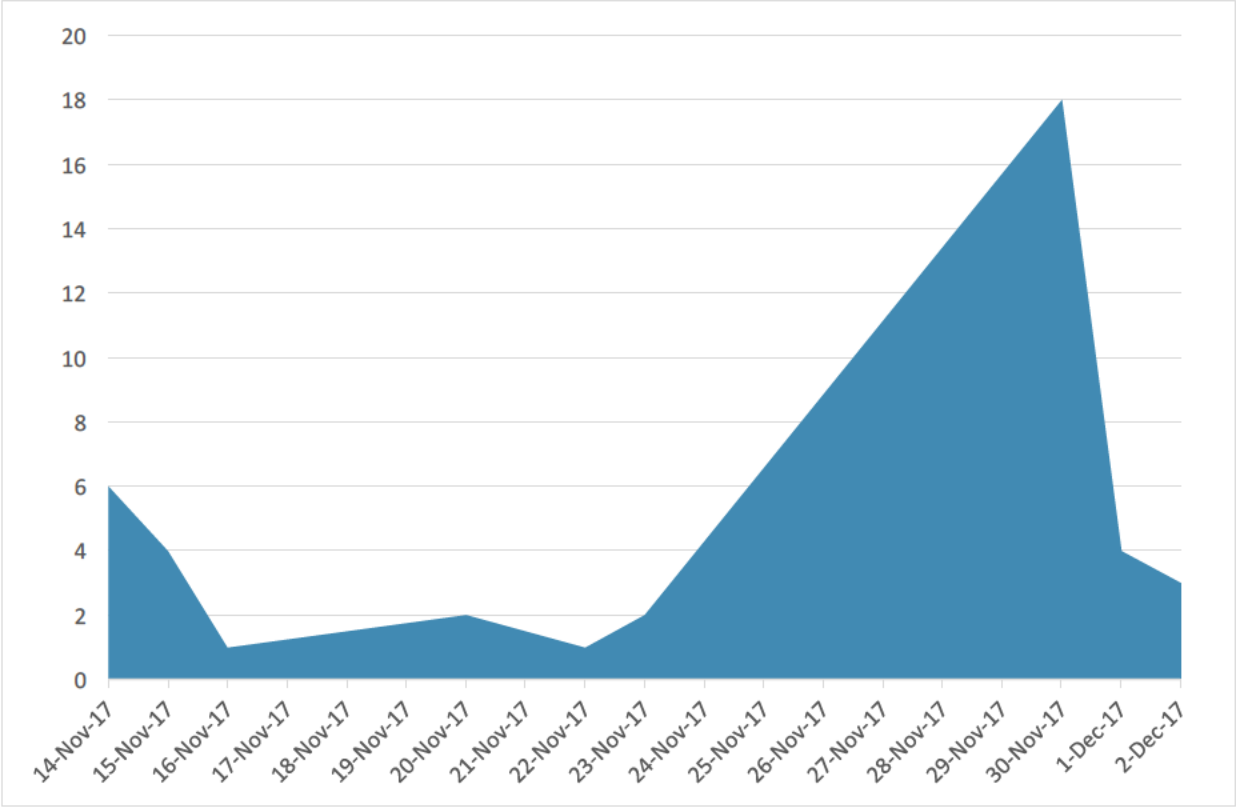


*Figure 5 1: Building Occupant IEQ Survey Completed Responses Distribution*

The survey responses were almost evenly split between Alumni Centre staff (44%) and transient population (56%). There are 35 total UBC Alumni staff, of which 13 completed the occupant survey (37%). There were four responses received from e@UBC staff. There were no responses from staff at the Loafe Café. Alumni Centre staff were primarily contacted through email, but this approach alone is evidently not sufficient to engage high numbers of staff.

The survey had a completion rate of 71%, indicating the survey was well designed and easy for respondents. There were 71 total questions in the survey (including the optional questions for dissatisfied responses) comprising demographic information and the ten different IEQ topics

noted in Section 3.1. The average survey completion time was 8 minutes and 22 seconds, with a range from 2 minutes 50 seconds to 57 minutes and 13 seconds. The survey managed to capture a large amount of data on a wide range of topics in a relatively short period of time.

Full historical energy and water consumption data were available on SkySpark for the Alumni Centre. This enabled complete building performance index calculations. Aside from UBC Alumni staff numbers, no information on building occupancy was available, which limited both the POE performance and the occupant survey analysis.

# 6 Discussion

## 6.1 Indicative Level POE

The pilot POE demonstrated that an indicative level POE can be useful to gather comprehensive building operations data. Energy and water data is readily available and easy to incorporate into the POE. The occupant survey was simple to use, while covering a wide range of topics.

The limited resources available, in terms of both time and experience, for survey marketing and gathering, limited the total number of responses. Additionally, external factors, such as graduation week, poster regulations in the building, and waits for unexpected approvals impacted the number of building occupant IEQ survey respondents.

The Alumni Centre Operations Manager indicated that some staff found some of the demographic questions clunky. Particularly when asked first if they work in the building and then asked how many hours a day they spend in the building. The survey logic could be adjusted for better flow for the various respondent types.

The Alumni Centre POE summary report (see Appendix C) is somewhat unwieldy to navigate. The report is primarily statistical analysis from the occupancy survey, presented with bar charts. The reporting method could likely be integrated into an online database, perhaps similar in structure to SkySpark, to allow users to better focus on items of interest and to compare results between buildings, which will help disseminate lessons learned.

There is much more data analysis that can be performed with the occupant survey, but due to project time constraints this was not possible. Additional analysis would provide more clarity and insight in understanding building performance.

## 6.2 Integrated Project Design

Integrated Project Delivery (IPD) is a building project delivery method focussed on collaboration to optimize the whole project (The American Institute of Architects, California Council [AIACC], 2014). IPD projects are characterized by having the following items for all key participants:

- Continuous project involvement

- Aligned business interests by sharing risks and rewards
- Joint project control
- Interlocking or multi party agreements
- Limited liability (AIACC, 2014)

Figure 6 1 below highlights the IPD approach.

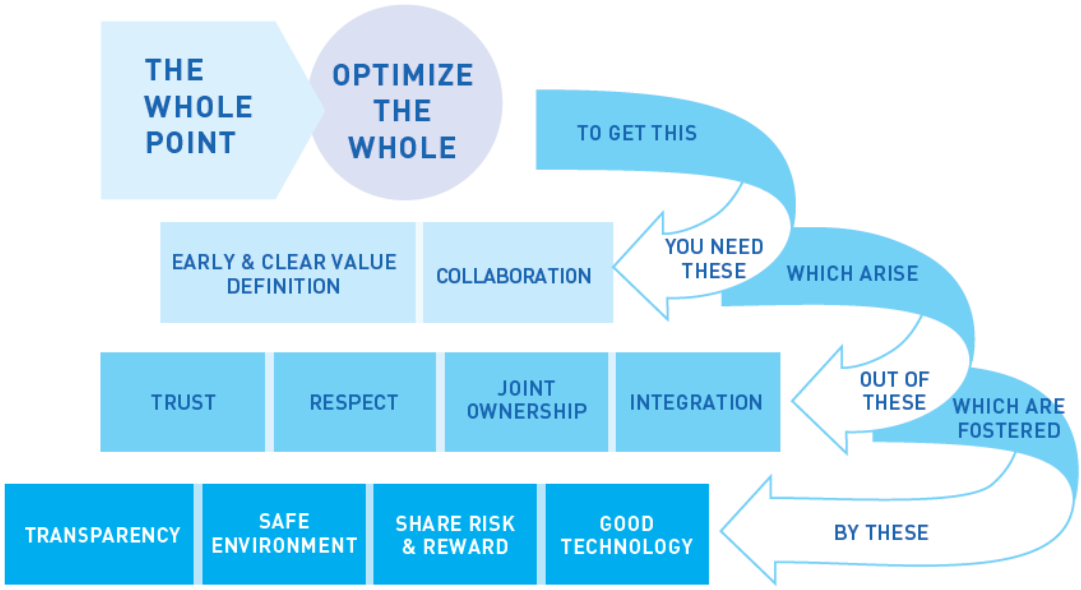


*Figure 6 1: IPD Project Essentials (AIACC, 2014)*

A high level comparison between the traditional design process and an IPD project is given in Figure 6 2 below. This figure clearly shows IPD's collaborative approach with almost all key team members contributing to the Conceptualization phase.

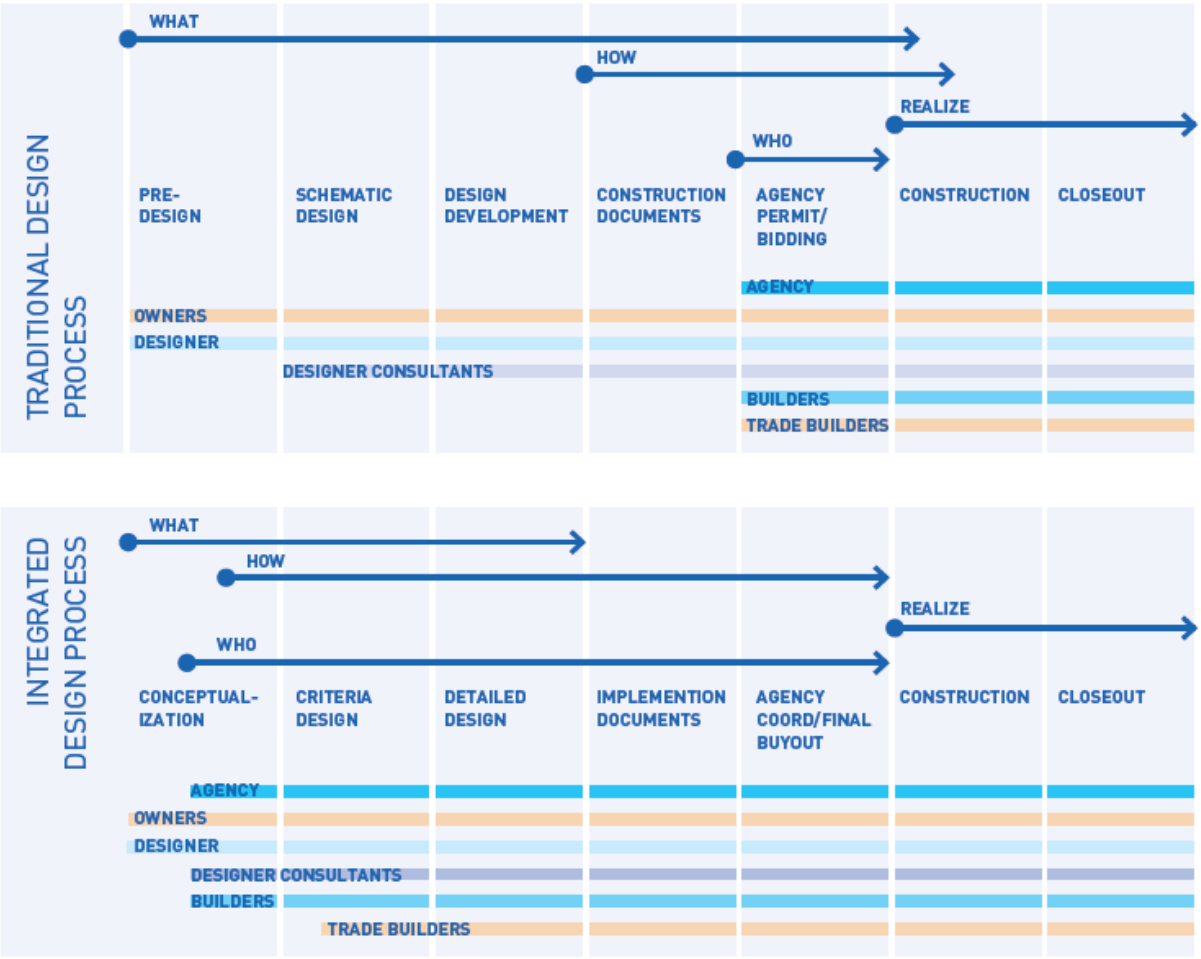


*Figure 6 2: IPD versus Traditional Design Process (AIACC, 2014)*

IPD projects have been found to offer statistically significant improvements over traditional project methods over a range of considerations, including:

- Quality
- Schedule
- Project changes
- Communication
- Environmental impacts
- Finances (El Asmar, Hanna, & Loh, 2013)

IPD projects result in better quality buildings without increasing financial expenditures (El Asmar, Hanna, & Loh, 2013). Additionally, stakeholders, especially project owners, report significant satisfaction with the IPD approach (Cheng, Allison, Dossick, & Monson, 2015).

POE, with its emphasis on feedback (Bordass & Leaman, 2005) and continuous improvement (Waltz, Gouvin, & Forth, n.d.) provides a good compliment to the IPD approach. Shifting

building project culture towards IPD will be supported by also shifting towards widespread POE implementation, as the POE information will help inform the collaborative design approach used in IPD (Waltz, Gouvin, & Forth, n.d.).

# 7 Conclusions and Recommendations

Post occupancy evaluation is a structured and systematic tool for indicating building performance and occupant IEQ satisfaction. POE is suitable for widespread use within UBC's Core Buildings with relatively low effort required. Widespread adoption will improve the tool's usefulness and generate a consistent format to compare buildings and help disseminate building project lessons.

Post occupancy evaluation is recommended as a future component of all new building and major renovation projects at UBC. To support this recommendation, work should initially focus on improving the POE template and execution process, as well as determining the POE logistics, and exploring IPD's suitability for project delivery. Specific tasks recommended to support this next phase of work are listed below.

**Post-Occupancy Evaluation Template**

- Find a way to easily incorporate occupancy data into POE.
- Engage subject matter expert to review and update social environment and community design metrics in Occupancy IEQ Survey.
- Review Occupancy IEQ Survey logic and look to improve functionality based on respondent demographics (ex. building staff versus transient population).
- Create standardized marketing plan for survey deployment and define required resources.
- Create online database for reporting POEs to enable easy comparison between buildings and detailed data analysis.

**Post-Occupancy Evaluation Execution**

- Set target sample size before starting study based on building characteristics.
- Vary engagement approach to maximize response rates. Consider focus group interviews, attending staff meetings, and targeting staff during in person survey gathering sessions.
- Allocate additional time and resources to in person survey gathering.

**Post-Occupancy Evaluation Logistics**

- Determine departmental ownership of POE at UBC.
- Secure funding for POE studies.

| Other |
| --- |
| • Explore IPD as building project delivery method for UBC with a pilot project.<br>• Assess how POE integrates with this project delivery approach. |

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# Appendix A Building Occupant IEQ Survey

THE UNIVERSITY OF BRITISH COLUMBIA

# Robert H Lee Alumni Centre - Post-Occupancy Evaluation - Occupant Survey

## Page 1

UBC Sustainability & Engineering Energy & Water Services Campus and Community Planning and nfrastructure Development are conducting a post occupancy evaluation on the Robert H Lee Alumni Centre (Alumni Centre) to identify opportunities to improve building management operations and overall performance

We want to understand your experiences both positive and negative with the Alumni Centre Your feedback will help identify potential performance issues and help to improve future building design on campus

This survey should take less than 15 minutes to complete

Your responses are completely anonymous

To thank you for your participation you have the opportunity to win a UBC Bookstore or UBC Food Services gift card The winners will be announced on December 1 2017

Any questions or concerns can be directed to Kerry Shaw or Dr Vladan Prodanovic (vladan prodanovic@ubc ca)

Thank you for your participation

## About You

### How o d are you?

- Under 12
- 12 - 17
- 18 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55 - 65
- 65+

*(role)*

### Are you a(n)

- UBC Undergraduate Student
- UBC Graduate Student
- UBC Alumni
- UBC Staff
- UBC Faculty
- Visitor
- Other please specify — Type here

### Do you work n the Robert H. Lee A umn Centre?

- Yes (full-time)
- Yes (part-time)
- No

### If YES, where do you work n the Robert H. Lee A umn Centre?

- Alumni UBC
- Loafe Cafe
- e@UBC Offices
- Student Ambassador / Coordinator
- Other (please specify) — Type here

## Overa Impress ons

### What do you typ ca y use th s space for?

- Socializing
- Quiet work
- Group work / meetings
- Waiting for class
- Eating
- Other (please specify) Type here

### How frequent y do you v s t the Robert H. Lee A umn Centre?

P ease answer on y for t mes where you are a regu ar v s tor to UBC's Vancouver campus.

- Daily
- Weekly
- Monthly
- Less than once a month

### How ong s a typ ca v s t?

- Under 30 minutes
- 30 - 60 minutes
- 1 - 2 hours
- More than 2 hours

### What space do you use ***most*** often w th n the A umn Centre?

- Third Floor Alumni Lounge
- Main Floor Office Space
- Jack Poole Hall (second floor event space)
- Classrooms
- Third Floor Office Space
- Main floor meeting rooms
- Loafe Cafe
- Second floor lounge seating
- Main floor lounge seating

- [ ] e@UBC Accelerator Meeting Space
- [ ] e@UBC Office Space
- [ ] Other (please specify) Type here

Overa , how sat sf ed are you w th th s bu d ng?

| Very Unsatisfied | | | Neutral | | | Very Satisfied |
|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |

## Overa Impress ons (cont nued)

What factors contr bute to your d ssat sfact on w th the bu d ng overa ?

P ease se ect a that app y

- [ ] Aesthetics
- [ ] Location
- [ ] Social environment
- [ ] Physical environment (ex temperature air quality lighting noise cleanliness)
- [ ] Limited Operating Hours
- [ ] Other (please specify) Type here

## Soc a Env ronment

Are you typ ca y here by cho ce or ob gat on?

- Choice
- Obligation

If here by ob gat on, do you typ ca y nger onger than requ red n the bu d ng?

[redacted]

Do you fee a sense of stewardsh p towards the bu d ng?

.e. do you want to take care of the space

[redacted]

The bu d ng offers adequate space to:

| | Strongly Disagree | Disagree | Undecided | Agree | Strongly Agree | Not Sure / Not Applicable |
|---|---|---|---|---|---|---|
| Socialize | | | | | | |
| Assemble | | | | | | |
| Collaborate | | | | | | |

Do you fee safe n the bu d ng?

[redacted]

How sat sf ed are you w th the fo ow ng bu d ng e ements?

| | Very Unsatisfied | | | Neutral | | | Very Satisfied |
|---|---|---|---|---|---|---|---|
| Social Environment (i e quality of life & perceived safety) | | | | | | | |
| Community Design (i e access to services and amenities) | | | | | | | |

## Soc a Env ronment (cont nued)

### What factors contr bute to your d ssat sfact on w th the bu d ng's soc a env ronment or commun ty des gn?

P ease se ect a that app y

- [ ] Spaces are inflexible
- [ ] Barriers (cost/availability) to social cohesion programming
- [ ] Building does not celebrate local culture/history
- [ ] nsufficient indoor gathering spaces
- [ ] nsufficient public art
- [ ] nsufficient outdoor gathering spaces
- [ ] Spaces are inaccessible
- [ ] Limited access to restorative built spaces (ex promenade plaza art gallery museum)
- [ ] Limited access to green spaces (trees plants)
- [ ] No information on design and/or operation of building
- [ ] Limited access to blue spaces (water)
- [ ] Other (please specify) Type here

### P ease st any other soc a env ronment re ated ssues that are mportant to you.

Type here

## Bu d ng Layout

How sat sf ed are you w th the bu d ng ayout?

.e. how bu d ng s arranged s ze and ava ab ty of space

Very Unsatisfied | Neutral | Very Satisfied

## Bu d ng Layout (cont nued)

What factors contr bute to your d ssat sfact on w th the bu d ng ayout?

P ease se ect a that app y

- [ ] Difficult to find facilities (ex washrooms water fountains)
- [ ] Lack of privacy
- [ ] nsufficient storage
- [ ] nsufficient space
- [ ] Cramped / crowded seating areas
- [ ] Other (please specify) Type here

P ease st any other ayout re ated ssues that are mportant to you.

Type here

## Therma Comfort

### Can you contro the temperature of your space?

ex. v a thermostat, open ng w ndow, fan, portab e heater

- Yes
- No
- Not sure

### If YES, do you contro the temperature?

| | Very Frequently | Frequently | Occasionally | Rarely | Never | Not Applicable |
|---|---|---|---|---|---|---|
| Thermostat | | | | | | |
| Opening window | | | | | | |
| Personal fan | | | | | | |
| Portable heater | | | | | | |

### How wou d you descr be the temperature of th s space?

| | Too Cold | Cool | Just Right | Warm | Too Hot | Not Applicable |
|---|---|---|---|---|---|---|
| Winter | | | | | | |
| Summer | | | | | | |

### How often do you not ce rap d or frequent temperature changes?

| | Always | Often | Sometimes | Never | Not Applicable |
|---|---|---|---|---|---|
| Winter | | | | | |
| Summer | | | | | |

### Overa , how sat sf ed are you w th the bu d ng temperature?

| | Very Unsatisfied | | | Neutral | | | Very Satisfied | Not Applicable |
|---|---|---|---|---|---|---|---|---|
| Winter | | | | | | | | |
| Summer | | | | | | | | |

## Therma Comfort (cont nued)

### What factors contr bute to your d ssat sfact on w th the bu d ng temperature?

P ease se ect a that app y

- [ ] Drafts from windows
- [ ] ncoming sun
- [ ] Air movement is too low
- [ ] Heating/cooling system does not respond
- [ ] Drafts from vents
- [ ] Air movement is too high
- [ ] Thermostat is adjusted by other people
- [ ] Temperature is hotter/colder in my area than others
- [ ] Temperature is too hot
- [ ] Hot/cold surfaces (ex floor windows walls)
- [ ] Thermostat is inaccessible
- [ ] Heat from cooking equipment
- [ ] Humidity too low (dry)
- [ ] Air from vents is too hot/cold
- [ ] Humidity too high (damp)
- [ ] Temperature is too cold
- [ ] Heat from office equipment
- [ ] Other (please specify) Type here

### P ease st any other temperature re ated ssues that are mportant to you.

Type here

## A r Qua ty

How sat sf ed are you w th the bu d ng a r qua ty?

.e. stuffy/sta e a r, c ean ness, odours

Very Unsatisfied | Neutral | Very Satisfied

## A r Qua ty (cont nued)

### What factors contr bute to your d ssat sfact on w th the bu d ng a r qua ty?

P ease se ect a that app y

- [ ] Cooking smells
- [ ] Air movement is too low
- [ ] Air is not clean
- [ ] Mouldy / musty smells
- [ ] Air movement is too high
- [ ] Humidity too high (damp)
- [ ] Condensation or fogging on insides of windows
- [ ] Staining or mould growth
- [ ] Humidity too low (dry)
- [ ] Air is stuffy / stale
- [ ] Other odours
- [ ] Other (please specify) Type here

### P ease st any other a r qua ty re ated ssues that are mportant to you.

Type here

## L ght ng

### Do you have access to any of the fo ow ng ght ng contro s?

P ease se ect a that app y

- [ ] Light switch
- [ ] Light dimmer
- [ ] Window blinds or shades
- [ ] Task lighting (ex desk light)
- [ ] None of the above
- [ ] Other (please specify)

### How sat sf ed are you w th the fo ow ng ght ng e ements n the bu d ng?

| | Very Unsatisfied | | | Neutral | | | Very Satisfied |
|---|---|---|---|---|---|---|---|
| Amount of Natural Light | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Amount of Artificial Light | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Lighting Visual Comfort (i e glare reflections contrast) | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Lighting Overall | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

## L ght ng (cont nued)

What factors contr bute to your d ssat sfact on w th the bu d ng ght ng?

P ease se ect a that app y

- [ ] Flickering lights
- [ ] Shadows
- [ ] Not enough daylight
- [ ] Too much daylight
- [ ] Reflections on screens
- [ ] Not enough artificial light
- [ ] Artificial lighting colour
- [ ] Too much artificial light
- [ ] Lack of task lighting
- [ ] Too dark
- [ ] Too bright
- [ ] Other (please specify) Type here

P ease st any other ght ng re ated ssues that are mportant to you.

Type here

## Acoust cs

How sat sf ed are you w th the bu d ng acoust cs?

.e. Sound transm ss on w th n bu d ng

| Very Unsatisfied | | | Neutral | | | Very Satisfied |
|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |

## Acoustics (continued)

### What factors contribute to your dissatisfaction with the building acoustics?

Please select all that apply

- [ ] Noises from other interior spaces (ex. corridors, stairwell, neighbouring rooms)
- [ ] Office equipment noise
- [ ] Cooking noise
- [ ] Plumbing system noise
- [ ] People overhearing my private conversations
- [ ] Mechanical system noise (heating, ventilation, cooling)
- [ ] Vibrations (ex. from traffic, doors slamming)
- [ ] Exterior noise
- [ ] White Noise
- [ ] Excessive echoing
- [ ] People talking in neighbouring areas
- [ ] Other (please specify) Type here

### Please list any other acoustics related issues that are important to you.

Type here

## C ean ness & Ma ntenance

How sat sf ed are you w th the fo ow ng bu d ng e ements?

| | Very Unsatisfied | | | Neutral | | | Very Satisfied |
|---|---|---|---|---|---|---|---|
| Cleanliness | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Maintenance | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

## C ean ness & Ma ntenance (cont nued)

What factors contr bute to your d ssat sfact on w th the bu d ng c ean ness and ma ntenance?

P ease se ect a that app y

- [ ] Dirty surfaces (ex floors windows)
- [ ] nsufficient waste bins
- [ ] Slow repairs
- [ ] Frequent mechanical failures (heating ventilation cooling)
- [ ] Waste bins do not accommodate proper sorting
- [ ] Waste bins not emptied regularly
- [ ] Other (please specify) Type here

P ease st any other c ean ness and ma ntenance re ated ssues that are mportant to you.

Type here

## Furn sh ngs

How sat sf ed are you w th the bu d ng furn sh ngs?

| Very Unsatisfied | | | Neutral | | | Very Satisfied |
|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |

## Furn sh ngs (cont nued)

What factors contr bute to your d ssat sfact on w th the bu d ng furn sh ngs?

P ease se ect a that app y

- [ ] Poor aesthetics
- [ ] Poor quality
- [ ] Damaged or stained furnishings
- [ ] nsufficient furniture
- [ ] Furnishings unsuited to task
- [ ] Furnishings are uncomfortable
- [ ] Other (please specify) Type here

P ease st any other furn sh ngs re ated ssues that are mportant to you.

Type here

## Page 21

### Techno ogy

How sat sf ed are you w th the bu d ng techno ogy?

.e. W F , aud o v sua

| Very Unsatisfied | | | Neutral | | | Very Satisfied |
|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ |

## Techno ogy (cont nued)

What factors contr bute to your d ssat sfact on w th the bu d ng techno ogy?

P ease se ect a that app y

- [ ] Slow WiFi
- [ ] Audio visual equipment is difficult to use
- [ ] nconsistent WiFi
- [ ] nsufficient audio visual equipment
- [ ] Broken audio visual equipment
- [ ] Other (please specify) Type here

P ease st any other techno ogy re ated ssues that are mportant to you.

Type here

Thank You!

Are there any other comments you wou d ke to share about your exper ence w th the Robert H Lee A umn Centre?

Type here

THE UNIVERSITY OF BRITISH COLUMBIA

# Robert H Lee Alumni Centre - Post-Occupancy Evaluation - Prize Entry

**Page 1**

To thank your for your part c pat on, you have the opportun ty to w n one of the fo ow ng:

- $50 UBC Bookstore g ft card (1 ava ab e)
- $25 UBC Food Serv ces g ft card (4 ava ab e)

To enter the draw, p ease enter your ema .

Your nformat on w not be shared.

Type here

## Appendix B Alumni Centre POE Pilot Tasks Overview

| | Step Name | Description | Estimated Time (h) |
|---|---|---|---|
| Planning | Contact Facilities Manager (FM) | Phone/email building facilities manager to introduce project and set up meeting. | Active Time: 2 hours<br>Inactive Time: Varies depending on FM responsiveness. Minimum 1 week. |
| Planning | Obtain building drawings | FM submits request to Infrastructure Development – Records. Confidentiality Agreement must be signed. The request will be processed. | Active Time: 2 hours<br>Inactive Time: Varies. Initial request from FM and response can take as much as 2 weeks if not closely managing. From confidentiality agreement submission to access granted is ~3 days. |
| Planning | Review building drawings | Determine major building mechanical systems and overall layout. | Active Time: 4 hours minimum. More time required if building is not well known to evaluator or poor information is available from FM. |
| Planning | Obtain building's LEED submission documentation | Submit request to external contractors (ex. architecture firm) who handled LEED submission. | Active Time: 2 hours<br>Inactive Time: Varies. For Alumni Centre, architecture firm was very responsive ~1 day. |
| Planning | Preliminary Building Walkthrough | Visit building, note major locations and space types within building. | Active Time: 1 2 hours depending on building size |

| | Step Name | Description | Estimated Time (h) |
|---|---|---|---|
| Planning | Update Occupant Survey for building | Review existing occupant survey template and update information to reflect new building of study (ex. update building locations, staff classifications)<br><br>For the pilot, two separate surveys were prepared. The main Occupant IEQ Survey and a Contest Entry Survey. A completed Occupant IEQ Survey auto directed to the second survey. This was done to keep the respondent emails separate and maintain anonymity for the Occupant IEQ Survey results. | Active Time: 4 hours |
| Planning | Preliminary Meeting with Building Operations Manager (or equivalent) | Explain purpose and scope of project. Confirm scope and terminology in Occupant IEQ Survey. Confirm if posters/digital screens can be used within building to advertise project. Secure support for Occupant IEQ Survey distribution to building staff. | Active Time: 1  2 hours<br><br>Inactive Time: 1 – 2 weeks from initial contact until meeting set. Potentially 1+ weeks for other building staff to approve study/survey. |
| Planning | Design Occupant IEQ Survey Poster | Prepare a poster to advertise the Occupant IEQ Survey. Poster should conform to required standards for building and for UBC overall. | Active Time: 4 – 8 hours. This will vary if a standard template is available and on the evaluator's graphic design skill set. |
| Planning | Acquire Gift Cards or other incentives for Occupant IEQ Survey | Incentives for survey respondents are recommended, for example gift cards. | Active Time: 1 hour |

| | Step Name | Description | Estimated Time (h) |
|---|---|---|---|
| Conducting | FM Interview | Tour building with FM and visit major HVAC equipment and other key features. Obtain information on:<br>• Major building systems<br>• Any renovations/ changes made since building opened<br>• FM satisfaction with building<br>• Problem items for building<br>Also, request building service request records. | Active Time: 4 hours minimum – including preparation time<br>Sending questions in advance allows FM to pre gather information and makes actual interview/tour more productive.<br>Inactive Time: 2 days 1 week to wait for service request records. |
| Conducting | FM Interview dissemination and analysis | Review interview details. Determine what to include in the report.<br>Analyze service request records' data. | Active Time: 4 hours |
| Conducting | Review LEED design information | Review LEED submission documents. Extract information on:<br>• Design and construction team<br>• Predicted energy and water consumption/ costs<br>• Occupancy<br>• Overall design features<br>Populate Building Performance Index tables with information. | Active Time: 8 hours. |

| | Step Name | Description | Estimated Time (h) |
|---|---|---|---|
| Conducting | Conduct building occupant IEQ survey | Deploy building occupant survey. Draft email for Operations Manager to send to building staff.<br><br>Conduct minimum one in person survey collection session. Target engagement with transient building population.<br><br>Have Operations Manager send reminder emails to staff once per week (minimum) and the day before survey closes.<br><br>Monitor amount of responses and adjust tactics accordingly. | Active Time: 12 hours minimum<br><br>Inactive Time: Survey should be open for 3 – 4 weeks. |
| Conducting | Energy/Water Consumption Analysis | Download actual historical energy and water consumption from SkySpark.<br><br>Use monthly averages. Define baseline operating period. Look for data anomalies and try to explain with known building features/ issues.<br><br>Calculate Energy Utilization Index (EUI), Water Utilization Index (WUI) as well as cost indices. | Active Time: 6 – 8 hours |
| Conducting | Occupant survey results analysis | Close survey. Download results, filter for completed responses only. Analyze results to determine building occupant satisfaction levels. | Active Time: 16 hours minimum for basic analysis only. Time will correspondingly increase with increased data analysis. |

| | Step Name | Description | Estimated Time (h) |
|---|---|---|---|
| Applying | Report preparation | Compile all POE information and results into report template to summarize work. | Active Time: 3 days<br>Inactive Time: Up to 1 week if request comments on draft report.<br>This will vary significantly if recommendation switch to an online database for reporting is pursued. |
| Applying | Dissemination meetings and/or presentations | Meet with POE team to disseminate information and/or present findings. Report back to building personnel (FM, Operations Manager). | Active Time: 4 hours minimum. Varies depending on number of stakeholders, and amount of information to disseminate. |
| Applying | Award Occupant IEQ Survey Prizes | Once Occupant IEQ Survey is closed, use randomizer to select appropriate number of winners. Email winners the details of how to collect their prize. | Active Time: 2 hours |
| Applying | Reviewing Outcomes | Follow up on actions taken per POE results. | Undetermined. Beyond current project scope. Likely dependant on complexity of recommendations. |

# Appendix C Alumni Centre Post-Occupancy Evaluation

# Table of Contents

# 1 General Building Information

| | |
|---|---|
| **Building Name** | Robert H. Lee Alumni Centre |
| **Address** | 6163 University Boulevard, Vancouver, BC V6T 1Z1 |
| **Description** | Offices and gathering space |
| **Total Floor Area** | 3885 $m^2$ |
| **Number of Floors** | 3 (plus Basement) |
| **Hours of Operation** | Monday to Friday: 8am to 6pm<br>Saturday: 10am to 4pm<br>Sunday: Closed<br>Building available outside these hours for private events |
| **HVAC Equipment Schedule** | Monday to Saturday: 6am to 1pm<br>Sunday: Off |
| **Project Completion** | July 15, 2015 |
| **Third-party Certification** | LEED Gold |
| **Year Certified** | 2016 |

Key contacts from the building design and construction team are listed in the table below.

| Role | Name | Organization | Contact |
|---|---|---|---|
| Client/Owner/Developer | [redacted] | alumni UBC | [redacted] |
| Client/Owner/Developer | | UBC Properties Trust | |
| Architect | [redacted] | HCMA Architecture + Design | [redacted] |
| LEED Consultant | | HCMA Architecture + Design | |
| Engineer – Mechanical | [redacted] | MMM Group | [redacted] |
| Engineer – Electrical | | Stantec Consulting | |
| Engineer – Civil | [redacted] | Kamps Engineering | [redacted] |

Information has been redacted from this report to protect personal privacy. If you require further information, you can make an FOI request to the Office of University Council.

| Role | Name | Organization | Contact |
|---|---|---|---|
| Landscape Architect | | Phillips Farevaag Smallenberg | |
| Contractor | | Syncra Construction | |
| Commissioning Authority | | Airmec Systems Ltd | |
| Building Science Professional | | Spratt Emanuel | |
| Measurement & Verification Consultant | | Stantec Consulting | |
| Energy Modeller | | MMM Group | |

A post-occupancy evaluation (POE) was conducted for the Robert H. Lee Alumni Centre (Alumni Centre) during November 2017. Key POE contacts are listed below.

| POE Role | Name | Contact |
|---|---|---|
| Alumni Centre Facility Manager | | |
| Alumni Centre Operations Manager | | |
| POE Lead | | |

# 2 Building Systems & Services Summary

## 2.1 Heating, Ventilation and Air Conditioning (HVAC)

The primary HVAC equipment for the Alumni Centre is listed below:

- 2 x Air Handler Units (AHU-1, AHU-2)
- 2 x Heat Recovery Ventilators (HRV-1, HRV-2)
- 33 x Fan Coils (FC-1 through FC-33)
- 1 x Chiller (temporary rental)
- 2 x Condensing Boilers (B-1, B-2)

The air handler units provide heating and cooling for the Celebration Space rooms on Level 2. AHU-1 services Room 223 and AHU-2 services Room 221.

The heat recovery ventilators provide heating and cooling for the rest of the building. HRV-1 services the basement, Level 1 and Level 2 (except Rooms 221 and 223). HRV-2 services Level 3.

The fan coils are located in ceiling spaces throughout the building and are fed from HRV-1 and HRV-2. FC-31 and FC-32 provide cooling to the electrical room.

Hot water for heating and for domestic hot water is supplied from a connection to UBC's Academic District Energy System (ADES). Cold water for cooling is supplied by a temporary, rental chiller. A new permanent chiller will be installed and commissioned soon.

The condensing boilers are natural gas fired and provide back-up heat to both the heat exchange system supplying the domestic hot water system and the building heating system.

The building thermostats can be adjusted by the occupants between 19°C and 23°C. The average temperature set point is 21.8°C.

### 2.2 Electrical

An emergency generator supplies power to smoke exhaust fans and make-up air door operators. Emergency lighting is serviced by the campus Uninterruptable Power Supply.

### 2.3 Lighting

Sound and motion sensitivity sensors control the lights. The atrium is equipped with LED Lighting, which minimizes light changes in this difficult to access area.

### 2.4 Building Management System

The building systems are all operated and controlled through the Building Management System.

### 2.5 Architectural

The windows are equipped with vertical stripes to reduce bird collisions.

### 2.6 Renovation / Retrofit Summary

An air to water heat pump (ASHP-1) originally supplied hot water for heating and cold water for cooling. ASHP-1 functioned adequately for heating loads, but failed at providing chilled water for cooling. As a result, ASHP-1 was decommissioned. The building was connected to the ADES on June 26, 2017 to hot water for heating loads. A temporary, rental chiller was installed to provide for the cooling loads.

## 3 Findings

### 3.1 Energy

Energy consumption was obtained for the entire building lifetime through October 2017. The Alumni Centre started reporting the ADES hot water consumption in September 2017. Therefore, there is not sufficient data yet to include the ADES in the energy analysis. The building performance analysis only considers the two-year period between September 1, 2015 and August 31, 2017. The energy usage over this period is summarized below.

| Period | Annual Electricity (kWh/y) | Annual Natural Gas (kWh/y) | EUI - Electricity (kWh/m$^2$.year) | EUI – Natural Gas (kWh/m$^2$.year) | Heating Degree Days (oC.day) | Cooling Degree Days (oC.day) |
|---|---|---|---|---|---|---|
| Sept 1 2015 – Aug 31 2016 | 803,465 | 802 | 206.8 | 0.21 | 2294 | 78 |
| Sept 1 2016 – Aug 31 2017 | 764,142 | 1,293 | 196.7 | 0.33 | 2848 | 158 |

The electricity usage is 50% larger than the predicted value design energy model, which has an Electricity EUI of 131.5. This indicates consumption in at least one area is significantly larger than predicted. Further analysis is shown in the Building Performance Indicators table in Appendix A

## 3.2 Water

Water consumption was obtained for the entire building lifetime through October 2017. The building performance analysis however only considers the two-year period between September 1, 2015 and August 31, 2017 to align with the energy analysis shown in Section 3.1. The water usage over this period is summarized below.

| Period | Annual Water Consumption (m$^3$/y) | WUI (m$^3$/m$^2$.year) |
|---|---|---|
| Sept 1 2015 – Aug 31 2016 | 17.9 | 0.0046 |
| Sept 1 2016 – Aug 31 2017 | 24.4 | 0.0063 |

The water usage index (WUI) is significantly lower than the predicted WUI of 0.088. A reduction this significant suggests that perhaps the reported consumption does not capture all water usage in the building or the design model was based on incorrect assumptions. Further details and analysis are given in the Building Performance Indicators table in Appendix A

## 3.3 Indoor Environmental Quality

A building occupant survey was completed to assess Indoor Environmental Quality. The survey was open between November 14, 2017 and December 2, 2017. A total of 41 completed responses were received. Where applicable, 'Other' responses that were provided are compiled in Appendix B

Demographics for the respondents are given below.

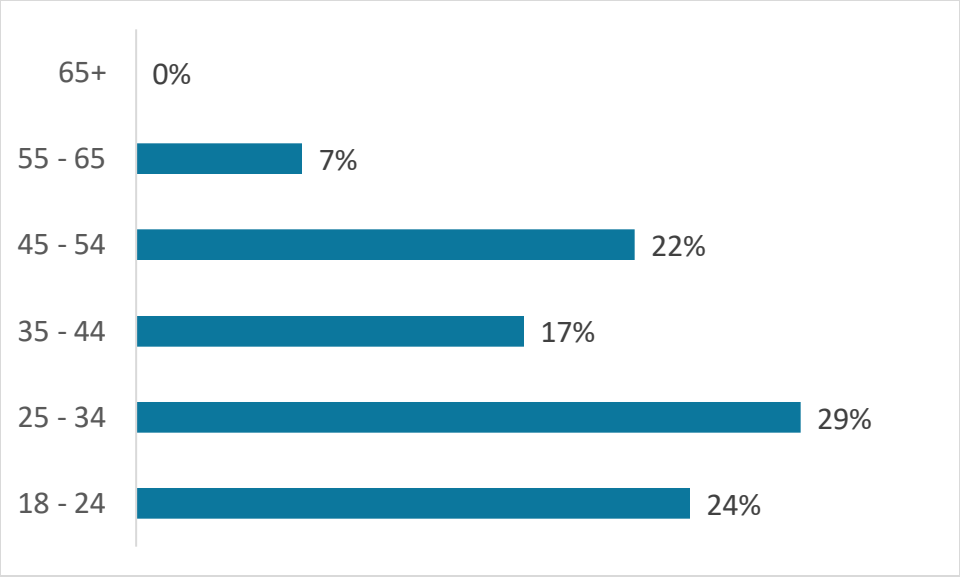


***Figure 3-1: Building Occupant Survey Respondent Ages (N=41)***

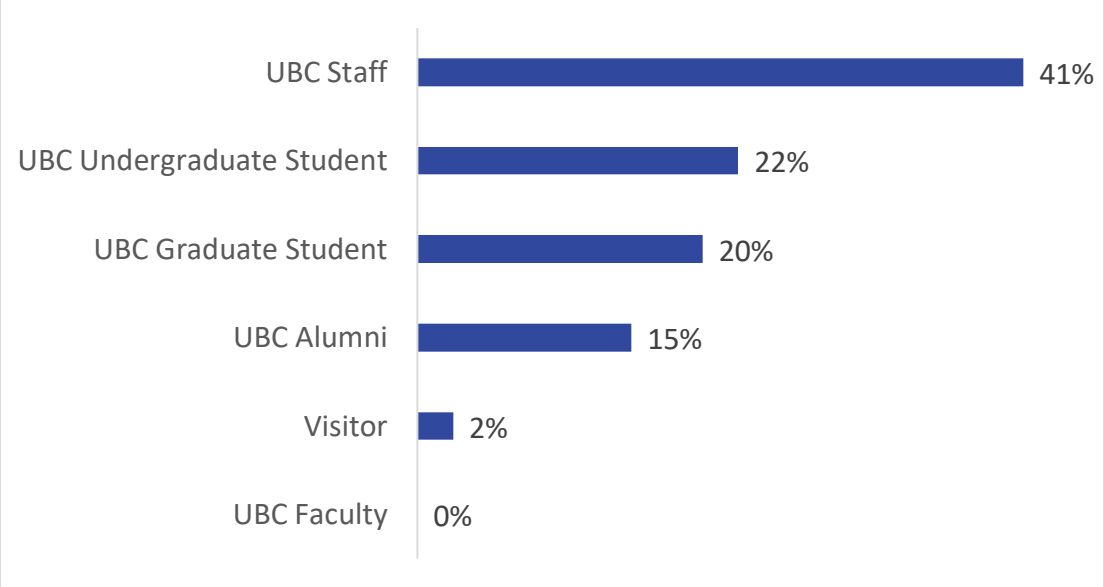


***Figure 3-2: Building Occupant Survey Respondent Role (N=41)***

44% of the survey respondents work in the Alumni Centre, 37% full-time staff and 7% part-time staff. Figure 3-3 below further breaks down where these Alumni Centre employees work. Thirteen Alumni UBC staff responded, which is a 37% response rate for this group.

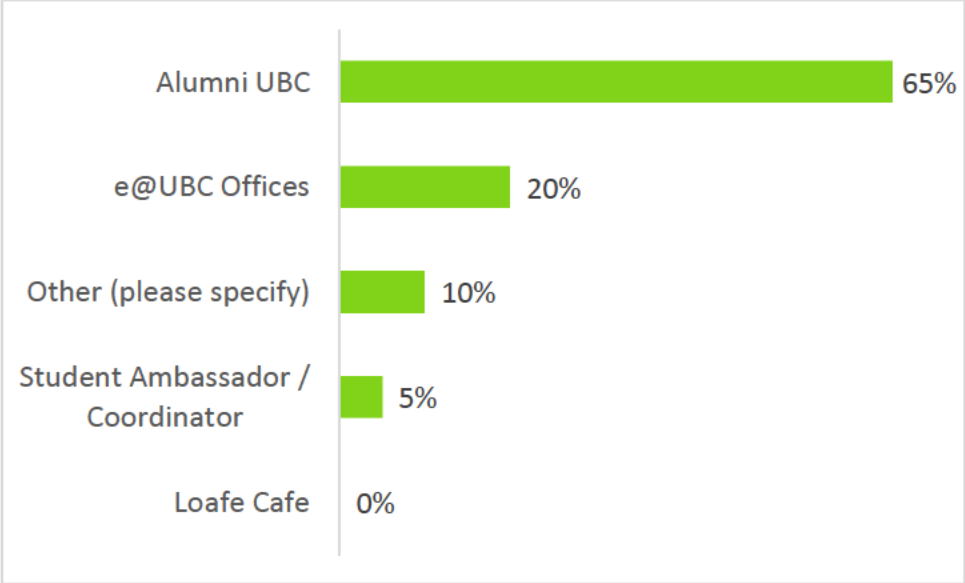


***Figure 3-3: Alumni Centre Employee Response Distribution (N=20)***

Figure 3-4 below gives a high-level overview of occupant satisfaction over a range of indoor environment factors. This chart shows occupants are predominately satisfied with the building across the broad range of metrics surveyed.

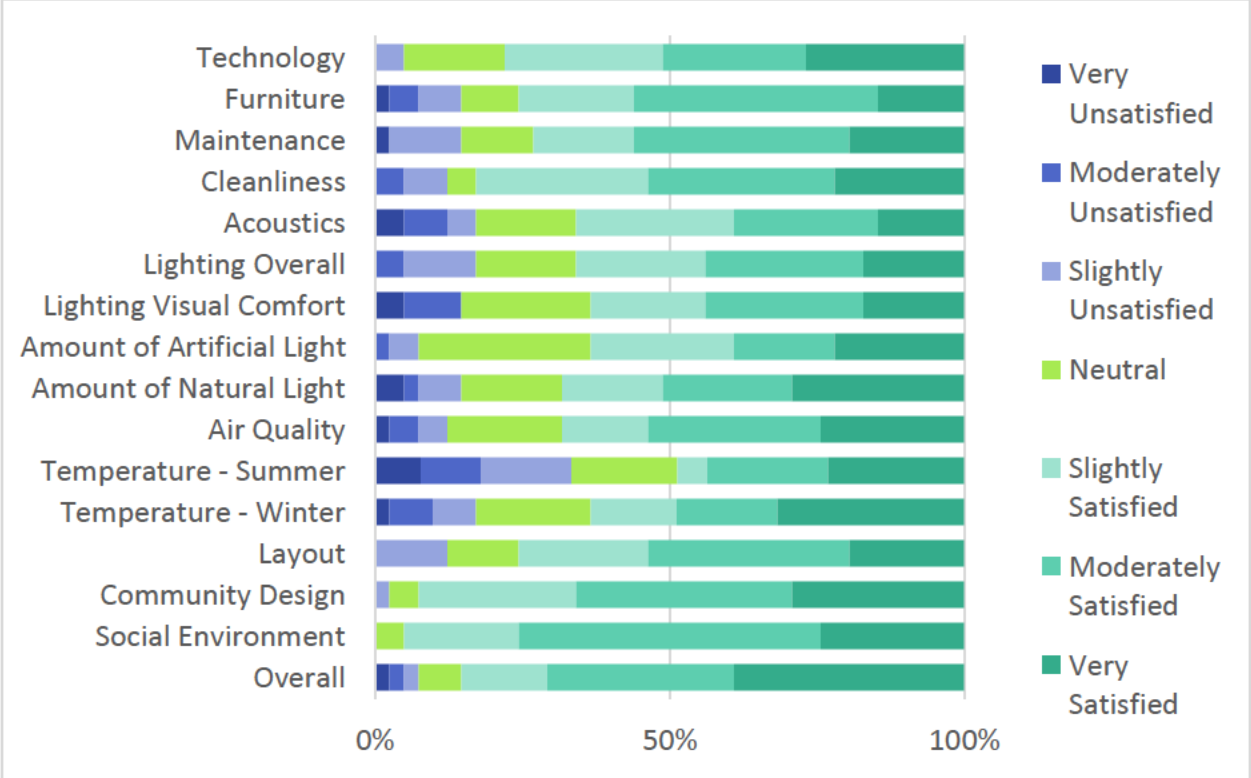


***Figure 3-4: Building Occupant Survey Satisfaction Summary (N=41)***

### 3.3.1 Overall Impressions

The figures below highlight how the building occupant survey respondents use the space.

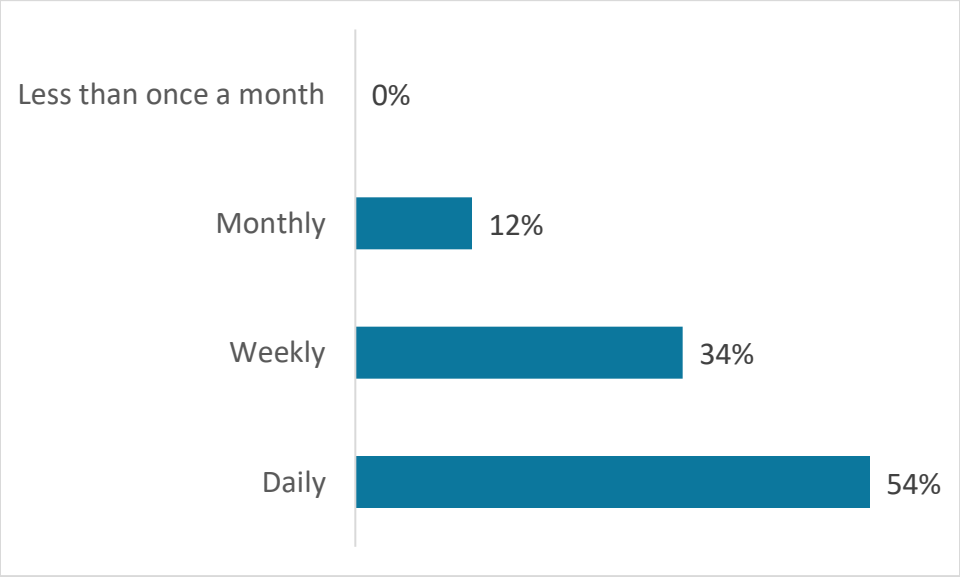


***Figure 3-5: Frequency of Visitation (N=41)***

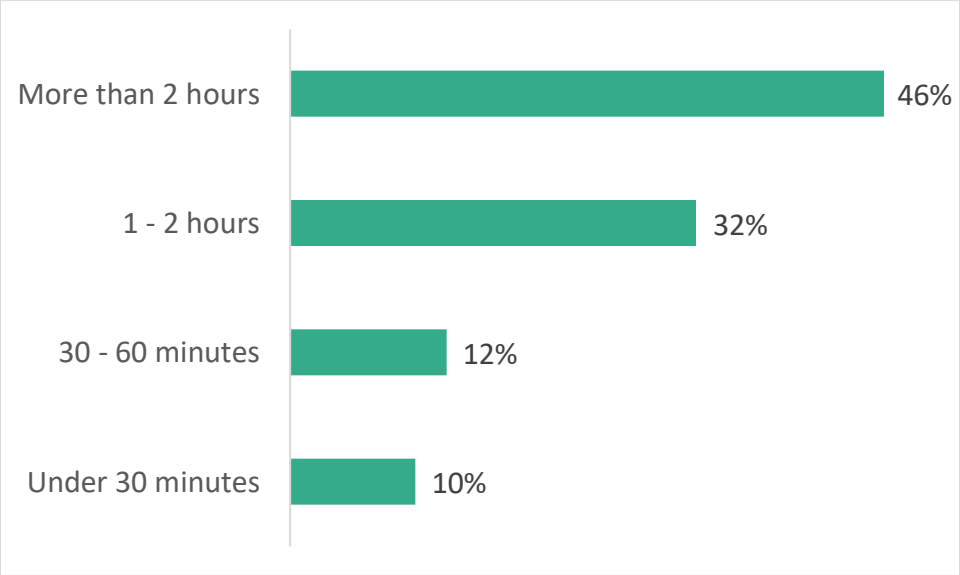


***Figure 3-6: Typical Visit Length (N=41)***

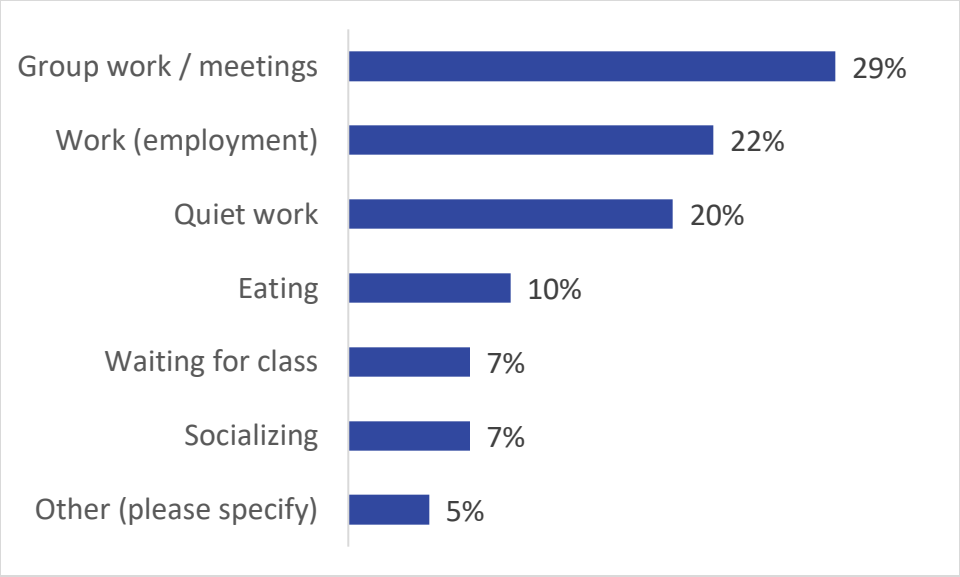


***Figure 3-7: Typical Activity within Space (N=41)***

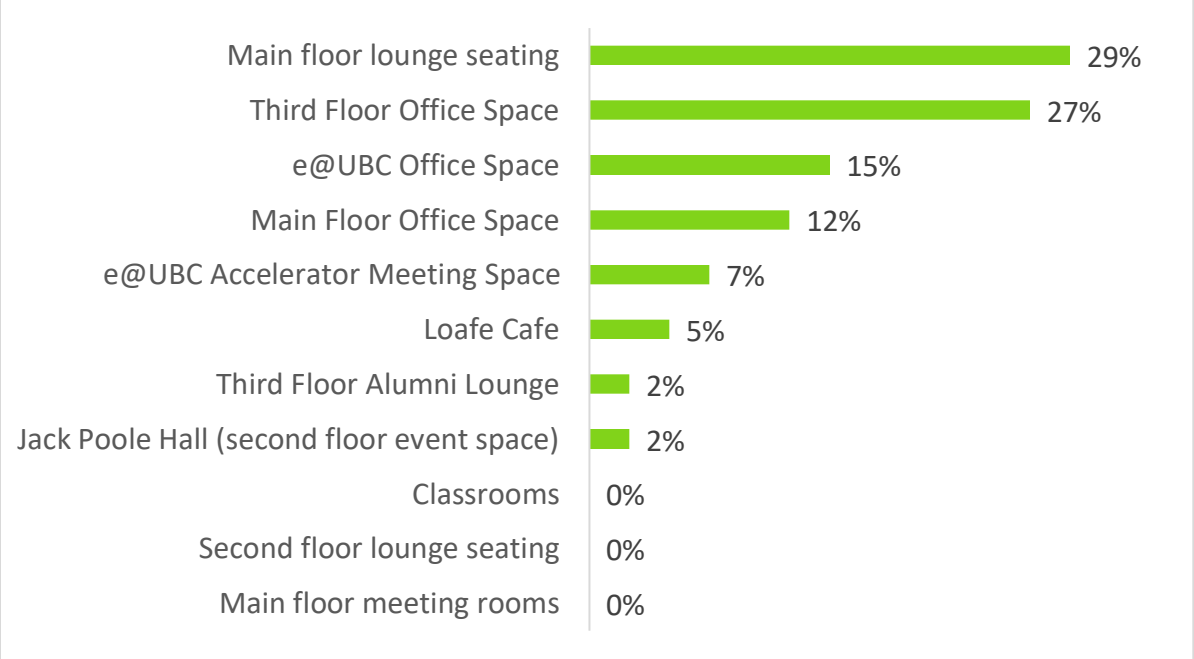


***Figure 3-8: Most Frequently Used Space (N=41)***

The overall building satisfaction levels are given in Figure 3-9 below. The respondents who reported some level of dissatisfaction attributed this to the physical environment (ex. temperature, air quality, lighting, noise, cleanliness).

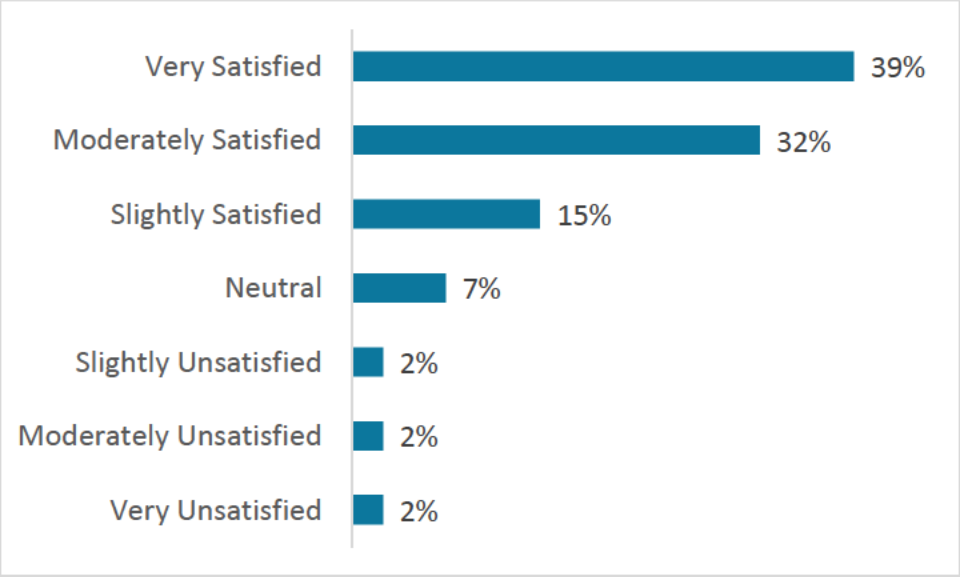


***Figure 3-9: Overall Building Satisfaction (N=41)***

### 3.3.2 Social Environment & Community Design

Survey respondents feel a strong sense of stewardship towards the building (90%) and reported feeling safe in the building (95%). Figure 3-10 below indicates if respondents agree that the building offers adequate space to socialize, assemble, or collaborate.

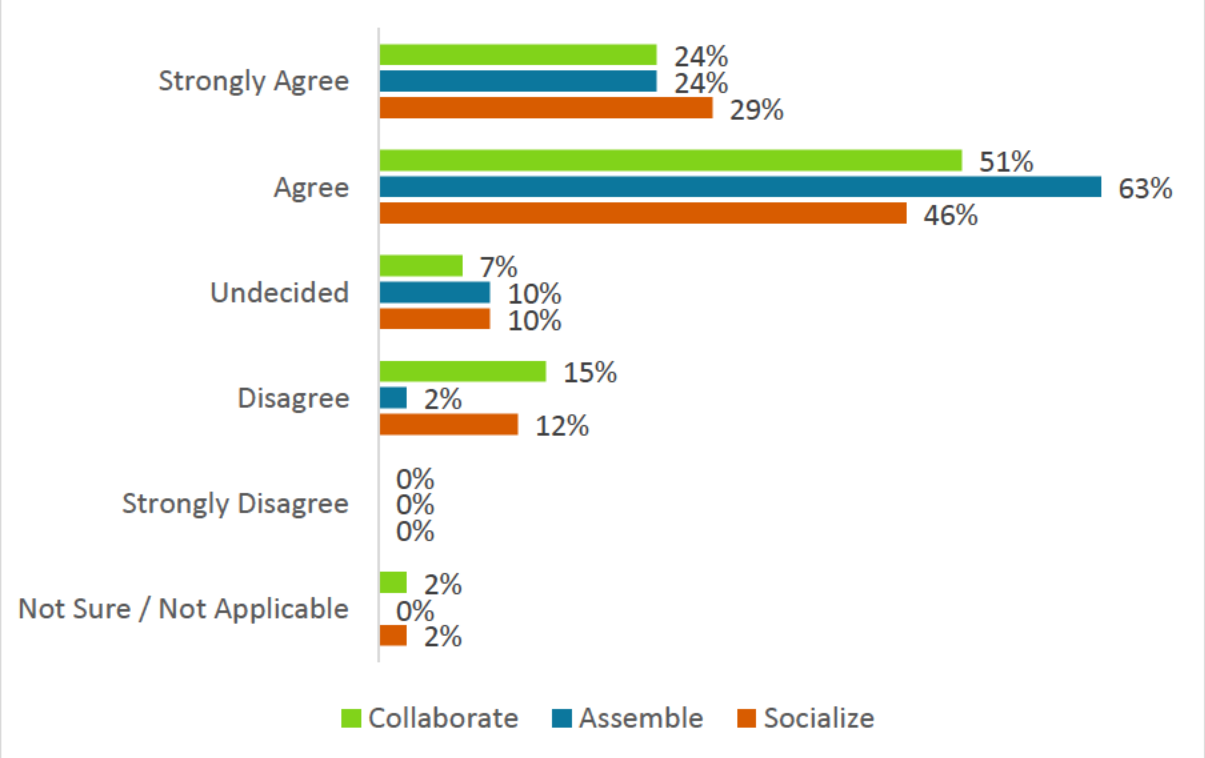


***Figure 3-10: Functions Building Offers Adequate Space For (N=41)***

The building social and community satisfaction levels are given in Figure 3-11 below.

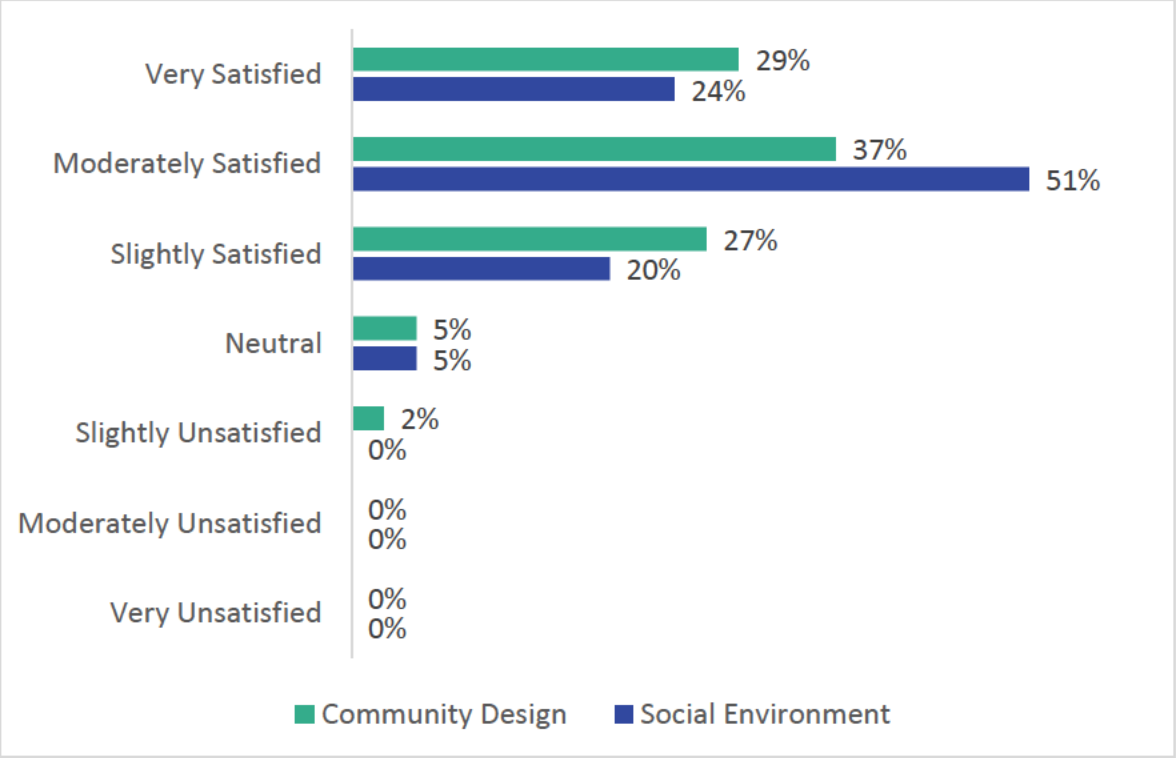


***Figure 3-11: Building Social & Community Satisfaction (N=41)***

Only one respondent indicated they were slightly unsatisfied with the community design. The following reasons were given to explain this response:

- Insufficient public art
- Insufficient indoor gathering spaces
- Barriers to social cohesion programming (cost/availability)

### 3.3.3 Layout

The building layout satisfaction levels are given in Figure 3-12 below.

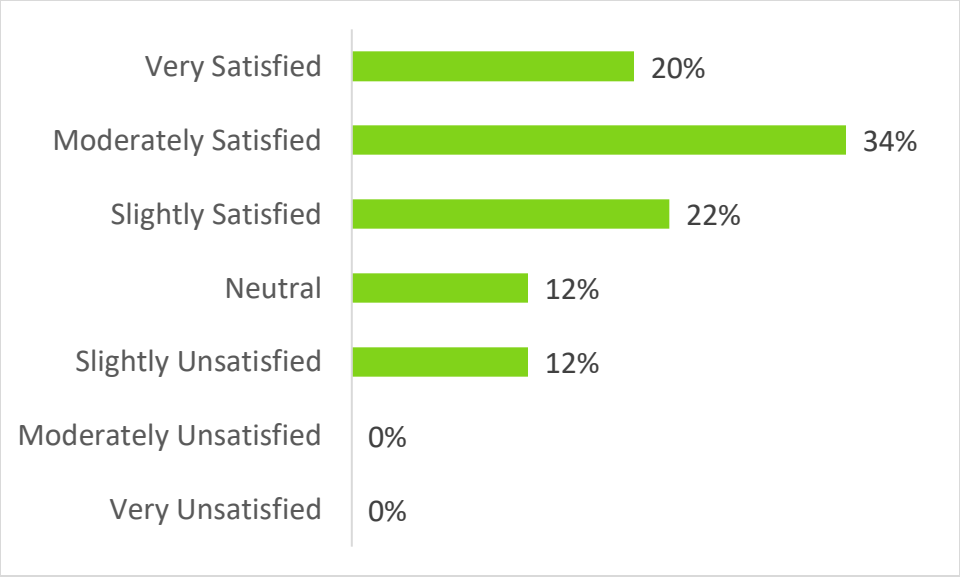


***Figure 3-12: Building Layout Satisfaction (N=41)***

The factors contributing to dissatisfactory responses are summarized in Figure 3-13 below. NOTE: Respondents could choose as many responses as applied.

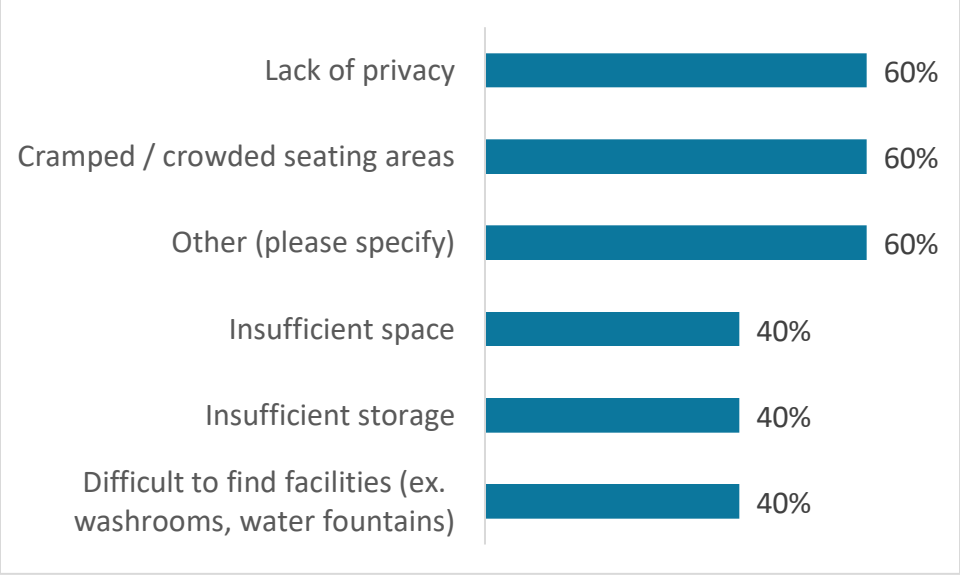


***Figure 3-13: Factors Contributing to Layout Dissatisfaction (N=5)***

### 3.3.4 Thermal Comfort

Most respondents (78%) could not or did not know if they could control the temperature of the space. For the 22% indicating they have control, Figure 3-14 below shows how frequently they do control the temperature with a variety of instruments (The remaining responses were 'Not Applicable', which are not shown in the figure below).

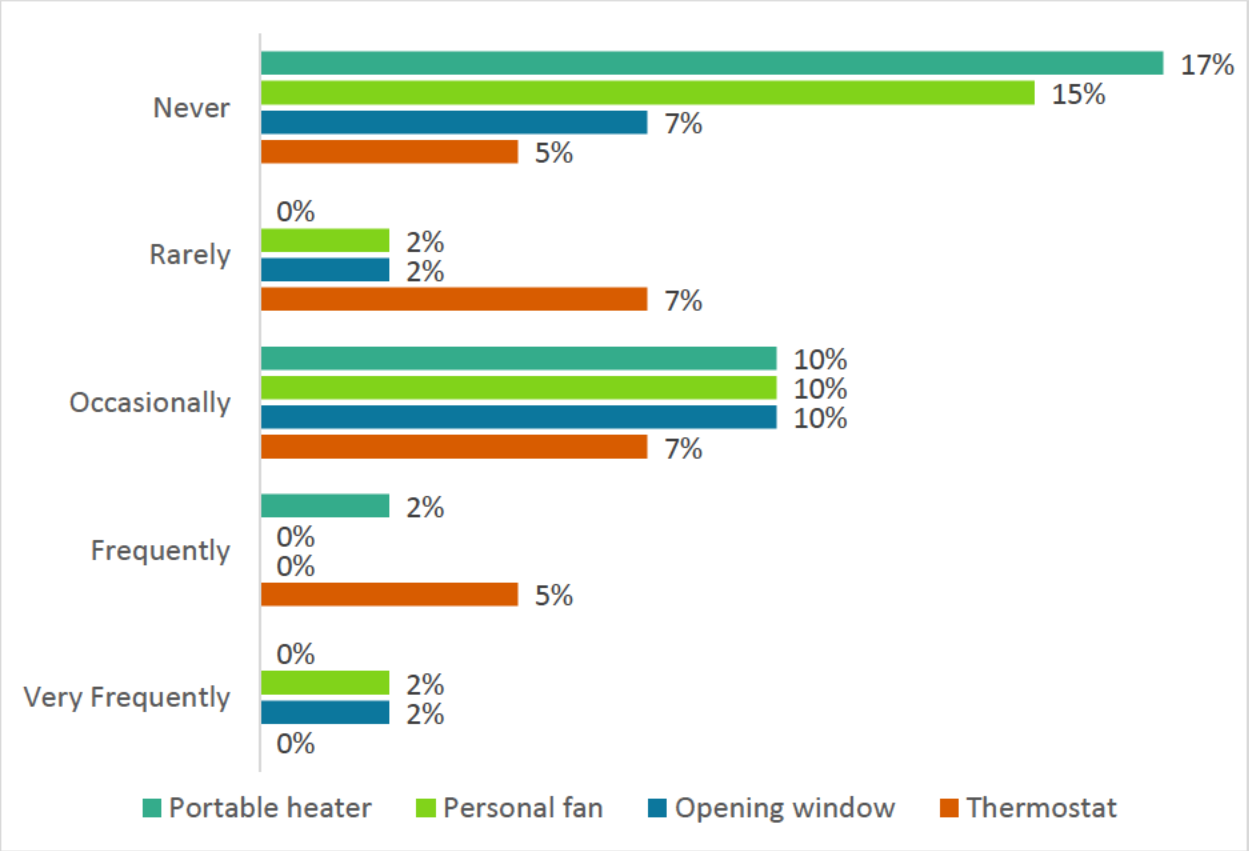


***Figure 3-14: Frequency of Temperature Control (N=41)***

Figure 3-15 and Figure 3-16 below highlight some key thermal observations.

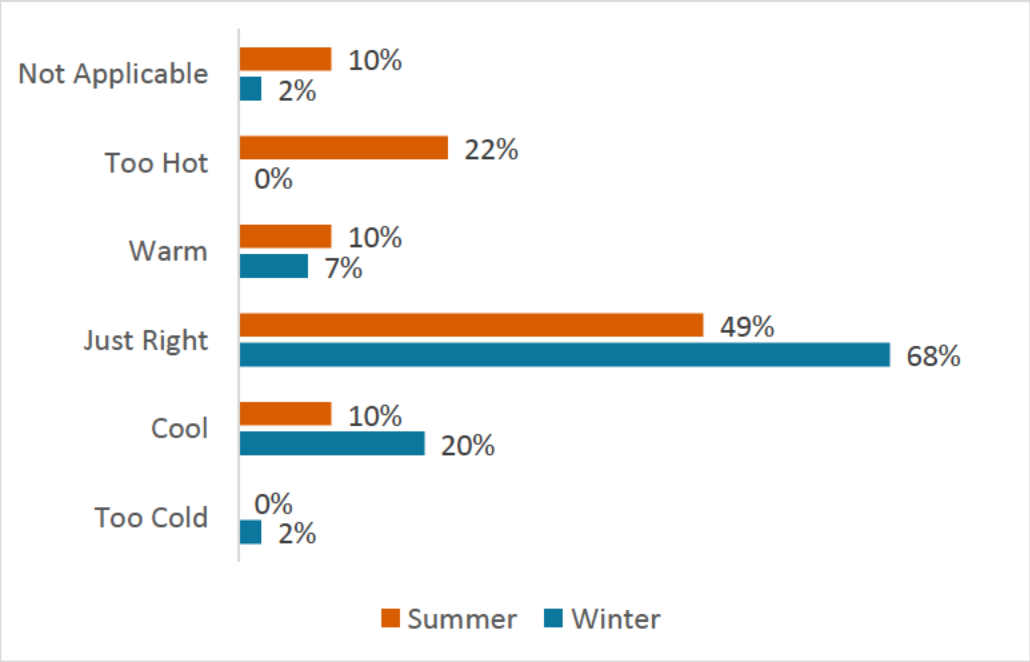


***Figure 3-15: Occupant Seasonal Temperature Description (N=41)***

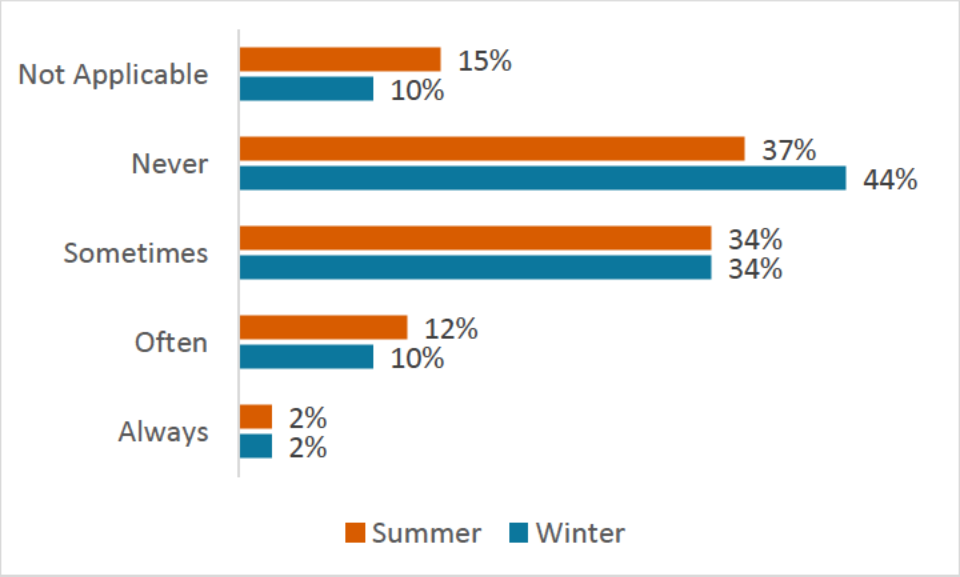


***Figure 3-16: Rapid or Frequent Temperature Change Occurrences (N=41)***

The building thermal comfort satisfaction levels are given in Figure 3-17 below. The spike in summer dissatisfaction ratings reflects the ASHP failure that the building experienced (see Section 2.6).

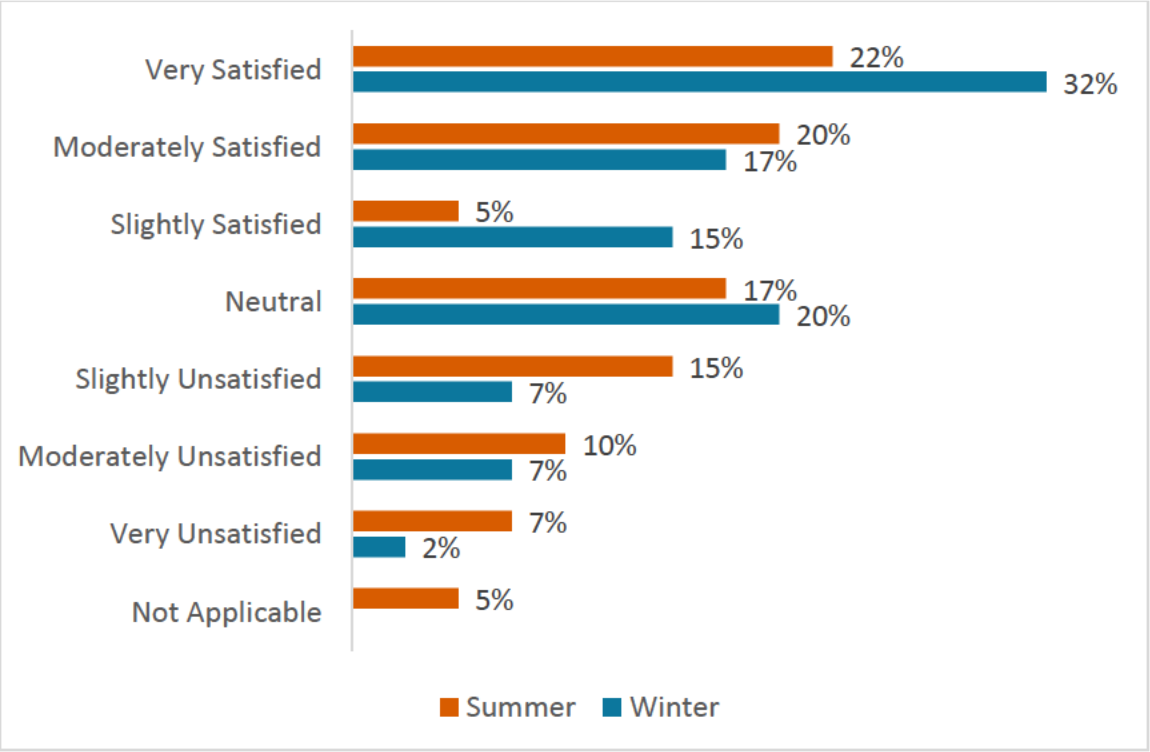


***Figure 3-17: Building Thermal Comfort Satisfaction (N=41)***

The factors contributing to dissatisfactory responses are summarized in Figure 3-18 below. NOTE: Respondents could choose as many responses as applied.

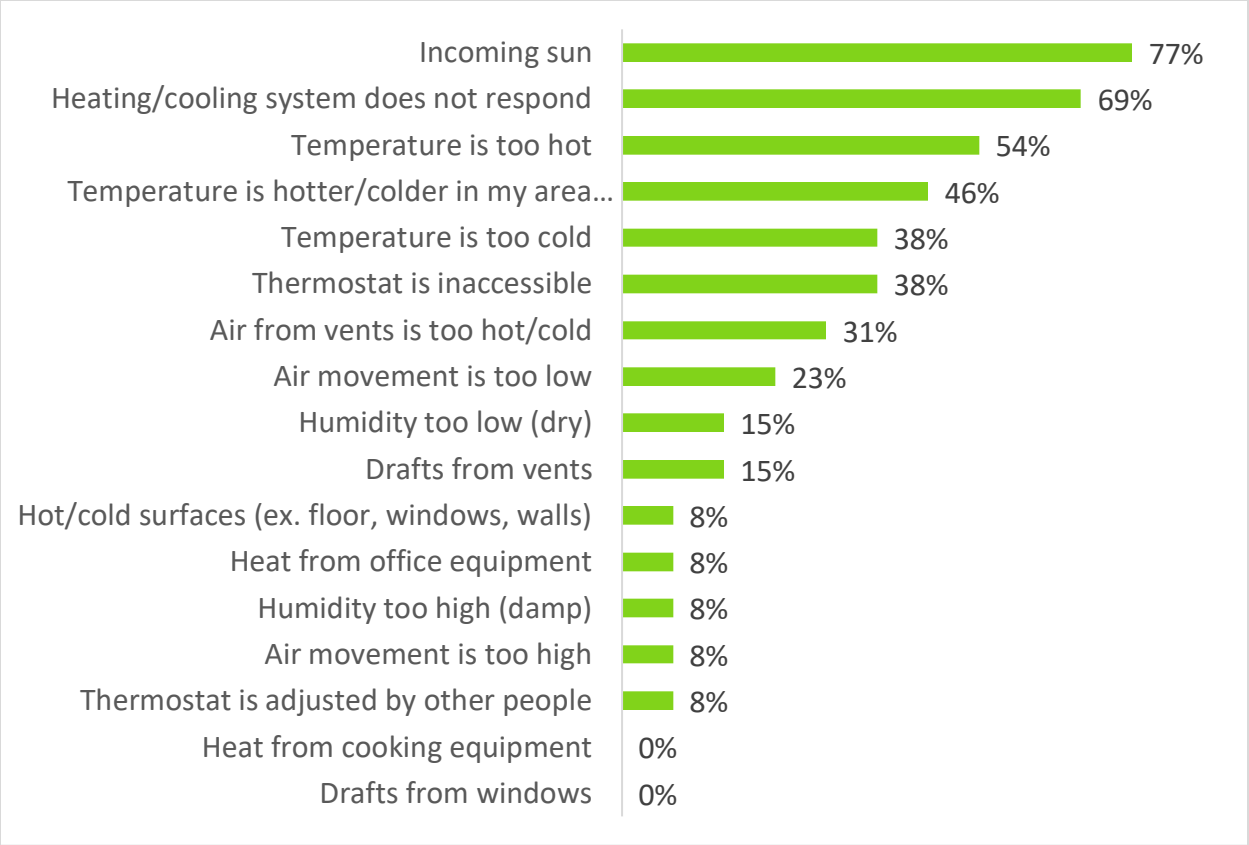


***Figure 3-18: Factors Contributing to Temperature Dissatisfaction (N=13)***

### 3.3.5 Air Quality

The building air quality satisfaction levels are given in Figure 3-19 below.

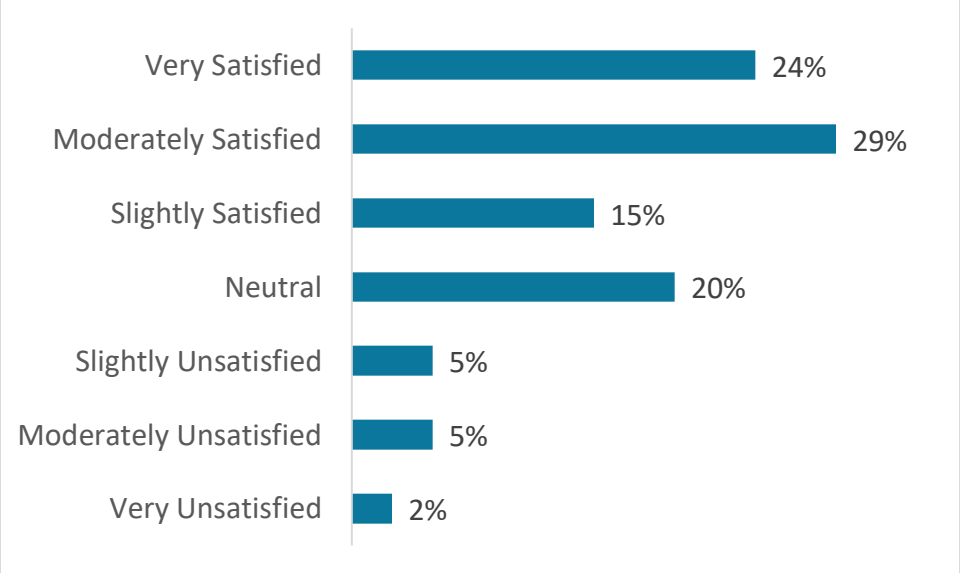


***Figure 3-19: Building Air Quality Satisfaction (N=41)***

The factors contributing to dissatisfactory responses are summarized in Figure 3-20 below. NOTE: Respondents could choose as many responses as applied.

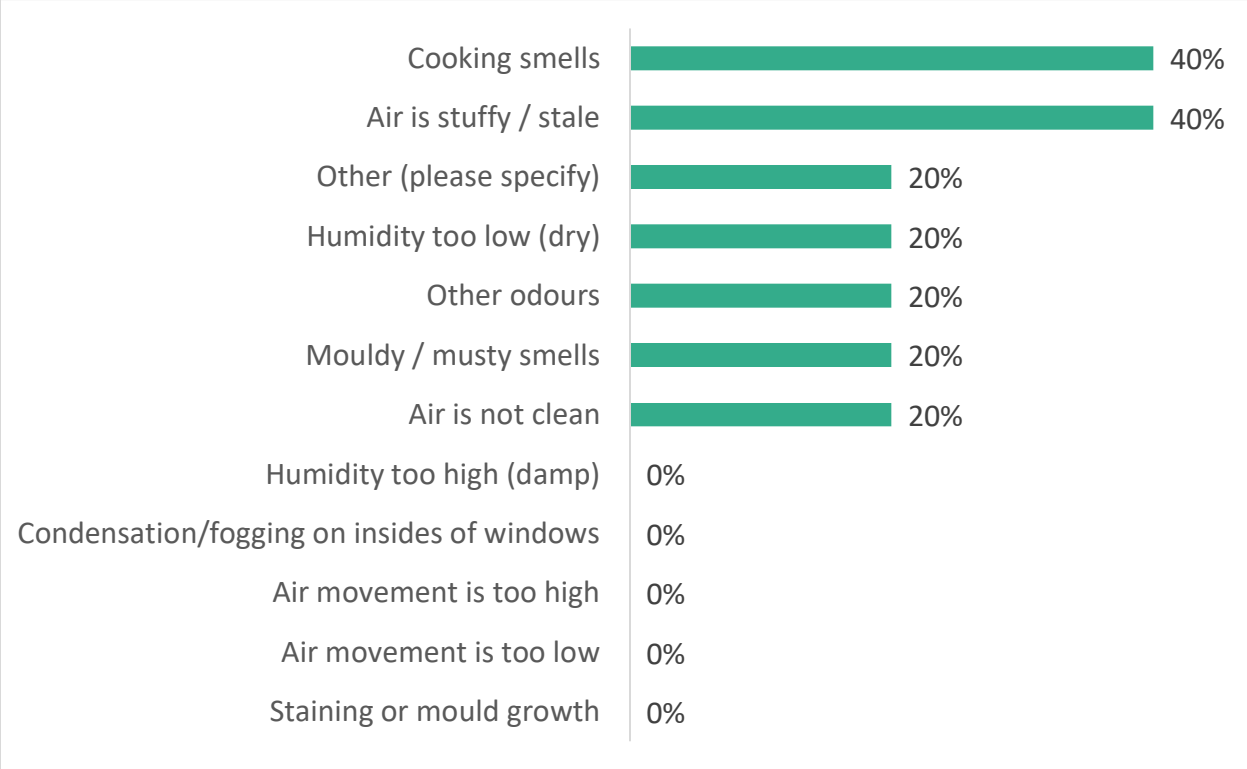


***Figure 3-20: Factors Contributing to Air Quality Dissatisfaction (N=5)***

### 3.3.6 Lighting

Figure 3-21 below indicates the types of lighting controls accessible to the respondent.

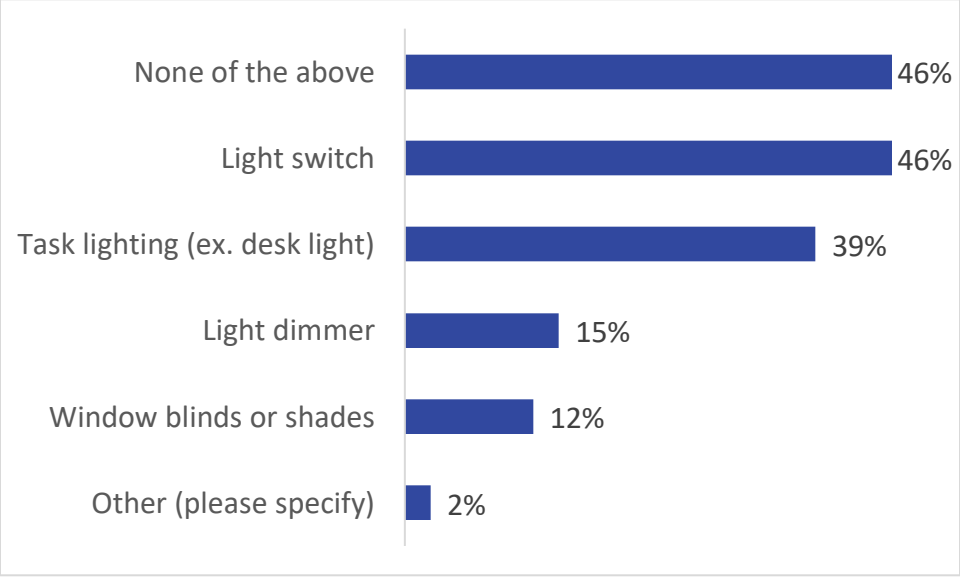


***Figure 3-21: Available Lighting Controls (N=41)***

The building lighting satisfaction levels are given in Figure 3-22 below.

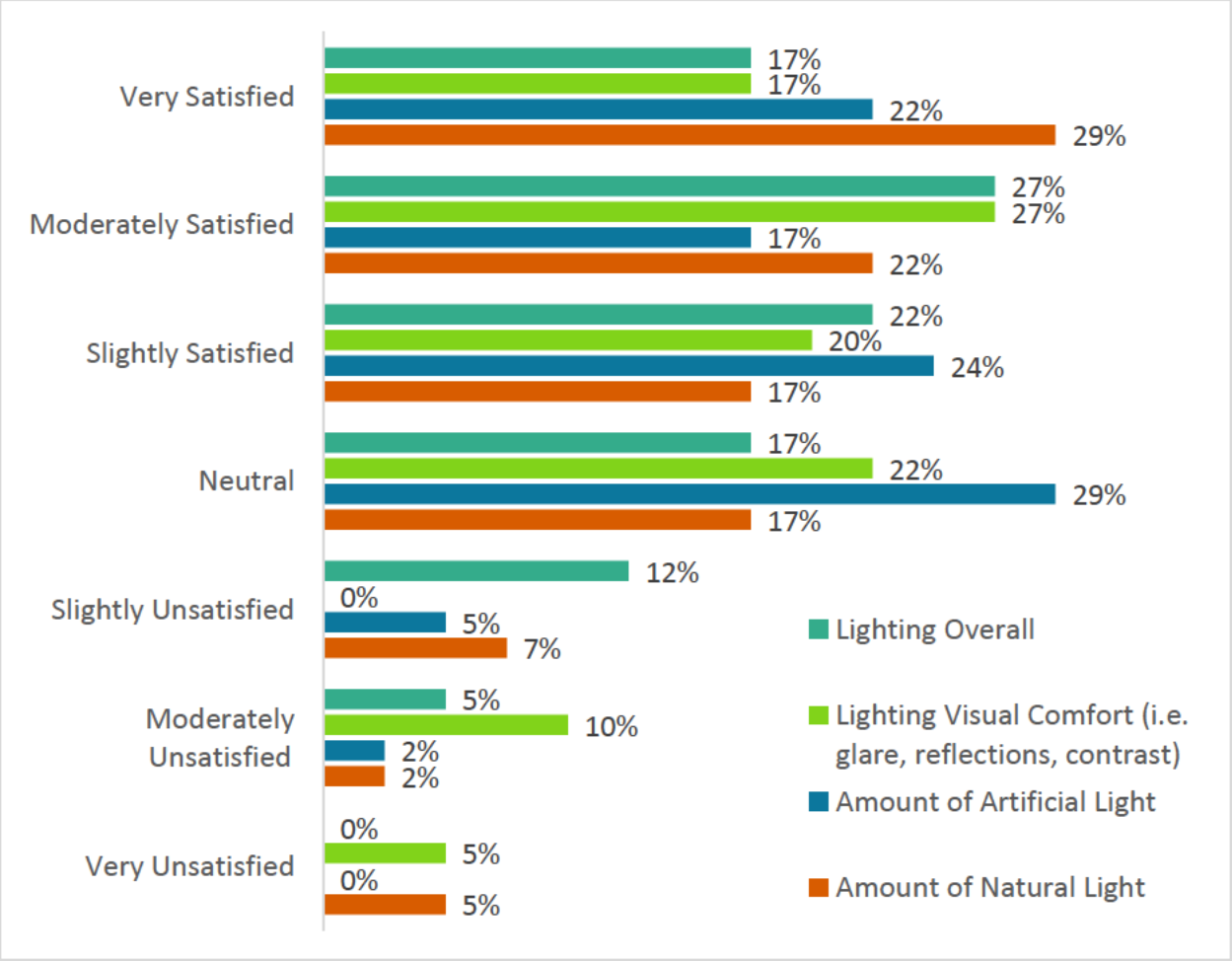


***Figure 3-22: Building Lighting Satisfaction (N=41)***

The factors contributing to dissatisfactory responses are summarized in Figure 3-23 below.
NOTE: Respondents could choose as many responses as applied.

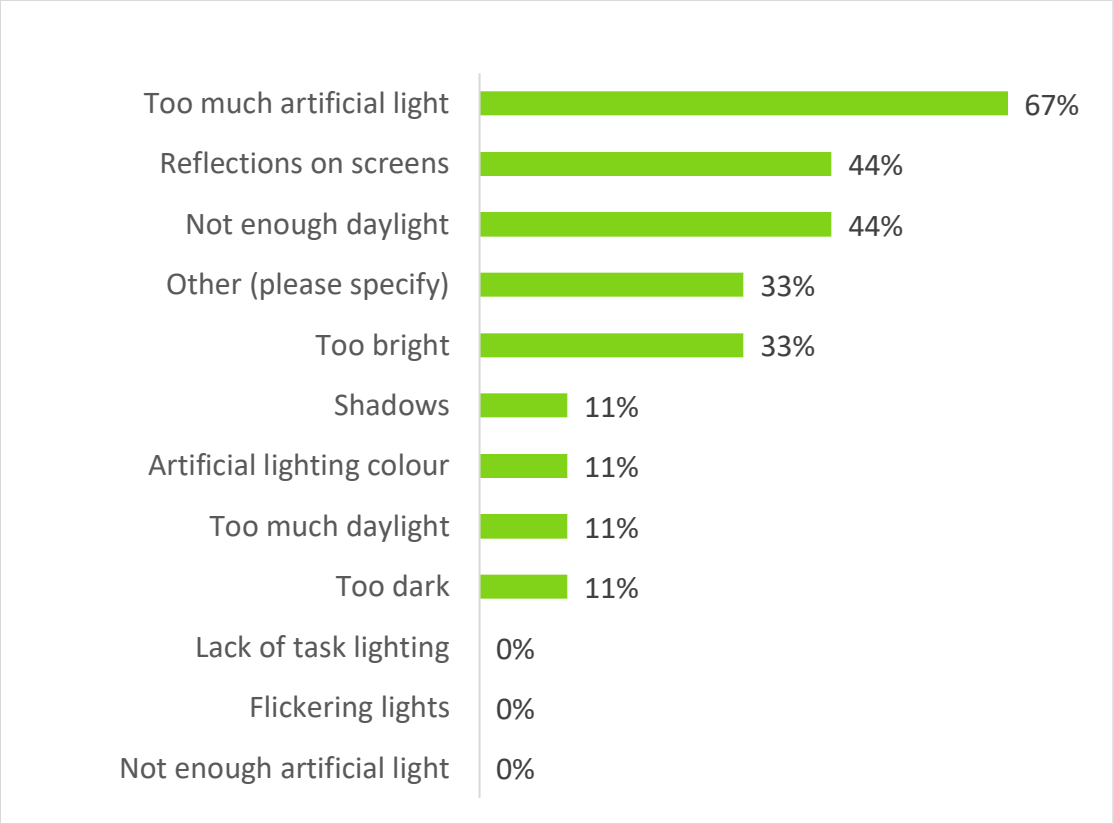


***Figure 3-23: Factors Contributing to Lighting Dissatisfaction (N=9)***

### 3.3.7 Acoustics

The building acoustics satisfaction levels are given in Figure 3-24 below.

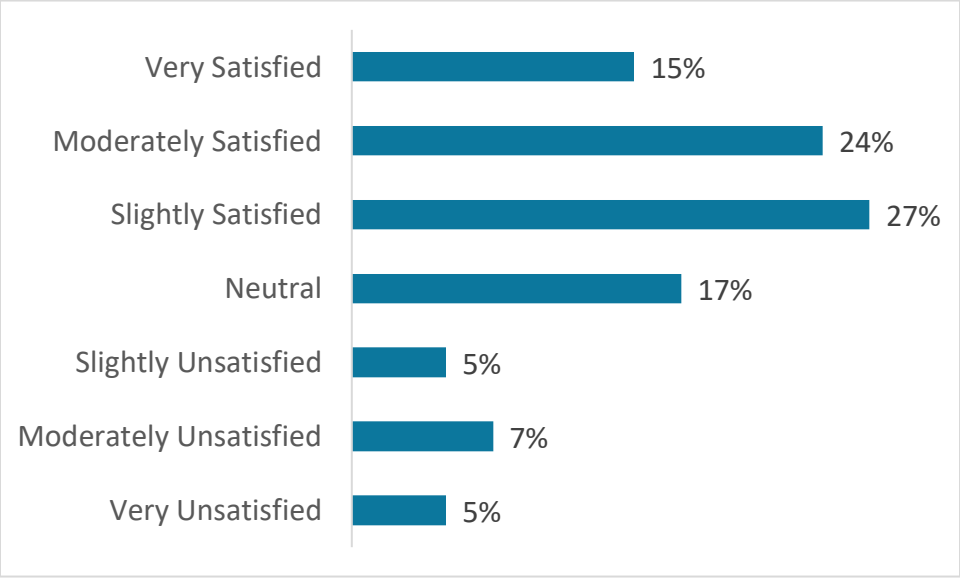


***Figure 3-24: Building Acoustic Satisfaction (N=41)***

The factors contributing to dissatisfactory responses are summarized in Figure 3-25 below.
NOTE: Respondents could choose as many responses as applied.

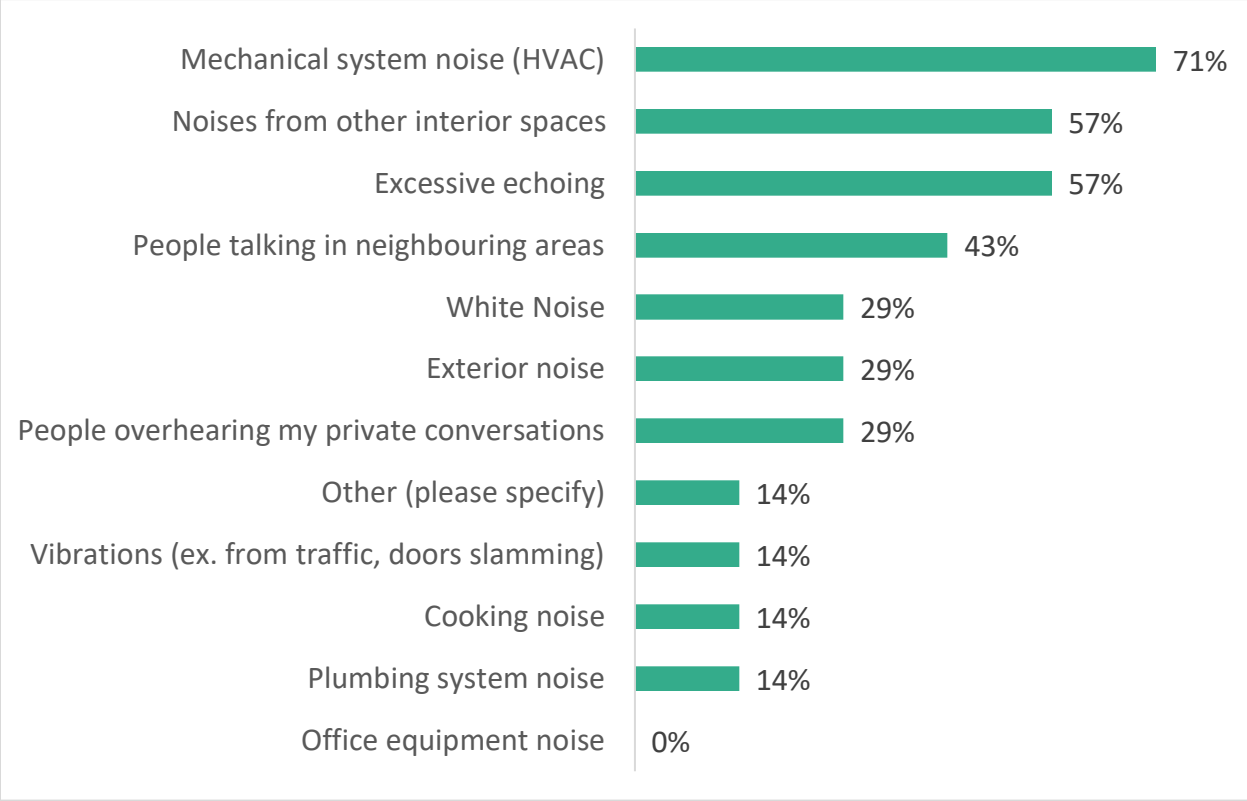


***Figure 3-25: Factors Contributing to Acoustic Dissatisfaction (N=7)***

### 3.3.8 Cleanliness & Maintenance

The building cleanliness and maintenance satisfaction levels are given in Figure 3-26 below.

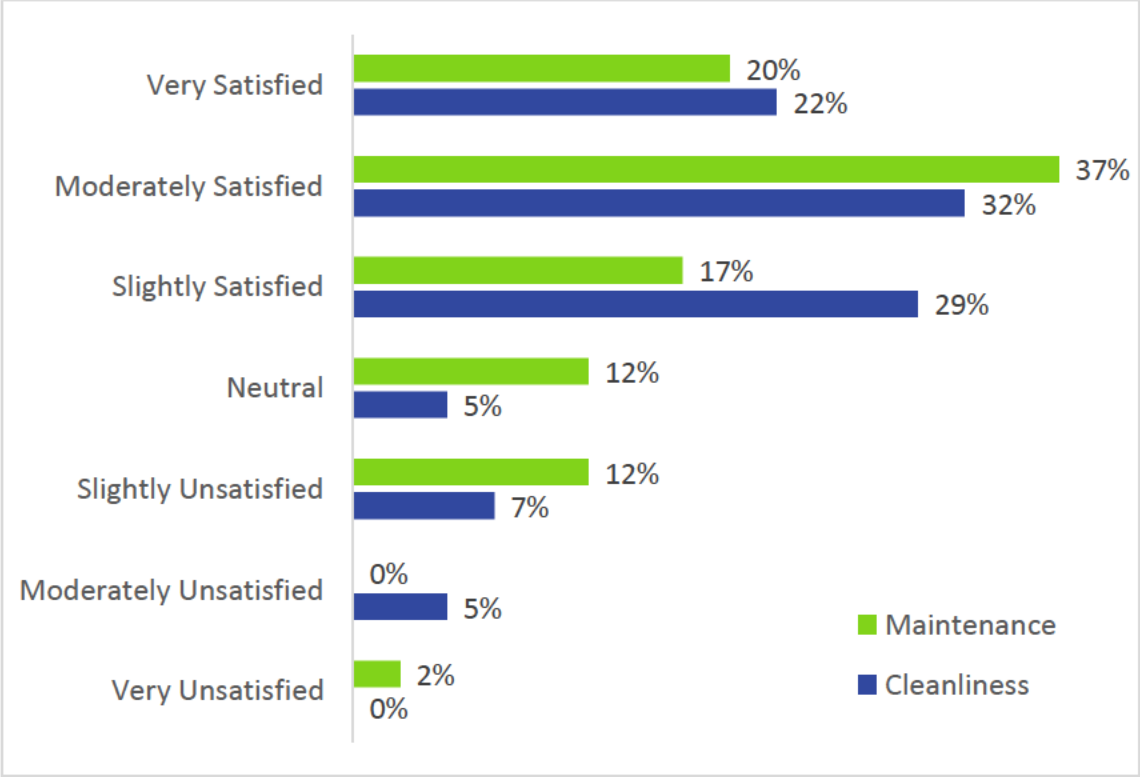


***Figure 3-26: Building Cleanliness & Maintenance Satisfaction (N=41)***

The factors contributing to dissatisfactory responses are summarized in Figure 3-27 below. NOTE: Respondents could choose as many responses as applied.

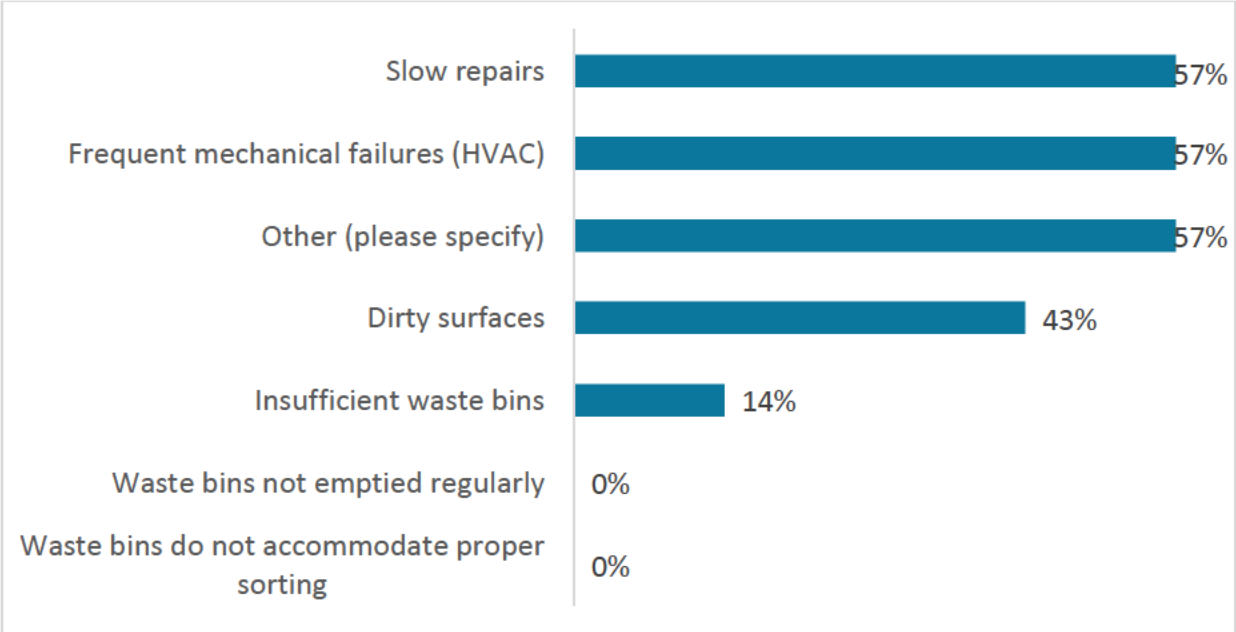


***Figure 3-27: Factors Contributing to Cleanliness & Maintenance Dissatisfaction (N=7)***

### 3.3.9 Furnishings

The building furnishings satisfaction levels are given in Figure 3-28 below.

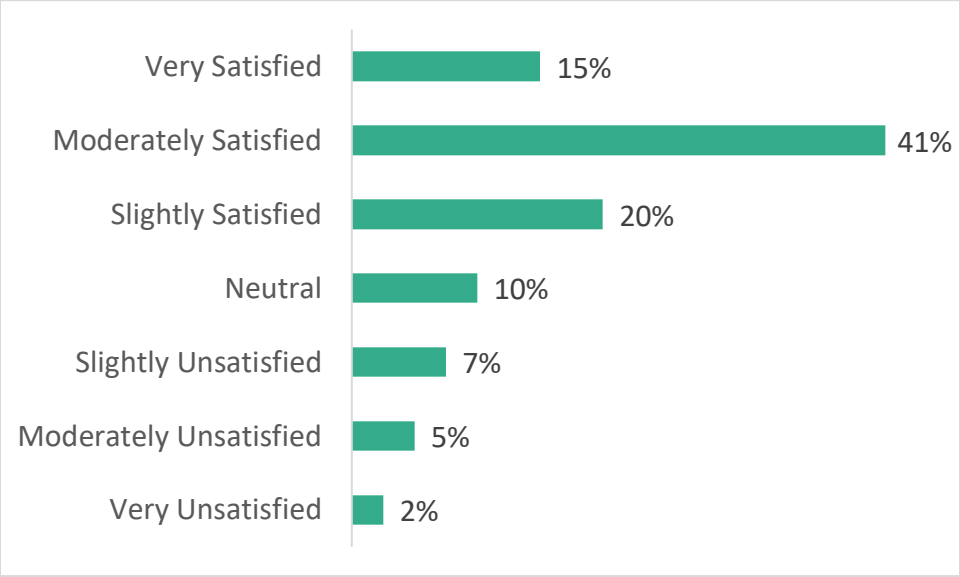


***Figure 3-28: Building Furnishings Satisfaction (N=41)***

The factors contributing to dissatisfactory responses are summarized in Figure 3-29 below.
NOTE: Respondents could choose as many responses as applied.

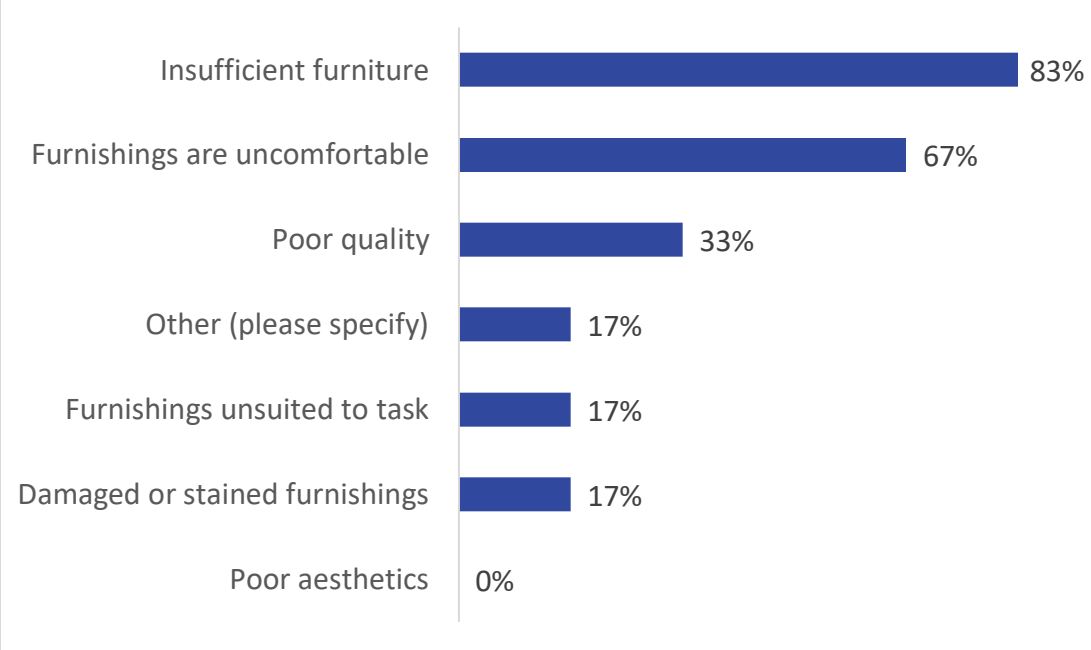


***Figure 3-29: Factors Contributing to Furnishings Dissatisfaction (N=6)***

### 3.3.10 Technology

The building technology satisfaction levels are given in Figure 3-30 below.

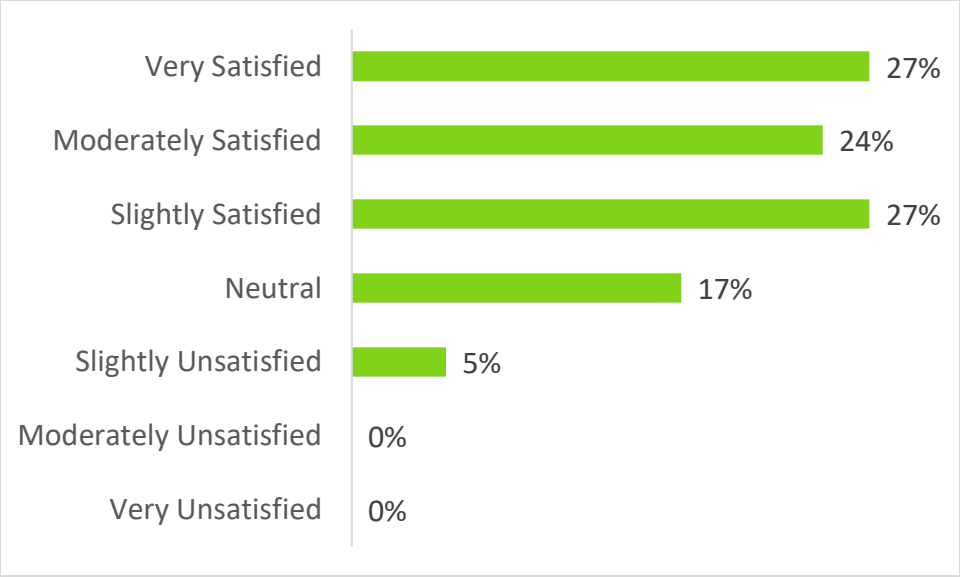


***Figure 3-30: Building Technology Satisfaction (N=41)***

The factors contributing to dissatisfactory responses are summarized in Figure 3-31 below. NOTE: Respondents could choose as many responses as applied.

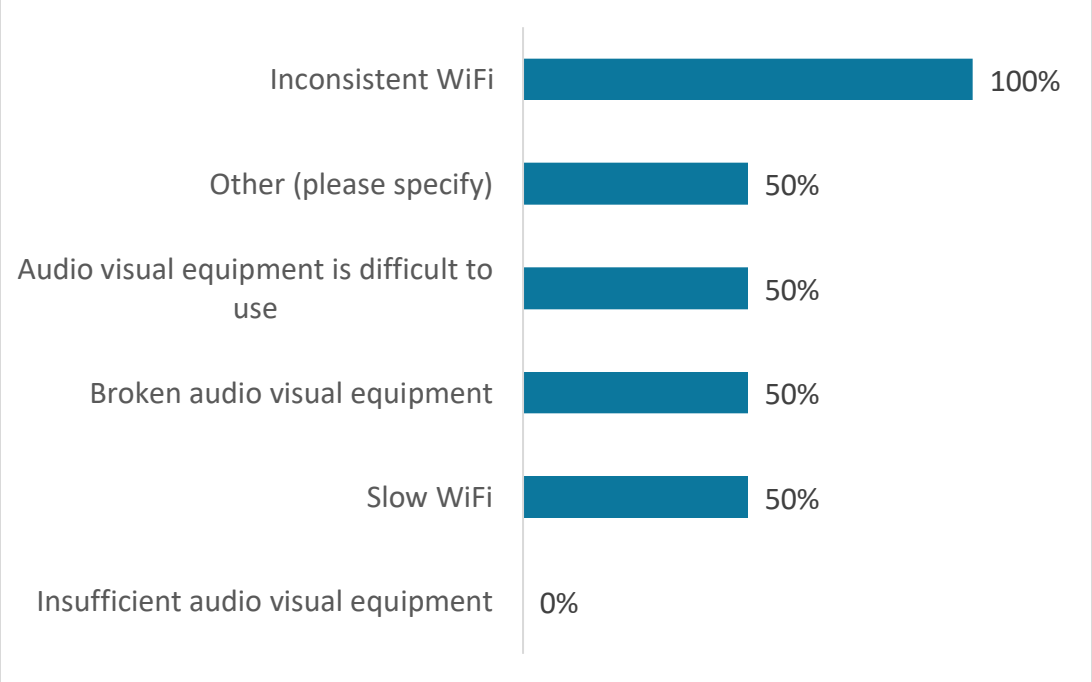


***Figure 3-31: Factors Contributing to Technology Dissatisfaction (N=2)***

## 3.4 Occupancy

Minimal occupancy information was available for the POE. There are 35 Alumni UBC staff who work in the Alumni Centre.

The Alumni Centre's LEED Submission documentation was prepared assuming an occupancy of 57 full-time equivalents and 189 transients.

## 3.5 Building Service Log

The Alumni Centre Service Log was provided by the Facilities Manager. The log provides an unbiased account of the actual service needs the building has incurred. The log compiles all service calls that have occurred since January 2016. A total of 424 service requests have been made over that period. Figure 3-32 below shows the breakdown by request type.

The two most frequent request types unfortunately do not have clearly described request types (Other Maintenance Request – 48%, and Temperature Adjustment – 13%). Other Maintenance Requests comprises a very broad range of items, from HVAC equipment malfunctions, to soap dispensers falling off the wall. The 73 Customer-Funded Orange Zone items are excluded from Figure 3-32. These are requests funded by external customers, for example film production companies filming in the building, and are not considered service requests. The full list of service requests, showing request type and description, is given in Appendix C

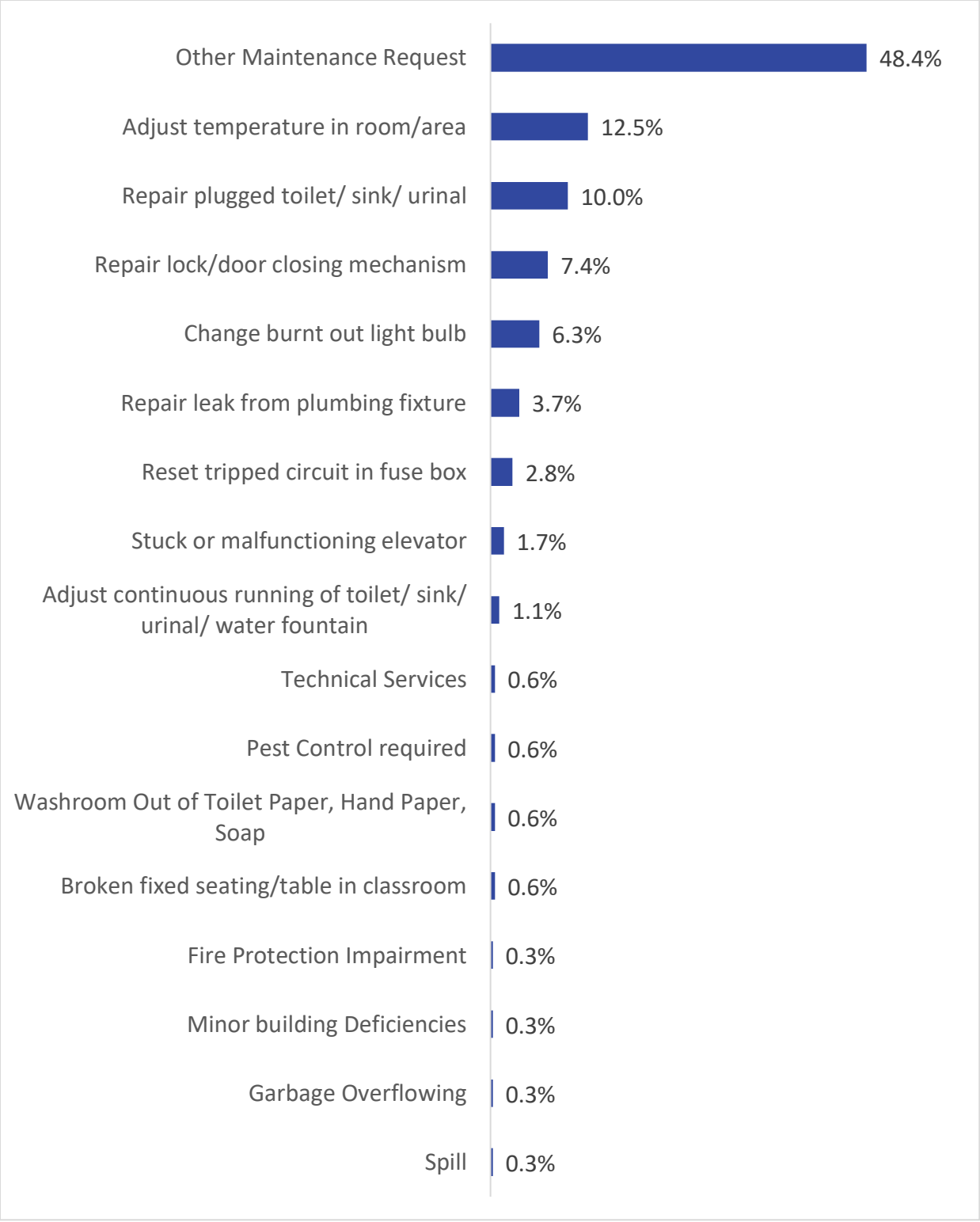


***Figure 3-32: Alumni Centre Service Log Summary (N=351)***

## 3.6 Additional Items

There are some additional items to highlight for the Alumni Centre based on discussions with the Facilities Manager. These are briefly discussed below.

The air to water heat pump (ASHP-1) failure is the only major concern the building has had. The equipment was gutted and all parts replaced to try to get it functioning. The equipment was sourced from an Italian company and all the manuals were written in Italian. The language barrier also made service calls difficult.

The main floor Alumni UBC office is equipped with a large sliding door. The door is very heavy and difficult to open. It has also frequently come off its rails. The initial handle provided with the door was a flush style and did not provide sufficient leverage to open the heavy door. The door was retrofitted with a handle-style pull.

The gas fireplace located in the main floor lounge emitted a gas odour last year. The fireplace was disassembled and the supplier replaced a part fixing the problem. Gas odour however, was noted in late October 2017 as well, which the facilities team fixed. The exhaust piping design is believed to somewhat contribute to the odours.

# 4 Recommendations

There is an overall high level of indoor environmental satisfaction with the Robert H Lee Alumni Centre. Therefore, a more detailed POE is not recommended. Additionally, as there are no specific areas that have low satisfaction ratings, no specific field measurements (ex. lumen level, carbon dioxide concentration) are recommended.

Energy consumption in the Alumni Centre is significantly higher than the predicted model. An American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Level 1 audit is recommended. The audit will provide more detailed insights into the discrepancy seen between actual and predicted energy usage.

According to the LEED Submission documentation (EA credit 5), all nine different end use items are metered. If sub-meters are available, the energy audit should compile this sub-metering information and see which specific end use items do not match their predicted energy consumption.

The building hours of operation provided by the operations manager do not match with the HVAC schedule provided by the facilities manager. The energy model used for the LEED Submission assumed Model National Energy Code for Buildings (MNECB) Schedule A occupancy for office space and MNECB Schedule C for all other spaces. A difference between the modelled operating schedule and the actual operating schedule, could partially explain why actual energy consumption is higher than predicted. As part of the recommended Energy Audit, the equipment operating schedule should be verified and compared to that in the predicted energy model.

Water consumption in the Alumni Centre is significantly lower than the predicted model. A closer analysis of the predicted water usage given in the LEED Submission documents is recommended to understand if the prediction is based on accurate data. Additionally, the

reported actual water consumption data should be confirmed to ensure that it includes all building water uses.

# Appendix A Building Performance Indicators

| No. | Performance Indicator | Reference Standard | Predicted Performance | Actual Operational Performance | % Difference (Actual vs. Reference) | % Difference (Actual vs. Predicted) | Units | Notes |
|---|---|---|---|---|---|---|---|---|
| **E: Energy & Emissions** | | | | | | | | |
| E1 | Total delivered electricity intensity | 166.3 | 131.5 | 196.7 | 18% | 50% | kWh/$m^2$ year | Source LEED Submission Documents (Energy Model - |
| E2 | Total delivered district energy system thermal energy intensity | N/A | N/A | | - | - | kWh/$m^2$ year | |
| E3 | Total delivered fossil fuel energy intensity | 185 | 0 | 0.33 | -100% | - | kWh/$m^2$ year | |
| E4 | Total delivered other energy | N/A | N/A | N/A | - | - | kWh/$m^2$ year | |
| E5 | On-site renewable energy generated | N/A | N/A | N/A | - | - | kWh/$m^2$ year | |
| E6 | Building energy use intensity (E1 + E2 + E3 + E4 + E5 | 351.3 | 131.5 | 197.0 | -44% | 50% | kWh/$m^2$ year | |
| E7 | Net delivered energy use intensity (E6 - E5 | 351.3 | 131.5 | 197.0 | -44% | 50% | kWh/$m^2$ year | |
| E8 | Greenhouse Gas Emissions intensity from net delivered energy | | | | | | Tonne $CO_2$ e/$m^2$ year | |
| E9 | Energy Consumption - Lighting | 48.8 | 32.1 | 48.1 | -2% | 50% | kWh/$m^2$ year | |
| E10 | Energy Consumption - Space Heating | 182.4 | 14.9 | 22.3 | -88% | 50% | kWh/$m^2$ year | Reference standard uses natural gas for heating. Building studied uses electricity. |
| E11 | Energy Consumption - Space Cooling | 20.5 | 16 | 24.0 | 17% | 50% | kWh/$m^2$ year | |
| E12 | Energy Consumption - Pumps | 27.5 | 5.1 | 7.6 | -72% | 50% | kWh/$m^2$ year | |
| E13 | Energy Consumption - Fans | 42.3 | 36.7 | 54.9 | 30% | 50% | kWh/$m^2$ year | |
| E14 | Energy Consumption - Plug Loads | 0 | 0 | 0.0 | | | kWh/$m^2$ year | |
| E15 | Energy Consumption - Hot Water Heating | 2.6 | 0 | 0.0 | | | kWh/$m^2$ year | |
| E16 | Energy Consumption - Misc. Equipment | 27.2 | 26.8 | 40.1 | 48% | 50% | kWh/$m^2$ year | |
| E17 | Annual Energy Operating Cost | $ 19.15 | $ 10.25 | $ 15.23 | -20% | 49% | $CAD/$m^2$ year | |
| **W: Water** | | | | | | | | |
| W1 | Delivered potable water intensity | 0.130353411 | 0.088140026 | 0.005950093 | -95% | -93% | $m^3$ $H_2O$/$m^2$ year | Source LEED Submission Documents (LEED Letter Template - Version D, WE tabs Actual performance WUI from Skyspark (much diff from calc |
| W2 | Recycled or captured water intensity | | | | | | $m^3$ $H_2O$/$m^2$ year | |
| W3 | Water use intensity (W1 + W2 | 0.130353411 | 0.088140026 | 0.005950093 | -95% | -93% | $m^3$ $H_2O$/$m^2$ year | |
| W4 | Total water use per occupant | | | | | | $m^3$ $H_2O$/occupant year | |
| W5 | Annual Water Operating Cost | | | | | | $CAD/$m^2$ year | |
| **O: Occupancy** | | | | | | | | |
| O1 | Full-time equivalent Occupants | | 57 | | | | People/day | 50% male, 50% female |
| O2 | Full-time equivalent Transients | | 189 | | | | People/day | 50% male, 50% female |
| O3 | Total full-time equivalent occupants | | 246 | | | | People/day | 50% male, 50% female |
| O4 | Typical annual person-hours of occupancy | | | | | | Hours/year | |
| O5 | Annual occupancy intensity (O3 * O4 /1000000 | | | | | | | |
| O6 | Typical weekly operating hours | | | 114 | | | Hours/week | |
| O7 | Annual building systems operation | | | | | | Hours/year | |

# Appendix B Supplemental Occupant Satisfaction Survey Results

The specified 'Other' responses to the Building Occupant Survey are compiled below.

**Q: Do you work in the Robert H. Lee Alumni Centre? If YES, where do you work in the Robert H. Lee Alumni Centre?**

- The Calendar
- Liu

**Q: What do you typically use this space for?**

- I use it for full time work, meetings, eating, socializing, hosting events, networking.
- A bit of all of them
- Sitting in the room

**Q: What factors contribute to your dissatisfaction with the building overall?**

- None

**Q: Please list any other social environment related issues that are important to you.**

- Non-recognition for continued respectful use of this space. Always have to validate to management that I have been working here for 2 years.

**Q: What factors contribute to your dissatisfaction with the building layout?**

- lack of comfortable seating, lack of tables, open concept workspace
- No natural light in work space
- lack of natural light in the back office.

**Q: Please list any other temperature related issues that are important to you.**

- There have been no end of heating/cooling issues due to equipment failure.
- We work in the basement, it used to be either too hot or too cold but that wasn't really bothersome, what is really bad is the smell. It always smells like burnt garlic, seems like every morning they burn garlic in the building like it's a scented candle - it would be great if you could do something about the smell.
- 3rd floor meeting rooms are more often than not colder than a refrigerator while the rest of the building is usually too warm (and in summer too hot).

**Q: What factors contribute to your dissatisfaction with the building air quality?**

- strong smell of natural gas on 3rd floor when fireplace is on, horrible smells in Jack Poole Hall which seem to come and go without rhyme or reason

**Q: Please list any other air quality related issues that are important to you.**

- No access to fresh/clean air
- It smells like Garlic!

**Q: What factors contribute to your dissatisfaction with the building lighting?**

- My office has no windows, which is pretty depressing
- Glare/reflections off all the interior glass in this building is a major issue for me.
- No blackout blinds for meetings

**Q: Please list any other lighting related issues that are important to you.**

- The building brightness is completely dependent on the weather outside. When it is sunny, it is too bright, when it is cloudy it is too dark.
- No daylight in space

**Q: What factors contribute to your dissatisfaction with the building acoustics?**

- Music from Lobby sometimes intrudes in basement workspace

**Q: Please list any other acoustics related issues that are important to you.**

- Sound echos/travels extensively in the building. Conversations on first floor can be heard on the 3rd floor
- Sound travels so easily in this building. The café being an open space concept really causes lots of sound transfer. The welcome centre space is very echoey.
- The main floor is usually very noisy and sometime they turn on the piano which doesn't really help.
- Events in Koerner lounge can sometimes be very noisy

**Q: What factors contribute to your dissatisfaction with the building cleanliness and maintenance?**

- washrooms are very dirty
- Inability of maintenance team to dampen excessive ventilation noise above my desk
- Lounge areas are sometimes dirty
- 3rd floor lounges are not cleaned regularly (stains/food on tables, leftover food on tables, coffee cups, etc.), Sometimes for a couple of days...

**Q: Please list any other cleanliness and maintenance related issues that are important to you.**

- Many stains in carpets, holes in walls (unfinished from construction), furniture is worn out, the tile always looks dirty because of the material/pattern chosen

**Q: What factors contribute to your dissatisfaction with the building furnishings?**

- The double-width chairs in the public areas are nice from a design point of view, but probably the most uncomfortable chairs I have ever used.

**Q: Please list any other furnishings related issues that are important to you.**

- Building furnishings are great, the only problem is that they have not worn well. All are damaged from high use. Also not enough furniture/places to sit
- Poor ergonomics
- Comfort n availability

**Q: What factors contribute to your dissatisfaction with the building technology?**

- Lack of support for AV systems. Old machines provided for AV for meetings. Lack of comms Infrastructure

**Q: Are there any other comments you would like to share about your experience with the Robert H Lee Alumni Centre?**

- The building is beautiful but not always practical. The first floor is the only space conducive to socializing/meeting, and it is always full with nowhere to sit. This severely limits the ability for people to enjoy the centre (i.e they don't want to eat at loafe because there's nowhere to sit on the first floor). It's a building where you pass through, or stay for only a few minutes, unless you're attending a private event.
- It is a beautiful building that gets a lot of use.
- Can we put up some whiteboards in the rooms downstairs? That would be really helpful to the teams working in the e@UBC office space
- This building has recently become my favourite place to study. The piano is honestly my favourite part, it helps me focus and relax, and creates a really welcoming atmosphere. If the acoustics were slightly different in the building such that we would be able to hear the piano in the cafe that would be nice but that's okay! Overall, I love this space, everyone is always very kind, and the ambiance is greate and allows for me to productive without being stressed. If the Loafe Cafe would allow for UBC card so I can stop spending all my real money on cappuccinos that would be greate :)
- I LOVE the self-playing piano; it is one of the best parts of the Alumni Centre!
- Yes, would be a great place to gather professional networking events with graduate from different departments like Liu, MBA  with companies that want to hire UBC students!
- Could use more seating but I understand that it's not intended for as much individual work spaces Could be more lenient about ppl sitting on the floor if they wish to (it often feels better on my back)
- You should have more chairs in the lounge area. Also, when they have Toons at Noon, the musician is supposed to talk about the piece, and usually I cant hear what they are saying.
- There should be more outlets to plug into in the lounge areas
- There is limited space for socializing. This is unfortunate because in my opinion it is the nicest building on campus and one which I would like to be able to have more meetings in.
- Lack of desktop support for staff and visitors. Inconsistent support from IT for desktop and AV
- As an Alumni who came to this space before I was a Masters student I really enjoy this space a lot. Especially the piano and natural light. However, I could never actually use it, especially the seating area near the piano, as there where so many students using the space to study. It would be really nice if there was some available seating where Alumni could meet and sit down to talk that was not taken up with people on their laptops.

- The furniture is very comfortable. The building is inviting. Our department has used the building for catered luncheons and I found it very luxurious and well maintained.

# Appendix C Building Service Requests List

| Request Type | Subject |
|---|---|
| MROT -- Other -- | AH Call 1/7 RHLAC Fire bells sounding |
| MR03 - Repair lock/door closing mechanism | Alumni Ctr south entrance automatic door stuck open |
| MROT -- Other -- | AH Jan 11 Alumni Ctr 03 trouble hasn't reset |
| MR02 - Adjust temperature in room/area | Alumni ctr room 221/223 raise temp by 2 degrees URGENT |
| MROT -- Other -- | AH Jan 10 Alumni 05 trouble |
| MR02 - Adjust temperature in room/area | URGENT FOR 1/12/2016 - need temp up to 24 degrees |
| CFOR - Customer-Funded Orange Zone | RHLAC Create Storage Shelves |
| CFOR - Customer-Funded Orange Zone | THIS IS A TEST TO CHECK OUR ACCOUNT CODE IGNORE |
| MROT -- Other -- | Urgent: HVAC very loud on level 3 |
| CFOR - Customer-Funded Orange Zone | RHLAC Front Desk Drilling for Cables |
| MROT -- Other -- | Alumni center - install wall hooks |
| MROT -- Other -- | Alumni center - Equipments repair |
| MROT -- Other -- | Urgent: Broken Glass |
| CFOR - Customer-Funded Orange Zone | Remove redundant smoke detector |
| CFOR - Customer-Funded Orange Zone | Temporarily Remove Paintings |
| MROT -- Other -- | Urgent: Lights turning on and off |
| MROT -- Other -- | alumni lamacoids |
| MR03 - Repair lock/door closing mechanism | Urgent: Broken Lock |
| MR02 - Adjust temperature in room/area | HVAC Schedule |
| MR03 - Repair lock/door closing mechanism | Urgent: Broken door motor and crash bar |
| MR03 - Repair lock/door closing mechanism | Urgent: Exterior door does not latch properly |
| MROT -- Other -- | RHLAC dangerous parking bollard |
| MROT -- Other -- | Lucifer - painting follow up |
| MROT -- Other -- | AH Jan 23 Alumni Ctr |
| MROT -- Other -- | Broken piece of wood in ceiling |
| MROT -- Other -- | RHLAC holes in ceiling drywall |
| CFOR - Customer-Funded Orange Zone | re-installation of paintings |
| MR01 - Change burnt out light bulb | ligths out |
| MR02 - Adjust temperature in room/area | URGENT: High temperatures in banquet hall |
| MR09 - Repair leak from plumbing fixture, if flood call 2-2173 | Leaky sink |
| MROT -- Other -- | High Priority: Turn on gas to fireplace |
| CFOR - Customer-Funded Orange Zone | Musqueam Banners |
| MR01 - Change burnt out light bulb | lights out |
| MROT -- Other -- | Fire Suppression unit running without alarm |
| MR03 - Repair lock/door closing mechanism | Stuck lock exterior door F |
| CFOR - Customer-Funded Orange Zone | Install desk lock |
| MR01 - Change burnt out light bulb | lights out |
| MROT -- Other -- | Alumni Ctr 3rd floor lounge 324 HVAC Noise |
| MROT -- Other -- | elevator on Level 1 does not display the correct floor |

| Request Type | Subject |
|---|---|
| CFOR - Customer-Funded Orange Zone | broken desk disposal |
| CFOR - Customer-Funded Orange Zone | Fire Drill Request |
| MROT -- Other -- | IMPORTANT: Turn on HVAC |
| MROT -- Other -- | Loose toilet seat |
| MR04 - Reset tripped circuit in fuse box | Urgent: access to breaker box |
| MROT -- Other -- | Alumni Centre Rm 222/223 |
| MR10 - Adjust continuous running of toilet/sink/urinal/water fountain | Alumni board room 303 too hot URGENT |
| MROT -- Other -- | AH 03-Apr-2016 Alumni Centre Room #222 & #223 |
| MR02 - Adjust temperature in room/area | Urgent: Turn up temperature |
| MR03 - Repair lock/door closing mechanism | ALUMNI- URGENT: Broken centre post for door |
| MROT -- Other -- | RHLAC 100 - Loose railing on staircase |
| MROT -- Other -- | ALUMNI- 100 Loose access post |
| CFOR - Customer-Funded Orange Zone | RHLAC Meter reading |
| MR02 - Adjust temperature in room/area | RHLAC 303 HVAC control adjustment |
| CFOR - Customer-Funded Orange Zone | ALUMNI- L1 Crash bar not able to lock and unlock manually |
| CFOR - Customer-Funded Orange Zone | RHLAC 222 - Flip Breaker April 15 |
| CFOR - Customer-Funded Orange Zone | ALUMNI- Crash Bar lock cap/plug missing |
| MROT -- Other -- | Alumni Centre - Gas Leak |
| MR01 - Change burnt out light bulb | lights out |
| MR04 - Reset tripped circuit in fuse box | RHLAC URGENT - 221: Open breaker box |
| CFOR - Customer-Funded Orange Zone | Remove Garbage room lock |
| CFOR - Customer-Funded Orange Zone | Remove base board heater |
| MR02 - Adjust temperature in room/area | Please lower the temperature alumni centre boardroom |
| MR02 - Adjust temperature in room/area | Return Temperature to regular setting room |
| MROT -- Other -- | Alumni Centre |
| CFOR - Customer-Funded Orange Zone | RHLAC 100 - Door pull installation |
| MROT -- Other -- | RHLAC 143 - Damaged bathroom stall door |
| CFOR - Customer-Funded Orange Zone | RHLAC 150 - Door and Frame Removal |
| MROT -- Other -- | Freestanding Identification sign for Alumni Centre |
| MROT -- Other -- | toilet seat is loose |
| MROT -- Other -- | Alumni centre lamacoids |
| MR09 - Repair leak from plumbing fixture, if flood call 2-2173 | Alumni Ctr room 124 mech room leak can't access mech room |
| MR09 - Repair leak from plumbing fixture, if flood call 2-2173 | Alumni ctr leak in mech room 124 cleaunup required |
| CFOR - Customer-Funded Orange Zone | Send to Azmina - Carpet Cleaning Request Alumni Centre |
| MR01 - Change burnt out light bulb | Alumni Lights |
| CFOR - Customer-Funded Orange Zone | Labor need to move desk with electrical attached |
| MR03 - Repair lock/door closing mechanism | ALUMNI- Door closure broken |
| MROT -- Other -- | RHLAC - Unlock Electrical Room - May 19 |
| MROT -- Other -- | RHLAC - Electrical Room Access - May 25 |
| CFOR - Customer-Funded Orange Zone | UBC100: What's Next Event - Request 1 |

| Request Type | Subject |
|---|---|
| CFOR - Customer-Funded Orange Zone | UBC 100: What's Next - Request 2 |
| CFOR - Customer-Funded Orange Zone | UBC: What's Next Event - Request 3 |
| CFOR - Customer-Funded Orange Zone | UBC100: What's Next Event - Request 4 |
| CFOR - Customer-Funded Orange Zone | UBC100: What's Next - Request 5 |
| CFOR - Customer-Funded Orange Zone | Conduit for card reader at Alumni Centre Foyer |
| MR04 - Reset tripped circuit in fuse box | AH May 28 UBC Alumni Centre |
| MROT -- Other -- | RHLAC URGENT - Noise from secure access door |
| CFOR - Customer-Funded Orange Zone | RHLAC - Desk reconfiguration |
| CFOR - Customer-Funded Orange Zone | RHLAC - Remove light switch |
| MR01 - Change burnt out light bulb | burnt out lights |
| MR08 - Broken fixed seating/table in classroom | Broken table leg |
| MR06 - Repair plugged toilet/sink/urinal | plugged urinal |
| MR06 - Repair plugged toilet/sink/urinal | RHLAC broken urinal |
| MROT -- Other -- | RHLAC - broken bathroom stall latch |
| MROT -- Other -- | RHLAC - Ethernet jack box falling off of the wall |
| MR03 - Repair lock/door closing mechanism | ALUMNI - Glass doors not in line |
| MROT -- Other -- | RHLAC - service panel door in elevator locked open |
| MR03 - Repair lock/door closing mechanism | Broken Lock Mens Washroom Stall Alumni Centre |
| MR03 - Repair lock/door closing mechanism | RHLAC - reconnect secure access door |
| MROT -- Other -- | CANCEL - RHLAC - Secure Access door does not work |
| MROT -- Other -- | RHLAC - sensor light works intermittently |
| MR10 - Adjust continuous running of toilet/sink/urinal/water fountain | RHLAC Urgent - Taps need to be tightened |
| CFOR - Customer-Funded Orange Zone | RHLAC - Urgent - Art removal and wall repair |
| MROT -- Other -- | Alumni Clint Heatpump Alarm |
| MROT -- Other -- | RHLAC - Flooding around building |
| MROT -- Other -- | plugged drain |
| MROT -- Other -- | shelf needed |
| CFOR - Customer-Funded Orange Zone | Filming - Magicians 202 (Shutdown) |
| CFOR - Customer-Funded Orange Zone | Filming - Magicians 202 (floor cleaning) |
| MROT -- Other -- | loose napkin dispenser |
| CFOR - Customer-Funded Orange Zone | Filming - Magicians 202 (RHLAC shutdown) |
| CFOR - Customer-Funded Orange Zone | RHLAC - Quote for power and ethernet access |
| CFOR - Customer-Funded Orange Zone | RHLAC - Instalation of door sweep |
| MROT -- Other -- | RHLAC - sanitary napkin disposal unit falling off of wall |
| MROT -- Other -- | RHLAC - washroom stall door hinge |
| MROT -- Other -- | RHLAC - Soap dispenser installation |
| CFOR - Customer-Funded Orange Zone | RHLAC - Waste Removal |
| MR01 - Change burnt out light bulb | RHLAC - Burnt out lights around entire building |
| MROT -- Other -- | green chemical dispensert is not dipsnesing properly |
| MROT -- Other -- | RHLAC - Paper towel dispenser installation |
| CFOR - Customer-Funded Orange Zone | Magicians - Electrician Alumni Centre and Buchanan July 7th |

| Request Type | Subject |
|---|---|
| MROT -- Other -- | RHLAC - Sunday HVAC July 10 |
| MR04 - Reset tripped circuit in fuse box | RHLAC - Tripped fuse in LL washrooms |
| CFOR - Customer-Funded Orange Zone | Chair Cleaning - Completed |
| MR01 - Change burnt out light bulb | ligths out |
| MR01 - Change burnt out light bulb | RHLAC - Burnt out light women's washroom |
| MR04 - Reset tripped circuit in fuse box | Alumni Ctr lower level grand lee innovations ctr area |
| MR09 - Repair leak from plumbing fixture, if flood call 2-2173 | Alumni Ctr 3rd floor men's washroom leak from ceiling |
| CFOR - Customer-Funded Orange Zone | Shattered Glass Door Needs Replaced |
| MROT -- Other -- | Red Norco Bike on Bike Rack on South Side needs to be remove |
| MR01 - Change burnt out light bulb | RHLAC - burnt out lightbulb in women's washroom |
| MROT -- Other -- | Alumni Ctr back door entrance door closest to nest |
| MR06 - Repair plugged toilet/sink/urinal | Alumni, 2nd floor plugged toilet womens |
| MR09 - Repair leak from plumbing fixture, if flood call 2-2173 | Alumni Ctr leak from ceiling room 100 lobby area |
| MROT -- Other -- | AH Call Alumni Centre Fire Bells Ringing |
| CFOR - Customer-Funded Orange Zone | Potential Call Centre Move / Request Designer |
| MR03 - Repair lock/door closing mechanism | East side door handle loose - screw has come off |
| CFOR - Customer-Funded Orange Zone | RHLAC - Chair leg protectors |
| MR02 - Adjust temperature in room/area | RHLAC - Turn on HVAC Sunday, August 28 |
| CFOR - Customer-Funded Orange Zone | Filming - Beaches (HVAC) |
| MR06 - Repair plugged toilet/sink/urinal | Alumni Centre: 1st floor men's washroom urinal overflowing |
| MR02 - Adjust temperature in room/area | URGENT ALUMNI - HVAC not working |
| MR03 - Repair lock/door closing mechanism | Locksmith to replace Alumni Keyswtich cylinder with abloy |
| MR09 - Repair leak from plumbing fixture, if flood call 2-2173 | URGENT ALUMNI - leak in ceiling in LL kitchen |
| MROT -- Other -- | ALUMNI - open electrical room Today 11am |
| MROT -- Other -- | Alumni Ctr possible gas leak 3rd floor hallway |
| MROT -- Other -- | Alumni ceiling leak |
| MR09 - Repair leak from plumbing fixture, if flood call 2-2173 | AH Alumni kitchan & unisex washroom bsmt leak |
| MR01 - Change burnt out light bulb | ligths out |
| MR09 - Repair leak from plumbing fixture, if flood call 2-2173 | ALUMNI - urgent toilet leaking |
| MR04 - Reset tripped circuit in fuse box | Alumni Ctr board room 303 blinds not coming down URGENT |
| MROT -- Other -- | Switch all active requests for RHLAC to Nicole Caron |
| CFOR - Customer-Funded Orange Zone | CARP Carpet Cleaning |
| MR02 - Adjust temperature in room/area | RHLAC: HVAC suddenly stopped working |
| MROT -- Other -- | Alumni HRV 1 not running |
| MROT -- Other -- | broken autoscrubber key |
| MROT -- Other -- | NEED Access to electrical room and IT room Lower Level Frida |
| MR06 - Repair plugged toilet/sink/urinal | Alumni, 2nd floor men's washroom toilet plugged |
| MR01 - Change burnt out light bulb | light switches are not responding 3rd floor |
| MR06 - Repair plugged toilet/sink/urinal | Mens Urinal Plugged |

| Request Type | Subject |
|---|---|
| MROT -- Other -- | Alumni - Key Tumbler needs to be fixed |
| CFOR - Customer-Funded Orange Zone | Homecoming 2016 |
| CFOR - Customer-Funded Orange Zone | roof hatch needed (does not need to be pretty) |
| MROT -- Other -- | Auto scrubber |
| MROT -- Other -- | AH Sept 16 Alumni Center |
| MROT -- Other -- | AH Sept 16 Alumni Center |
| MROT -- Other -- | AH Sept 16 SUB Plaza |
| CFOR - Customer-Funded Orange Zone | Filming - William (HVAC) |
| CFOR - Customer-Funded Orange Zone | Filming - William (FLS) |
| MROT -- Other -- | Room LL112 Chemical Smell |
| CFOR - Customer-Funded Orange Zone | Washing windows |
| MR04 - Reset tripped circuit in fuse box | Third floor boardroom tripped breaker - asap |
| MROT -- Other -- | HRV1 check for power, will not run |
| MR06 - Repair plugged toilet/sink/urinal | RH Lee Alumni Centre 3rd floor HC washroom: toilet |
| CFOR - Customer-Funded Orange Zone | Testing |
| MR01 - Change burnt out light bulb | RE: Bathroom light out |
| MR02 - Adjust temperature in room/area | SUNDAY HVAC TURN ON OCT 2nd - Alumni Centre |
| MR02 - Adjust temperature in room/area | SUNDAY OCT 9 HVAC turn on |
| MR01 - Change burnt out light bulb | Women's bathroom light burnt out |
| CFOR - Customer-Funded Orange Zone | Filming - William (furniture) |
| MR06 - Repair plugged toilet/sink/urinal | plugged urinal |
| CFOR - Customer-Funded Orange Zone | Filming - William (cleaning) |
| MR05 - Stuck or malfunctioning elevator, if passenger trapped call 2-2173 | RE: All elevators out of order |
| MR12 - Spill | RE: Meeting room dirty |
| MR01 - Change burnt out light bulb | RE: Women's bathroom dark |
| MROT -- Other -- | Alumni Ctr men's washroom 141 light sensor issue |
| MROT -- Other -- | Alumni Ctr lower level unisex washroom by LL102E |
| MROT -- Other -- | RE: Junk pickup |
| MR04 - Reset tripped circuit in fuse box | Alumni Ctr boardroom 303 shades won't pull down URGENT |
| MRTS - Technical Services | RE: Need access to electrical room |
| MROT -- Other -- | CARP RE: Carpet clean |
| MR09 - Repair leak from plumbing fixture, if flood call 2-2173 | AH Oct 12 16:05 hrs Alumni Ctr Bsmt Kitchen Leak |
| MR02 - Adjust temperature in room/area | Nest Osprey Daycare room 4406 too cold |
| MR16 - Minor building Deficiencies (Building Ops use only) | RE: Door lining fell off |
| MROT -- Other -- | RE: HVAC Oct 16th |
| MROT -- Other -- | AH Oct 17 Alumni ctr 1:17 hrs |
| CFOR - Customer-Funded Orange Zone | RE: Install tray under desk |
| MR02 - Adjust temperature in room/area | RE: HVAC Request - October 30/16 |
| CFOR - Customer-Funded Orange Zone | RE: Art |
| MROT -- Other -- | RE: Wall touch up request |
| MROT -- Other -- | Labour Request for Today Oct 24 - Moving Furniture |

| Request Type | Subject |
|---|---|
| MR08 - Broken fixed seating/table in classroom | Lounge Chair Feet Protectors - Carpenters |
| MROT -- Other -- | replace carpet tile 3rd floor |
| MROT -- Other -- | Please check Fancoil 4 in ceiling space of room LL102F |
| MR18 - Pest Control required | PEST - Mouse Found Loafe |
| MROT -- Other -- | Alumni Centre Basement staff kitchen: dishwasher broken |
| MROT -- Other -- | Alumni Ctr - bathroom latch |
| MR04 - Reset tripped circuit in fuse box | RE: Blown fuse in loading bay |
| CFOR - Customer-Funded Orange Zone | RE: Art installation |
| MROT -- Other -- | Replace the squeegee |
| MR14 - Washroom Out of Toilet Paper, Hand Paper, Soap | RE: Soap dispenser broken |
| CFOR - Customer-Funded Orange Zone | URGENT - Campaign pillar for disposal today |
| MR06 - Repair plugged toilet/sink/urinal | AH Call -Alumni men's washroom, ground floor toilet clogged |
| MR02 - Adjust temperature in room/area | Alumni Centre 3rd floor very cold |
| MROT -- Other -- | RE: Hooks in bathroom |
| CFOR - Customer-Funded Orange Zone | SR095029 - Call Centre - Design Only - Shutdown |
| MROT -- Other -- | RE: Dislodged entrance pole |
| MROT -- Other -- | RE: Main building door not closing |
| MROT -- Other -- | RE: Junk pickup |
| MROT -- Other -- | RE: Loading bay card scanner |
| MR14 - Washroom Out of Toilet Paper, Hand Paper, Soap | RE: Replace hand soap dispensers |
| CFOR - Customer-Funded Orange Zone | RE: Desk install |
| MR06 - Repair plugged toilet/sink/urinal | pluged toilet |
| MROT -- Other -- | Women's bathroom toilet seat broken |
| MROT -- Other -- | Alumni Ctr room LL102D whiteboard fell off wall |
| MR03 - Repair lock/door closing mechanism | RE: Lock broken to office |
| MR02 - Adjust temperature in room/area | RE: Main floor really cold |
| MR03 - Repair lock/door closing mechanism | ALUMNI- RE: 3rd floor main door |
| MR02 - Adjust temperature in room/area | RE: RHLAC 101 raise temp |
| MROT -- Other -- | Alumni Ctr Fire Bells Ringing Dec 9 Approx 12:30 pm |
| CFOR - Customer-Funded Orange Zone | RE: January 4th, 2017 cleaning project |
| MR02 - Adjust temperature in room/area | RE: 3rd floor very cold |
| MR19 - Fire Protection Impairment | AH Call Robert H Lee Alumni Centre - 03 trouble no reset |
| MROT -- Other -- | Deficiency - University Commons Pole LED Light |
| CFOR - Customer-Funded Orange Zone | RE: UBC Labor to move bookcase |
| MR18 - Pest Control required | Pest -small bird in building alumni centre |
| MROT -- Other -- | HRV2 needs belt |
| CFOR - Customer-Funded Orange Zone | RE: Donor wall work |
| MR02 - Adjust temperature in room/area | Jack Poole Hall North Temperature needs to go up (224) |
| MROT -- Other -- | Alumni Air Source Heat Pump |
| MROT -- Other -- | gas smell on rooftop |
| CFOR - Customer-Funded Orange Zone | RE: Loafe cafe electrical outlet request |
| MROT -- Other -- | Alumni Centre Broken wood handrail from staircase urgent |

| Request Type | Subject |
|---|---|
| MR06 - Repair plugged toilet/sink/urinal | Robert H Lee Alumni Main Fl Women's Washroom Toilet Plugged |
| MROT -- Other -- | RE: Classroom tables repair |
| MROT -- Other -- | RE: Welcome Centre sofas and chairs clean |
| MR03 - Repair lock/door closing mechanism | ALUMNI- RE: Broken locking mechanism |
| MR03 - Repair lock/door closing mechanism | AH Feb 1 Alumni Centre - loading door does not lock. |
| MR05 - Stuck or malfunctioning elevator, if passenger trapped call 2-2173 | Alumni center - Elevator door won't open |
| MR06 - Repair plugged toilet/sink/urinal | AH Feb 2 21:02 Alumni center - Plugged toilet |
| MR02 - Adjust temperature in room/area | RE: HVAC request for Sunday, February 12, 2017 |
| MR06 - Repair plugged toilet/sink/urinal | Alumni Centre 2nd floor urinal: overflowing |
| MR06 - Repair plugged toilet/sink/urinal | plugged urinal |
| MR06 - Repair plugged toilet/sink/urinal | Alumni Centre basement unisex washroom toilet clogged |
| MR05 - Stuck or malfunctioning elevator, if passenger trapped call 2-2173 | RE: Elevators acting strange |
| MR10 - Adjust continuous running of toilet/sink/urinal/water fountain | water fountain draining very slow |
| MROT -- Other -- | RE: Fan coil or something malfunctioning |
| MROT -- Other -- | RE: Carpet clean, Jack Poole Hall (Rm 221/223) |
| MROT -- Other -- | RE: Flooding by East entrance door |
| MR01 - Change burnt out light bulb | RE: Main floor accessible washroom |
| MROT -- Other -- | RE: Broken building dolleys |
| MROT -- Other -- | RE: white walls marked up |
| MR02 - Adjust temperature in room/area | Alumni Ctr boardroom 221 too hot 28 degrees |
| MROT -- Other -- | RE: broken door bar |
| MR01 - Change burnt out light bulb | Back office 101 dark |
| MROT -- Other -- | RE: 3rd floor staff kitchen leak |
| MR06 - Repair plugged toilet/sink/urinal | RE: Men's washroom urinal main floor |
| MROT -- Other -- | Alumni center - Loose toilet seats |
| MROT -- Other -- | RE: color swatches |
| MR02 - Adjust temperature in room/area | RE: HVAC request - March 12th |
| MROT -- Other -- | ALUMNI- door push bar is loose |
| MR06 - Repair plugged toilet/sink/urinal | plugged sink |
| MR06 - Repair plugged toilet/sink/urinal | RE: Main floor, men's toilet clogged |
| MROT -- Other -- | RE: Broken linen bar in 2nd floor catering kitchen |
| MR02 - Adjust temperature in room/area | RE: HVAC Request - March 19th, 2017 |
| MR02 - Adjust temperature in room/area | RE: RHLAC 101 really warm |
| MR03 - Repair lock/door closing mechanism | RE: 3rd floor utility closet |
| MROT -- Other -- | RE: Consistent lighting |
| MR09 - Repair leak from plumbing fixture, if flood call 2-2173 | Dishwasher hose broken loafe cafe |
| MROT -- Other -- | AH Call -HOT water is off in our building - alumni centre |
| MROT -- Other -- | compost bins are full |

| Request Type | Subject |
|---|---|
| MR03 - Repair lock/door closing mechanism | Alumni Centre elecrtical room LL143 door not securing |
| MROT -- Other -- | Alumni Heat Pumps |
| MR02 - Adjust temperature in room/area | RE: Alumni centre very hot |
| MR02 - Adjust temperature in room/area | Jack Poole RM 221 / High Heat / Event Planned Today |
| MROT -- Other -- | URGENT RE: 3rd floor boardroom ceiling covering falling |
| MR01 - Change burnt out light bulb | RE: Main floor, hallway outside bathrooms |
| MR02 - Adjust temperature in room/area | RE: HVAC - Easter Long Weekend |
| CFOR - Customer-Funded Orange Zone | RE: Backoffice paint + labor request |
| CFOR - Customer-Funded Orange Zone | RE: 2nd floor paint job |
| MROT -- Other -- | Fire Drill April 25 - Alumni Centre |
| MROT -- Other -- | light switch cover is broken |
| CFOR - Customer-Funded Orange Zone | RE: Keyboard tray install |
| CFOR - Customer-Funded Orange Zone | SR094448 - Alumni Building 797 |
| MROT -- Other -- | RE: Main floor no hot water |
| MR02 - Adjust temperature in room/area | RE: RHLAC 303 boardroom very hot |
| MR02 - Adjust temperature in room/area | Robert H Lee 303 Very Hot |
| MROT -- Other -- | Alumni Center - empty garbage dumpster |
| MR06 - Repair plugged toilet/sink/urinal | Alumni center - Plugged toilet |
| MROT -- Other -- | Alumni Air Source Heat Pump |
| MR02 - Adjust temperature in room/area | JACK POOL HALL SOUTH HVAC DOWN |
| MR06 - Repair plugged toilet/sink/urinal | Alumni - plugged toilet |
| MR06 - Repair plugged toilet/sink/urinal | BOE- Alumni Centre Main Floor Toilet Plug |
| MROT -- Other -- | Adjust toilet sensor for longer flush - Alumni M/F Men's |
| MROT -- Other -- | ceiling lights on ceiling of the Robert H Lee Alumni Centre |
| MROT -- Other -- | URGENT RE: 3rd floor boardroom ceiling covering falling |
| MR01 - Change burnt out light bulb | RE: Main floor, hallway outside bathrooms |
| MR02 - Adjust temperature in room/area | RE: HVAC - Easter Long Weekend |
| CFOR - Customer-Funded Orange Zone | RE: Backoffice paint + labor request |
| CFOR - Customer-Funded Orange Zone | RE: 2nd floor paint job |
| MROT -- Other -- | Fire Drill April 25 - Alumni Centre |
| MROT -- Other -- | light switch cover is broken |
| CFOR - Customer-Funded Orange Zone | RE: Keyboard tray install |
| CFOR - Customer-Funded Orange Zone | SR094448 - Alumni Building 797 |
| MROT -- Other -- | RE: Main floor no hot water |
| MR02 - Adjust temperature in room/area | RE: RHLAC 303 boardroom very hot |
| MR02 - Adjust temperature in room/area | Robert H Lee 303 Very Hot |
| MROT -- Other -- | Alumni Center - empty garbage dumpster |
| MR06 - Repair plugged toilet/sink/urinal | Alumni center - Plugged toilet |
| MROT -- Other -- | Alumni Air Source Heat Pump |

| Request Type | Subject |
|---|---|
| MR02 - Adjust temperature in room/area | JACK POOL HALL SOUTH HVAC DOWN |
| MR06 - Repair plugged toilet/sink/urinal | Alumni - plugged toilet |
| MR06 - Repair plugged toilet/sink/urinal | BOE- Alumni Centre Main Floor Toilet Plug |
| MROT -- Other -- | Adjust toilet sensor for longer flush - Alumni M/F Men's |
| MROT -- Other -- | ceiling lights on ceiling of the Robert H Lee Alumni Centre |
| MROT -- Other -- | RE: broken electrical outlet |
| MROT -- Other -- | Alumni Building Fan Coil Unit Filter Checks |
| MROT -- Other -- | soap dispenser came off |
| MR02 - Adjust temperature in room/area | URGENT: Board of Governors in boardroom need temps down asap |
| MR06 - Repair plugged toilet/sink/urinal | wwr toilet plugged |
| MROT -- Other -- | RE: June 1st - Carpet cleaning |
| MROT -- Other -- | Alumni center - Bora vacuum does not work |
| MR02 - Adjust temperature in room/area | RE: HVAC request - Sunday, June 11th, 2017 |
| MR06 - Repair plugged toilet/sink/urinal | Alumni BOE 2nd floor ladies washroom plugged toilet |
| MROT -- Other -- | Alumni BOE Throughout 2nd Floor Strong Sewer/Waste Smell |
| MR02 - Adjust temperature in room/area | RE: HVAC request - June 25, 2017 |
| MR02 - Adjust temperature in room/area | Urgent: Alumni centre L2 temps |
| MROT -- Other -- | BOE- Alumni Centre Remove Compressor |
| MROT -- Other -- | soap dispenser came off |
| MROT -- Other -- | please replace garbage dumpster |
| MROT -- Other -- | soap dispenser came off |
| MROT -- Other -- | Soap Dispenser Has Fallen Off Wall |
| MR05 - Stuck or malfunctioning elevator, if passenger trapped call 2-2173 | Elevator not working |
| MROT -- Other -- | soap dispnser came off |
| MROT -- Other -- | Alumni Center soap dispensers |
| MROT -- Other -- | Alumni Center garbage bin in bathroom stall |
| MR02 - Adjust temperature in room/area | RE: July 9th, 2017 - Air Con on for wedding |
| MROT -- Other -- | pressure washing needed |
| MR09 - Repair leak from plumbing fixture, if flood call 2-2173 | AH Call Alumni Center Basement utility room Significant Leak |
| MROT -- Other -- | CARP - RE: July 21st - Universal Carpet Cleaning |
| MROT -- Other -- | Fan squeaking sound |
| MROT -- Other -- | RE: Sliding wall door to Sarah Morgan Silvester jammed |
| MROT -- Other -- | the light fixture came off from the ceiling |
| MROT -- Other -- | RE: Small gouge in wall |
| MR03 - Repair lock/door closing mechanism | RE: RHLAC East Door broken |
| MROT -- Other -- | RE: 2nd floor catering doors |
| MROT -- Other -- | Alumni center - Soap dispenser came off the mirror |
| MR06 - Repair plugged toilet/sink/urinal | plugged toilet |

| Request Type | Subject |
|---|---|
| MROT -- Other -- | Alumni Chiller Replacement |
| MROT -- Other -- | Level 2 touch ups high profile wedding coming in this Saturd |
| MR06 - Repair plugged toilet/sink/urinal | Alumni Ctr main floor unisex washroom (BOE) |
| MR06 - Repair plugged toilet/sink/urinal | RE: Main floor bathroom out of order |
| MR02 - Adjust temperature in room/area | URGENT: Jack Poole Hall Rm 221/223 temps |
| MROT -- Other -- | RE: RHLAC 3rd floor, horrible smell (sewage?) |
| MROT -- Other -- | Alumni Centre - North Doors stuck |
| MROT -- Other -- | Alumni Centre - Move roof hatch hold open |
| MR06 - Repair plugged toilet/sink/urinal | Alumani building main floor men,s w/r 141 toilet overflowed |
| MROT -- Other -- | RE: Servery kitchen locks |
| MR05 - Stuck or malfunctioning elevator, if passenger trapped call 2-2173 | IMPORTANT: Elevator locked |
| MR01 - Change burnt out light bulb | RE: Dangling bulb in north hallway |
| MR09 - Repair leak from plumbing fixture, if flood call 2-2173 | URGENT: Steady leak in basement storage room |
| MROT -- Other -- | Alumani main floor w/w/r soap dispenser fell off the wall |
| MROT -- Other -- | soap dispenser came off |
| MR03 - Repair lock/door closing mechanism | RE: Jack Poole Hall lock broken |
| MROT -- Other -- | RE: main floor accessibility washroom broken soap dispenser |
| MR09 - Repair leak from plumbing fixture, if flood call 2-2173 | RE: Welcome Centre leak AH Call |
| MROT -- Other -- | Alumni Ctr Fire Bells - False Alarm |
| MR02 - Adjust temperature in room/area | RE; August 13/17 - HVAC activation |
| MROT -- Other -- | plugged toilet |
| MROT -- Other -- | RE: Paint request main floor |
| MROT -- Other -- | BOE- Alumni 2318 Janitor Room Light |
| CFOR - Customer-Funded Orange Zone | Alumni Day at Homecoming - Waste Management |
| CFOR - Customer-Funded Orange Zone | Alumni Day at Homecoming - Moving of furniture |
| MROT -- Other -- | CUST: Special custodial request |
| MROT -- Other -- | Carpet machine - wheel came off |
| MR06 - Repair plugged toilet/sink/urinal | plugged toilets |
| MROT -- Other -- | CUST: Labor Day Long Weekend request |
| MROT -- Other -- | CARP RE; Sept 17 - Full RHLAC clean |
| MR06 - Repair plugged toilet/sink/urinal | Alumni Centre basement kitchen sink is clogged |
| MR01 - Change burnt out light bulb | Alumni Centre Men's washroom, main floor light |
| MR03 - Repair lock/door closing mechanism | RE: 2nd floor electrical box lock broken |
| MROT -- Other -- | soap dipsneser came off |
| MROT -- Other -- | Urgent: Broken ceiling partition with nails |
| MROT -- Other -- | Re & Re of the chiller at Alumni |
| MR03 - Repair lock/door closing mechanism | Alumni ctr - Door stays ajar |
| MR03 - Repair lock/door closing mechanism | Alumni- lock broken - Loafe Cafe AH |

| Request Type | Subject |
|---|---|
| MROT -- Other -- | TV Screen by room LL103 has no power. |
| MR02 - Adjust temperature in room/area | Alumni Jack Poole Hall 221/223 26 degrees |
| MROT -- Other -- | Alumani building 1st floor w/w/r soap dispenser fell off |
| MROT -- Other -- | Alumni center - chemical dispenser does not work properly |
| CFOR - Customer-Funded Orange Zone | SR129974 - Chiller Replacement - Shutdown |
| MR06 - Repair plugged toilet/sink/urinal | alumni main foolr plugged toilet 141 urgent please |
| MR04 - Reset tripped circuit in fuse box | AH Call- Alumni Weekend Tripped Breaker |
| MR15 - Garbage Overflowing | ALUMANI garbge container ,recycling bins overflowing |
| MROT -- Other -- | Water dispenser filter needs replacing |
| MR03 - Repair lock/door closing mechanism | Northern Door Not Shutting Properly |
| MR03 - Repair lock/door closing mechanism | Alumni Centre - accessibility bathroom stall |
| MROT -- Other -- | 2 multi-bin recycling stations for United Way event |
| MROT -- Other -- | UW event - delver 2 tables - October 12 |
| MROT -- Other -- | Alumni |
| MR06 - Repair plugged toilet/sink/urinal | Plugged sink in Women's washroom |
| MRTS - Technical Services | Fan noise in 101A |
| MR10 - Adjust continuous running of toilet/sink/urinal/water fountain | Leak in the catering kitchen handwashing sink |
| MR06 - Repair plugged toilet/sink/urinal | ALUMANI 1st floor w/w/r 143 sink plugged |
| MR02 - Adjust temperature in room/area | Robert H Lee Alumni 2nd Floor Rooms 221 & 223 Too Cold |
| MR01 - Change burnt out light bulb | Burnt out light bulbs & fixture check |
| MR03 - Repair lock/door closing mechanism | Alumni Centre - options for kitchen and bathroom doors |
| MROT -- Other -- | AH Call -Alumni Centre bad smell 3rd floor |
| MROT -- Other -- | Alumani (Robert lee) garbage container overflowing |
| MROT -- Other -- | Alumani building recycling containers (bottels&cans) pick up |
| CFOR - Customer-Funded Orange Zone | 40 small picture frames hung on the wall |
| CFOR - Customer-Funded Orange Zone | 2 floor credenzas moved from one room to room to anther |
| MR05 - Stuck or malfunctioning elevator, if passenger trapped call 2-2173 | RH Lee Alumni Elevator Out of Service |
| MROT -- Other -- | Smell from fireplace |
| MR03 - Repair lock/door closing mechanism | Alumni Centre main entrance lock fell out |
| CFOR - Customer-Funded Orange Zone | SR129974 - Steamfitters to drain hot water lines |